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Making Connections: A Handbook for Effective Formal Mentoring Programs in Academia

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MAKING CONNECTIONS

A Handbook for Effective Formal
Mentoring Programs in Academia

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LAND ACKNOWLEDGEMENT

As a land-grant institution, Utah State University campuses and centers reside and operate on the territories of the eight tribes of Utah, who have been living, working, and residing on this land from time immemorial. These tribes are the Confederated Tribes of the Goshute Indians, Navajo Nation, Ute Indian Tribe, Northwestern Band of Shoshone, Paiute Indian Tribe of Utah, San Juan Southern Paiute, Skull Valley Band of Goshute, and White Mesa Band of the Ute Mountain Ute. We acknowledge these lands carry the stories of these Nations and their struggles for survival and identity. We recognize Elders past and present as peoples who have cared for, and continue to care for, the land. In offering this land acknowledgment, we affirm Indigenous self-governance history, experiences, and resiliency of the Native people who are still here today.

PRAISE FOR MAKING CONNECTIONS

Kathy E. Kram; Andrew J. Hobson; and Dave R. Woolstenhulme

This handbook is a must-read for anyone who wants to design an effective mentoring initiative in academia. The contributors include scholars and practitioners who have examined the challenges of creating high quality mentoring experiences in highly complex settings. Collectively, they address multiple target populations including undergraduate students, graduate students, faculty and staff—as well as multiple approaches to mentoring ranging from traditional hierarchical mentoring, to co-mentoring, group mentoring and developmental networks. This is not a book to read cover to cover and then put on a shelf—instead, consulting a particular chapter at the moment that the reader is tackling yet another design, implementation, or evaluation challenge is the way to go.

-Dr. Kathy E. Kram, Shipley Professor in Management Emerita Boston University Questrom School of Business

Mentoring programs can have significant positive impacts for those who participate in them, including enhanced thinking, learning, development, effectiveness, well-being, retention, and can foster enhanced organizational cultures. Yet, depending on how the programs are established and maintained and how mentoring is enacted, these and other potential benefits are not always realized, and participation in mentoring programs can even have detrimental impacts. This handbook will be invaluable to colleagues seeking to develop or enhance mentoring programs in Higher Education. It will help such colleagues to understand how to maximize the positive impacts of mentoring and to minimize and avoid any adverse effects. It will help them to lobby organizational leaders for appropriate (and necessary) resources and support for mentoring programs in academia. Written and edited by experts in the field and informed by research and first-hand experience of leading mentoring programs in academia, I expect that *Making Connections: A Handbook for Effective Formal Mentoring Programs in Academia* will have a profound positive impact on and in universities in the United States and worldwide.

-Dr. Andrew J. Hobson, Professor of Education, University of Brighton, UK, and Editor–in–Chief, "International Journal of Mentoring and Coaching in Education"

Making Connections is an invaluable resource for anyone seeking to cultivate a culture of belonging on campus through an effective mentorship program. As Commissioner of the Utah System of Higher Education, I have witnessed the profound impact of mentoring on the retention and achievement of our valued students, faculty, and staff. This handbook offers practical guidance on navigating the processes and resources involved in creating and sustaining a meaningful mentoring program. I highly recommend this book to anyone seeking to improve retention rates and enhance professional development within their university community. This indispensable and approachable guide is one that readers will come back to again and again.

–Dr. Dave R. Woolstenhulme, Utah Commissioner of Higher Education

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FOREWORD: MENTORING PROGRAMS IN ACADEMIA

David Clutterbuck

In institutions devoted to formal education, mentoring often takes the role of a poor sister – unglamorous and often unnoticed but providing pivotal support. Formal learning requires informal learning to release its potential for change within and beyond the learner. In every area of my professional practice, formal learning has given me frameworks and access to sources of knowledge that I can subsequently draw. I can rarely recall the detail; when I do, it is rarely completely accurate. The most impactful learning comes from experience — my own and what I glean from the experience of others.

The rise of artificial intelligence has helped in recent years to illustrate this formal-informal yin and yang. What distinguishes a human mentor, coach, or tutor from an AI is the depth and quality of their respective wisdom. The original mentor in the Odyssey was Athena — the Goddess of Wisdom (and other things). To help Odysseus and his son Telemachus become wiser, she enabled them to reflect upon their experiences — learning from within and without. Computer intelligence can offer what I call 'skinny wisdom". Skinny wisdom consists of vast information resources and algorithms that structure and order it into accessible knowledge. Skinny wisdom lacks two essential ingredients of the other two kinds of wisdom. Firstly, it cannot make judgments outside of the boundaries of its algorithms; it can only extrapolate and make analogies within those boundaries. Secondly, it cannot offer the qualities of humanity (although it can do an excellent job of emulating compassion within set routines).

Broad wisdom comes from experience, both personal and vicarious. It is as much an emotional quality as an intellectual one. The key to broad wisdom lies in the quality of our reflection — how we make sense of experience regarding our own identity and how the world around us works. We constantly adapt our conscious and unconscious algorithms in light of these reflections.

Meta-wisdom integrates multiple sources of knowledge, skinny and broad wisdom. It is a process of constant creation and recreation. It requires curiosity and seeing connections between disciplines, philosophies, and perspectives.

Mentoring generally involves broad wisdom. However, in some environments (especially in academia), it also requires meta-wisdom. The essence of great science is seeing connections that others have missed or dismissed.

A wisdom perspective suggests that effective mentoring programs should:

- Avoid matching people within narrow disciplines or traits because that may steer the relationship toward skinny wisdom. It's a myth that mentoring is primarily about knowledge transfer. Athena used her wisdom to help Odysseus reflect and become wiser in turn. Mentees can acquire skinny wisdom in many other ways, and the more the relationship focuses on it, the less time and space for different aspects of mentoring, which are far more deeply developmental.

- Ensure mentoring program managers have their resources for building and sharing wisdom.

- Emphasize the co-learning that takes place when mentoring relationships are at their best. If a mentor learns nothing from their mentee/protege, they probably weren't mentoring!

There are at least two standards for mentoring programs, one from the International Mentoring Association and one from the European Mentoring and Coaching Council. Both provide a baseline for constructing and evaluating a mentoring program.

These are, however, just a starting point for effective programs. Building on the standards requires insights into programs in practice. That's where this book comes in. *Making Connections: A Handbook for Effective Formal Mentoring Programs in Academia* offers practical experience from mentoring across the academic world. It is, in effect, a source of collective wisdom. The authors of Part I of this book provide a macro perspective on the foundational elements of mentoring that program coordinators must reflect on as they create the underpinnings of their respective programs. The authors of Part II share their meta-wisdom as they help coordinators understand and reflect on the various elements and interconnectedness of design, implementation, and evaluation. Finally, in Part III, the authors of the case studies share their broad wisdom based on years of personal and vicarious experiences overseeing mentoring programs in academia.

The systemic perspective is the most important theme for mentoring programs this decade. In particular, universities have many mentoring programs, each aimed at a distinct audience — pre- Uni, students, faculty, alums, and more. Each program tends to have its own mission, program management, and evaluation processes. They may also address a fairly narrow audience (such as women in STEM). This approach has stood us well overall, but only when we integrate them into a systemic approach will we harness the full power of mentoring. For example, if we want to have more professors of color, then the role model for a school leaver is not a student or junior faculty member but a professor who can open the young person's eyes to the journey ahead and inspire them to pursue a vision of the person they want to become.

If we see mentoring in academia as a smorgasbord of interlocking, mutually supportive programs, we open the door for far more benchmarking and sharing of good practice. We also enable mentees to plan better and take charge of their mentoring journey, seeing each stage as a progression of co-learning.

The systemic perspective requires program managers to be comfortable with managing increasing levels of complexity; to see beyond the limited boundaries of individual programs to the possibilities of influencing the whole system of education, from school to university, to the world of work.

In *Making Connections: A Handbook for Effective Formal Mentoring Programs in Academia*, a systems perspective is evident in two ways. First, as the editors explain in their introduction, the chapters in this book provide a "one-stop shop" for program coordinators and university leaders wishing to create mentorship programs. Though each chapter has unique content, it is only through a systemic lens that the interconnections between chapters are understood and valued. It is through this holistic view that makes creating a comprehensive theory of change possible. Second, a systems perspective is evident in Part IV, theoretically and practically focusing on developmental networks.

The range of mentoring applications in academia is gradually expanding. A significant trend is to innovate around specific societal needs. For example:

- Mentoring is playing an increasing role in supporting students at all levels who have cognitive or neuro-diversity
- Mentoring has significantly supported students from less privileged backgrounds in entering higher education and staying the course.
- Increasing attention is being directed to the problem of gender and racial/ cultural origin in the context of professional advancement. We are still far from gender equality in achieving tenure or professorial status, but mentoring is helping.

A few years ago, I coined the term pracademic to describe the practitioner and academic person. Nowhere else, to my knowledge, is this fertile role so prevalent as in the world of coaching and mentoring. An academic perspective provides rigor to field research; a practitioner approach ensures the research conclusions have practical application. For example, every participant in the senior practitioner mentoring programs I facilitate globally has to complete a research project as part of their accreditation. This same principle could usefully be applied in the accreditation of program managers. Indeed, it could be argued that it is an essential element of their personal development in the role. In academia, it might be regarded as a vital role.

Mentoring has a long history in academia, but the next decade will be important in shaping just how influential mentoring will be in shaping the agenda for change. Many forces in play suggest the traditional view of an academic institution is less and less relevant in an evolving, online, AI-assisted world. Now is an appropriate time to use this book as a comprehensive resource to bring together current good practices and design mentoring for tomorrow's world of education.

INTRODUCTION

David Law and Nora Domínguez

Introduction

This book, *Making Connections: A Handbook for Effective Formal Mentoring Programs in Academia*, makes a unique and needed contribution to the mentoring field as it focuses solely on mentoring in academia. This handbook is a collaborative institutional effort between Utah State University's (USU) Empowering Teaching Open Access Book Series and the Mentoring Institute at the University of New Mexico (UNM). This book is available through (a) an e-book through Pressbooks, (b) a downloadable PDF version on USU's Open Access Book Series website), and (c) a print version available for purchase on the USU Empower Teaching Open Access page, and on Amazon.

The Purpose of This Handbook

This handbook aims to create a comprehensive resource for those in academia who want to understand how to develop, implement, evaluate, sustain, and fund mentorship at their respective universities. We want the chapters in this book to provide a "one-stop shop" for program coordinators and university leaders wishing to create mentorship programs. Our primary goal in creating this handbook is to help mentoring programs in academia move from an ad hoc culture to one of intentionality and effectiveness. This handbook's chapters provide a retrospective and prospective overview of the mentoring field. The audience for this book is practitioners, university leaders, and researchers, with a primary focus on novice program coordinators. We selected the chapter authors because of their national reputations in specific content areas or previous scholarship. Our challenge to the authors was to write their chapter in a way that takes complex ideas or processes and makes them relatable to a novice program coordinator or university leader. For example, entire university courses and professional workshops cover topics in this book, such as conducting a needs assessment, theoretical frameworks, research methodology, or program evaluation. Recognizing that many of our authors write in a formal style consistent with academic journals, we asked them to write as if they were speaking to a room full of novice program coordinators and university leaders who wanted to know more about mentorship for their university. Thus, many authors employ a conversational writing style.

Organization of Handbook

This book has four parts. Part I contains four chapters that position the reader to understand the origins and evolution of the mentoring arena in academia. Part II includes 11 chapters designed to help practitioners, researchers, and university leadership design, implement, evaluate, and fund effective mentoring programs. Part III provides four case studies on undergraduate students as mentees, two on graduate students as mentees, three for mentoring faculty, and two on mentoring university staff. Each case study used an outline we created to address as many components of the mentoring process as possible. Finally, Part IV, which focuses on future directions of mentoring in academia, has a chapter and case study devoted to networked approaches. These networked approaches show great promise for maximizing mentorship in universities. We begin each of the book's four parts with an introduction section. The book ends with conclusions and four recommendations.

How to Read This Handbook

Generally speaking, most people do not read handbooks from beginning to end. Instead, they skim the table of contents and read the chapters most salient to their interests. We anticipate the same for this book. However, we have specific recommendations for novice program coordinators trying to orient themselves to this large and complex discipline of mentorship, especially as it applies to mentorship in academia. University leaders will also find this content helpful in understanding the processes and resources needed to create and sustain an effective mentoring program. For the novice reader for whom this book is primarily intended, we recommend starting with Christiansen's and Busenbark's Chapter 7, specifically Figure 7.1. This figure summarizes the crucial role and responsibilities of the mentoring program coordinator. In summarizing these responsibilities, Christiansen and Busenbark give an overview of the handbook and reference corresponding chapters that address specific content areas in more depth.

After Chapter 7, we recommend focusing on the case studies in Chapters 16, 17, 18, 19, and 20. As you read these case studies, ask yourself questions such as: What is the operational definition? What theories are driving this program? What is the program's mentoring structure or typology? How were mentors and mentees matched? How was the program evaluated? What were program outcomes reported? How was the program funded, and how will it be sustained?

After reading Chapter 7 and reviewing the 12 case studies, we encourage the reader to review the table of contents and the introductions to Parts I, II, and IV. These introductions give a summary of each corresponding chapter. Next, we advise reading the abstract of each chapter. By following these suggestions, we anticipate the reader will become aware of what they do and do not know regarding mentorship in academia and which chapters to delve into depending on their needs and priorities.

A Note from the Editors Regarding University Culture

When university leaders support a formal mentoring program at their respective universities, they hope to increase engagement, resulting in a prioritized outcome, such as higher retention rates for undergraduate students or improving tenure-achievement rates for faculty of color. University leaders must understand that cultural change takes time, often years. Changing culture does not happen overnight. It usually takes a few years to achieve the cultural change needed for a formal mentoring program to function as intended.

PART I

MENTORING ARENA

The four chapters in Part I of this book practitioners, researchers, and university leaders prepare a firm foundation for their formal mentoring program. Garvey begins chapter 1 with an in-depth synopsis of the origins and meaning of mentoring, beginning with the ancient Greeks and ending with modern developments. Mentoring is differentiated from other developmental relationships such as counseling, coaching, or academic advising. Of great practical importance in chapter 1, Garvey explores the difficulty of creating a singular definition of mentoring in academia and provides an alternative approach to looking at how the dimensions of mentoring can be applied to the practice of mentoring.

Often in academia, discussions about theoretical frameworks and how they impact mentorship programs may seem abstract to practitioners. The authors of chapter 2, Hager, Hales, and Dominguez, help practitioners base their mentoring program on one or more theoretical frameworks. They begin by helping practitioners understand their mentoring program's key components and variables. Then, they focus on broad frameworks and how they might align with the program's needs and goals. Next, the chapter gives examples of how customizing theoretical frameworks inform the practice of mentoring. Lastly, in chapter 2, Hager, Hales, and Dominguez articulate how research design can contribute to the body of knowledge regarding theoretical frameworks.

In chapter 3, Murrell and Onosu focus on different mentoring relationships found in academia, including hierarchical mentoring relationships, peer mentoring, group mentoring, and reverse mentoring. Based on research and best practices, mentoring in academia is moving beyond a single mentor-mentee relationship into a diverse range of multiple relationships forming a social network promoting personal, academic, and career support. The authors conclude chapter 3 by exploring how mentoring can serve as a buffer, be a tool for social influence, and a catalyst for identity work as members of the academy progress in their academic and professional journeys.

Novice program coordinators may not distinguish between formal mentoring programs and informal mentoring opportunities. Arocho and Johnson present a framework to differentiate between these two opportunities in chapter 4. By formalizing and customizing mentoring programs to meet the needs of their students, staff, and faculty, universities will more equitably distribute the benefits of mentoring among their members. Arocho and Johnson summarize the benefits of mentoring for the university, the mentors, and the mentees. When discussing the benefits of mentoring, an often-overlooked, unintended consequence is the adverse outcomes of the mentoring program. The authors of chapter 4 acknowledge these risks and advise how to mitigate these unintended consequences.

<div align="right">1.</div>

MENTORING ORIGINS AND EVOLUTION

Bob Garvey

Abstract

This chapter is in nine parts. The first explores the origins and meanings of mentoring from the Ancient Greek to modern times in different parts of the world. The second section discusses the similarities and differences between mentoring and other developmental relationships.

The third part explores the difficulties in defining mentoring. As an alternative to a definition, the fourth part looks at the dimensions of mentoring and the fifth part explores how the dimensions could be applied in practice. Following this, the sixth section considers a range of mentoring arrangements found in academia and uses the dimensions framework to develop descriptions of mentoring in different contexts in higher education. The seventh considers some practical developments of mentoring in higher education. The eighth section briefly considers the mentoring research agenda in academia.

The final section brings these ideas together and concludes that mentoring offers great potential for growth and development in many different contexts.

<center>**The Origins and Meanings of Mentoring**</center>

The Ancient Greeks

You may be wondering why it is necessary to understand the history of mentoring. First, history gives us a baseline. If we know where something has come from, we understand how it has evolved anddeveloped over time but also how these early ideas influence the present and possibly the future as well. Understanding the history of mentoring also shows us how it has been created as a social activity. Finally, history is often about versions of a story. In the mentoring world, there are many stories; some are used to present an impression of what mentoring actually is. Let's examine the origins and think about what impression an author is trying to create by linking modern mentoring to history.

To begin at the beginning, the word "mentor" comes from Homer's epic poem "The Odyssey." The prefix "men-" is translated from ancient Greek and means "of the mind" or "one who thinks," and "-tor" is the suffix meaning "man." In the feminine form, the suffix would be "-trix." So, mentor literally means "a man who thinks" and *mentrix* is "a woman who thinks."

The original story of Mentor, found in Homer's "The Odyssey," appears in the section about King Odysseus's son, Telemachus. Telemachus in Ancient Greek means "far from the battle." Telemachus is therefore positioned in the story as weak and in need of protection. The poem is set on the island of Ithaca. Odysseus leaves the protection of his son to his trusted friend, Mentor. Unfortunately, Mentor is not up to the task, and the kingdom becomes unstable due to the arrival of many unsuitable suitors who think the king is dead and wish to marry Queen Penelope. Athene, "the goddess of civil administration, war and, most notably, wisdom" (Harquail & Blake 1993, p. 3), is sent by Zeus to protect the stability and wealth of Ithaca during Odysseus's absence, and she sees Telemachus as key to the achievement of this aim. She appears in the form of Mentor and sets about the task of educating Telemachus in the ways of kingship of the times. Athene sets the young man some challenges. One of these challenges is to take a voyage to find out if his father is dead. During these adventures, Telemachus learns to be a fierce warrior. At the end of the story, Odysseus returns, and Telemachus joins his father to rid the court of the suitors and there follows a very bloody and violent battle in which Odysseus and Telemachus are victorious, as this quotation illustrates:

> So he spoke, and taking the cable of a dark-prowed ship, fastened it to the tall pillar, and fetched it about the round-house; and like thrushes, who spread their wings, or pigeons, who have flown into a snare set up for them in a thicket, trying to find a resting place, and meeting death where they had only looked for sleep; so their heads were all in line, and each had her neck caught fast in a noose. So that their death would be most pitiful. They struggled with their feet for a little, not for very long.
> They took Melanthios along the porch and the courtyard. They cut off, with pitiless bronze, his nose and his ears, tore off his private parts and gave them to the dogs to feed on raw, and lopped off his hands and feet, in fury of anger. (Lattimore, 1965, vs. 461–475)

This quotation from "The Odyssey" is part of the climax of the story, in which Odysseus returns and joins Telemachus to rid Ithaca of the suitors and those who colluded with them while Odysseus was away fighting the Trojan wars. To modern ears, this sounds bloodthirsty, merciless, and vengeful. The

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men who preyed on Penelope and their female collaborators are dispatched and defiled with an element of viciousness and glee.

So, how is it that such violence could be part of our prototype for adult development?

Despite many modern writers (Lean, 1983; Clutterbuck, 1992; Garvey, 1994b Eby et al., 2007; Starr, 2014; Rolfe, 2021), myself included, suggesting that Ancient Greece is the origin of mentoring, the word "mentor" does indeed come from these times but the meaning of mentoring activity as we understand it now clearly does not!

These links form what Garvey (2017, p. 15) calls the "old-as-the-hills" argument. This argument somehow confers substance to the mentoring concept because it is old and has stood the test of time.

Medieval Times

You have probably read or heard that some people (for example, Gay and Stephenson, 1998; Purkiss, 2007; Rolfe, 2021) make links to medieval times by comparing mentoring to the relationship between knight and squire and the craftsperson-and-apprentice model.

What do you think about linking mentoring to the medieval period? On what historical basis do they do this? Let's look at these claims in more detail.

Like the Ancient Greek old-as-the-hills argument, the link to medieval times is also a misunderstood and possibly romanticised notion of the mentoring story.

Medieval times were very different from today. Contemporary accounts suggest that the knight and squire relationship was not based on honor and chivalry as Hollywood would like us to believe! Instead, the relationship was based on feudalism, injustice, disease, and poverty. Essentially, the knight was a mercenary who basically ran protection rackets (Jones, 2015) and the squire was conditioned into this role and exploited along the way. Garvey (2017) argues that this is "a male-dominated narrative of paternalistic care with the agenda being with the mentor or the holder of power" (p. 20).

Is this how we would wish mentoring to be understood now?

The apprenticeship model was no different from the knight-and-squire model. In this period, apprenticeships for poor children were compulsory and legally enforceable. Despite risking imprisonment, it is recorded that 50% of apprentices failed to complete the indenture (Jones, 2015). Parents paid fees to the master, and children were exploited as a form of cheap labor.

Is this how you would like your mentoring program to be?

Probably not! Like the knight-and-squire model, the apprenticeship model is also flawed; curiously, writers make the association with present-day mentoring uncritically. This point is discussed later in this chapter. Both of these links to mentoring are based on romanticized notions of history, perhaps given to us by the film industry!

18th and 19th Century

Having discounted the Ancient Greeks and the medieval period, we come to the 18th and 19th centuries; this offers us something more relevant. Roberts (2000) states that the word "mentor" was not present in the English language until 1750 and that any earlier associations are false. However, it is in early 18th-century France when the first account of mentoring in the form we may recognize it today appears.

Educational content of that time was based on Ancient Greek and Roman mythologies, and this probably explains how the story of Mentor entered people's consciousness in that period of history.

The cleric and educator, Fénelon (1808) published the book *Les Aventures de Telemaque* as an educational treatise in France in 1699. Fénelon's work was translated into English and was first published in England in 1760. Lee (2010) argues that Fénelon's work presents the version of mentoring we are familiar with in modern times, and the word is currently used with reference to Fénelon's character Mentor. Riley (1994) argues that Fénelon's philosophy of love, without the "fear of punishment" or the "hope of reward," is applied to his character, Mentor. Here we have Mentor described as a generous and altruistic character.

When Fénelon's book was published, it was viewed as controversial. Although it was based on "The Odyssey," insofar as the characters are the same, the book, written as a poem, is an account of the growth and development of Telemachus with the help, support, and guidance of a generous and kind Mentor.

Fénelon was of the Enlightenment period in history, and his book deeply influenced educational philosophy, with its roots firmly in the humanist school of learning. It was aimed at spreading morality and enlightened ideas to the widest possible audience, including women and children. Fénelon's Mentor is presented as the hero who made speeches and offered advice on how to lead. Mentor denounces war, indulgence, and selfishness. He argues for altruism and recommends the overhaul of the government, the abolition of the feudalistic mercantile system, and cruel peasant taxes and advocates a parliamentary government and a federation of nations to settle disputes between nations peacefully—an enlightened text indeed!

For his trouble, Fénelon was banished to Belgium and had his pension cancelled by the King. Despite this, *Les Aventures de Telemaque* was translated into several European languages and became a bestselling book. Fénelon's work influenced others in Europe as the mentoring story spread through publications. For example, Lord Chesterfield's (1737–1768) *Letters to his Son*, first published in 1774, urges his son to trust and take notice of his wise mentor. The book *The True Mentor; Or, the Education of Young Men in Fashion* by Caraccioli and published in English in 1760, describes how to be a mentor based on Fénelon's work. The educational philosopher Rousseau published the book *Emile* in France in 1762. Again, this is based on Fénelon's work. Rousseau also said that the ideal class size for education was a one-to-one ratio of student to teacher! Murry published *Mentoria: The Young Ladies Instructor* in London in 1778, a collection of lessons for young women. Honoria published three volumes of *The Female Mentor* in 1793 and 1796, using Fénelon's work as its basis. These works were probably the first descriptions of group mentoring (see Group Mentoring in this chapter and in Chapter 3). The poet Lord

Byron refers to Mentor in three of his poems, "The Curse of Minerva" (1821); "Childe Harold's Pilgrimage" (1829); and "The Island" (1843).

Roberts (1998) argues that Fénelon's Mentor is androgynous and therefore has the qualities of both male and female.

> Fénelon's Mentor demonstrates the ability to proffer calm advice, admonish with reason, nurture, and guide, empathise, display aggression in the protection of his charge and consideration of ending the mentoring relationship. . . . Both stereotypically masculine and stereotypically feminine personality traits seem apparent in Mentor's behaviour towards his charge; after all, Fenelon's Mentor was half-male and half-female. (p. 19)

In brief, Fénelon's Mentor offers us a model of Mentor that is still relevant today and includes such qualities as fostering independence and self-efficacy by supporting and challenging the learner. He bases his educational ideas on what we now might call experiential learning. There is a strong ethical base to Fénelon's Mentor, and it is clear that Fénelon understood mentoring as providing what we might now call psychosocial support and development. Trust was at the heart of Fénelon's Mentor, as was an altruistic intent.

This seems more like the mentors we would like to have in our programs!

According to Irby and Boswell (2016), the term "mentoring" first appeared in America around 1778. They claim that the book published in 1778 by Ann Murry called *Mentoria: The Young Ladies Instructor* was the first time the word "mentor" was used in print in the United States. However, it is curious that Ann Murry's book was published in London, where she was a private tutor to the Princess Royal, Amelia. The introduction of the book is a dedication to Princess Amelia. The book is written, similarly to Honoria's *The Female Mentor*, in the style of a mentoring conversation and was primarily aimed at the education of young ladies. The book was very popular, and by 1823 it had been published in twelve editions. Perhaps the book was exported to America, but, more likely, the first publication in America that used the term "mentor" was a book called *The Immortal Mentor: Or, Man's Unerring Guide to a Healthy, Wealthy, and Happy Life. In Three Parts*. This instructional text was written by Lewis Cornaro, Dr. Franklin, and Dr. Scott and published by Francis and Robert Bailey for the Reverend Mason L. Weems in 1796.

Some cultures are suspicious of mentoring. A 19th-century development offers an explanation as to why. In 1894, George du Maurier published the novel *Trilby*, in which he creates an evil character called Svengali. Svengali is an evil hypnotist with sinister intent who manipulates people to serve his own ends. The novel was a massive success, and in the early days of filmmaking, Svengali was a dominant character in many silent films and later in talking pictures. The character's name has also been associated with mentoring, which perhaps represents the darker side of mentoring, in which the mentor is a controlling figure giving advice.

Not the mentor we would like in our programs!

Modern Developments of the Mentoring Model

William David Moffat created The Mentor Association in America in 1912. This was like a think tank group that gathered together men from different specialisms to share their knowledge. This was disseminated through the publication of *The Mentor*, first published in 1913. The first volume stated in its introduction:

> The object of The Mentor Association is to enable people to acquire useful knowledge without effort, so that they may come easily and agreeably to know the world's great men and women, the great achievements, and the permanently interesting things in art, literature, science, history, nature and travel. (Mabie, 1913, p. 1)

Mentoring in this association clearly had an educative function. In the early days, it was not particularly successful as a publication; however, by 1930, it had achieved a circulation of 85,000. But by 1931, it had stopped publication.

The now well-known Big Brothers Big Sisters of America had their origins in the early 1900s. Big Brothers was started by Ernest Coulter, a journalist, lawyer, and public administrator, because he was concerned about the high numbers of boys that were coming through his courtroom in New York. He noted that caring adults could help to keep these boys out of the legal system, and he set about finding volunteers to offer mentoring to the boys. Around the same time, a group called the Ladies of Charity was established to befriend girls who came through the court system. Both voluntary groups worked independently from each other until 1977, when they joined together to form Big Brothers Big Sisters of America.

In the research world in 1978, Levinson et al. presented a modern concept of mentoring in the book *The Seasons of a Man's Life*. This book presents a substantial model of male development in which mentoring plays a key role. Levinson et al. (1978) use the term "mentor" for someone, often half a generation older, who helps accelerate the development of another in his age-related transitions, which they refer to as "mentoring the dream." The research found that mentoring, when applied to age transitions, could reduce the transition from an average of seven years to three years for those with mentors. Arguably, it was this research that started the movement toward mentoring for career acceleration, and when Collins and Scott published their article "Everyone Who Makes it Has a Mentor" in the Harvard Business Review of 1978, mentoring was expanding in the USA!

In the book *Passages: Predictable Crises of Adult Life* (1976), Gail Sheehy discussed adult development mainly from the female perspective. She noted that mentoring relationships were not so common among women; however, some 20 years later, in her revised edition, *New Passages: Mapping Your Life Across Time* (1996), she adds developmental maps on males and notes that mentoring had become common for women and men alike due to many societal changes since her first book.

In the United Kingdom, Clutterbuck (1985) published a book called *Everyone Needs a Mentor*. This was probably the first publication to look at mentoring in business settings in the United Kingdom, and in 1988, David Megginson published a paper entitled "Instructor, Coach, Mentor: Three Ways of Helping for Managers," and these two publications, taken together, seemed to signal the start of mentoring in business contexts in the United Kingdom a few years behind the United States!

Mentoring in the education sector seemed to start in the early 1990s in the United Kingdom and has been represented through the journal *Mentoring and Tutoring* since 1993. In the United States, publications on mentoring in the education sector were appearing around the same time. Also, during the 1990s in the United Kingdom, the government was investing heavily in mentoring for young people aimed at employment policies and prevention of criminality and drug abuse.

Since these beginnings in in the 1980s and '90s, mentoring activity has spread to many parts of the world where it is employed for various purposes in various contexts. For example, Youth Business International offers volunteer mentoring to support and develop youth entrepreneurship in 52 countries around the world, supporting 169,000 young people in being economically active. Other large international charities such as MSF (Doctors Without Borders), World Wildlife Fund, Greenpeace, and Save the Children have extensive international mentoring programs for staff, and mentoring is found for students, staff, and faculty in the higher education sector in America, Australia, Canada, New Zealand, South Africa, and the United Kingdom (Lunsford et al. 2017).

Further Developments of the Mentoring Model

Mentoring, being a social process, has changed and adapted since its earlier conceptualizations as an essentially one-to-one model. As a social construction, created by people to serve particular contextual purposes, there are now many varied mentoring forms in use around the world. There may be variations in the types of mentees, for example:

- a peer
- a team member or group of mentees
- someone who is younger or older than the mentor
- someone with different experience
- someone who is known to the mentor or someone they have not met before
- someone from a different department, function, or subject discipline
- someone from a different organization

What is common to all cases of mentoring is that the mentee comes to view things in a new way. The mentor promotes change in the mentee, helping that person or persons toward a new vision of what is possible.

Who will be the mentors and who will be the mentees in your mentoring program? Giving thought to that is important because you want to get the right people involved!

Mentoring may have different purposes. For example, mentoring may be used to help with induction, onboarding, or helping students understand college life and its expectations. Mentoring can be used for developing leadership abilities in many different situations, such as at school, at work, and in other social settings. In the workplace, it may assist in succession planning or talent programs and developing potential managers of the future to develop potential and capabilities.

Mentoring could be used to simply help people think about the things that are important to them at whatever age they are. It can also be used to help progress people's careers by supporting learning and development. Another important use of mentoring is to develop respect and to understand and to value cultural diversity. Mentoring can be used to support people in change and transition (see Alred & Garvey, 2019).

What are you going to use mentoring for? Being clear about the purpose of mentoring is very important. If you don't have a clear purpose, it can lead to confusion among those trying to work with it!

Mentoring can also take on different forms and these relate to your purpose and the people you are hoping to take part in the program.

Developmental Mentoring and Developmental Networks

Where the mentor supports the mentee's learning and development is often part of your mentoring structure and can show up within the private, public, or social sectors. It may also include having a mentoring program as a developmental network of people who may provide a range of different kinds of developmental support. Here, a mentee has access to a pool of mentors who may offer different types of mentoring. No person is an island! We all exist within a network of different relationships. This idea, in relation to mentoring, is about individuals who may draw on a number of different mentoring-type relationships in a variety of ways. It may be, for example, to get different views on an issue or it may be to simply run an idea past several people. A mentor may give their mentees access to their networks. To extend this idea further, we could arrive at the notion of a mentoring organization, where there are many mentors willing and able to support others in their learning and development (see Alred & Garvey, 2000; Garvey & Alred, 2001; and Chapter 3 of this volume).

In 2001, Higgins and Kram identified developmental networks in some organizational settings. In essence they suggested that developmentally aware people often had more than one developer, or mentor, and it is possible that an individual will be part of a network of developers who contribute to that individual's learning and development. Some people would make regular use of their developmental network and others would make less use of it.

When you think about your program, what is your view on the developmental network? Are you expecting your mentees to only have one mentor, or would you identify a group of people who could fulfill this role and would be willing to offer their time to help support learning and development? What might be the practical challenges of this? How might the following mentoring forms be helpful or not in your program?

Hierarchical Mentoring

Some (see Chapter 3) suggest that this is the traditional mentoring form. It is about fast-tracking the mentee in their career. This may be linked to talent-management programs in organizational settings, but it may also be found in educational settings where talent might be supported and nurtured by a mentor.

Peer Mentoring

This can take various forms. Essentially, it happens between individuals who may have similar experience, status, or power. In some contexts, this can be referred to as a "thinking partner" arrangement. These relationships are often mutually beneficial, particularly as the potential power dynamics between the dyad are largely eliminated, and this facilitates good, open conversation.

Reverse Mentoring

Here the mentor is younger or more junior than the mentee. It focuses on the differences of experience, understanding, and attitudes as mentor and mentee learn about each other's worlds (Alred & Garvey, 2019, p. 31).

Reciprocal Mentoring

This is where both parties to the relationship work with each other to learn and grow for mutual benefit.

Group Mentoring

Interestingly, this was the type of mentoring described in Murry's and Honoria's publications from the 18th century (mentioned earlier in this chapter). Group mentoring maybe be found in educational settings and, in the United Kingdom at least, in public sector organizations. It is where a mentor may facilitate the learning in a group or, in some cases, it is self-facilitated by group members. This may take the form of action learning sets (see Revans [1983] and Chapter 3 of this volume).

Differentiating Mentoring from Other Developmental Relationships

Do you find that people often ask, what's the difference between coaching and mentoring? What's the difference between an academic advisor and a mentor? Isn't mentoring a bit like counseling? Isn't supervision, tutoring, or pastoral care like mentoring? The answer to these questions is that it all depends on the purpose, context, and intention!

Garvey (2004) suggests that there are three main "helping" activities: counseling, mentoring, and coaching. Counseling is a skilled activity that focuses on the individual's needs and assumes that there is some kind of pathology present. There are many different forms of counseling, but often it is about exploring the past in order to find a new way of behaving or thinking. The counselor attempts to offer a neutral position to the client but is an expert in the psychological state of the client.

Mentoring is also a skilled activity that essentially focuses on the holistic development of the mentee. A mentor has been described as the highest-level educator. The mentor may use their experience and engage in a learning relationship with the mentee. A mentor tends to be actively engaged in the relationship.

Coaching is also a skilled activity and tends to focus on the coachee's performance. The coach is often neutral in relation to the client and will be expert in coaching and not the coachee's context or issues.

However, the borders and boundaries are not always clear, and in the case of mentoring and coaching, there is a view that the skills of the coach can be appropriate for the mentor and that the use of the coach's experience can also be helpful to the coachee. Stelter (2019) argues for what he calls the third generation of coaching. Here he suggests that a coach or a mentor are both "facilitators of dialogue," and Garvey and Stokes (2022) argue that there is a hybridization of coaching and mentoring beginning to emerge across different sectors.

Supervision in the context of education could be a form of mentoring or coaching. However, much depends on how it is done. If its focus is on a nondirective facilitation of the learner's performance, it could be coaching. If it is focussed on the holistic learning and development—often in a nondirective way—on the learner, it could be a form of mentoring. However, in academia, sometimes this may go wrong, and ethical issues start to appear.

If the supervisor is using the learner as "cheap labor," as it was in medieval times with the craftsperson and apprentice model raised earlier in this chapter, it is ethically dubious. If the supervisor is using the learner to write a paper for publication without proper acknowledgement of the learner's contribution, this is also exploitation of the medieval kind! If the supervisor is using the learner to complete their own research without due acknowledgement, this is also ethically wrong.

Advice-giving is also potentially problematic. It is also a common issue in educational settings where the educator is knowledgeable and "tells," rather than facilitates, or "draws out." Advice-giving within coaching is not considered appropriate, nor is it in counseling. In mentoring it is a common misunderstanding of the mentoring process. Here is an important maxim: "Nobody ever took any advice unless they wanted to!" This is a serious point in mentoring. Advice-giving is only OK if the mentee asks for it or if it's been agreed upon in advance as part of the mentoring process. Why? Because, if the mentor continually gives advice, the mentee may become dependent on the mentor and unable to stand on their own two feet! Also, the mentee may become resentful of it, and why would a mentor think that their advice is appropriate or necessary? It is far better to share experience as data to be discussed rather than advice to be followed!

In academic settings, program coordinators need to be prepared to differentiate academic advising from mentoring. It is common in the designing phase of program development for potential participants as well as stakeholders to wonder if a mentoring mission creeps into the role of an academic advisor. Dominguez and Kochan (2020) provide a schema that differentiates mentoring from academic advising: The only area both scored high on was career support. In the other dimensions of skill development, modeling, psychosocial support, and sponsorship and networking, mentoring scored high, while advising scored low. This makes intuitive sense because a mentor, when compared to a generalist advisor, is often more skilled and connected to a profession and professional network, which positions them to be an effective role model and offer comprehensive psychosocial support.

Given that these "helping activities" are, as I stated earlier, social constructions, this dynamic quality will result in a constant shifting of what we understand about their purpose, nature, and form. In considering other development relationships, for example education and training activities, a main difference is that both coaching and mentoring tend to be individual activities, whereas education and training tend to be group activities. As I stated earlier in this chapter, Rousseau argued

in 1772 that the ideal class size for education is one-to-one! Clearly, this represents an ideal; however, it is worth considering that a key value of mentoring is found in its individual orientation. In this way the subject matter under discussion is pertinent to the learner.

Defining Mentoring

So, what about a single definition of mentoring as it is currently—is there one? As one of my students once said, "That's annoying isn't it!" She's right! This section is about why definition is a problem and how else this problem can be viewed and understood. I will start with the challenges of creating a single definition. I will then look at some different definitions from different contexts. Next, I will pull out the common themes in these definitions and then explore an alternative to definition by thinking about these common elements as dimensions of mentoring. Following the exploration of dimensions, I bring these different ideas on the dimensions together into an integrated framework (Figure 1.3) with the aim of it being of practical use in a range of contexts where mentoring might take place. From this, I will consider the idea of moving from definitions to descriptions in order to capture the main aspects of mentoring activity.

Challenges of Creating a Singular Definition of Mentoring

There is no universally agreed-upon definition of mentoring (Dominguez & Kochan, 2020) despite the calls from many quarters for such a thing. Dominguez and Kochan suggest that "providing stature for mentoring discourse, however, is an intricate process in and of itself" (2020, p. 4). One way to explore the intricacies of mentoring definitions, as Dominguez and Kochan suggest, is through the notion of discourses.

Discourses are ways in which people talk about things and they are ways of supporting and transmitting meaning through social contexts. Bruner (1996, p. 39) suggests that people have two main ways of developing a sense of meaning and organising their thoughts. "One seems more specialized for treating of physical 'things' the other for treating of people and their plights. They are conventionally thought of as logical-scientific thinking and narrative thinking" (p. 39).

The logical-scientific way would certainly hold with the notion of a universal definition for mentoring; however, this approach denies the socially constructed nature of mentoring. The National Academies of Sciences, Engineering and Medicine mentoring guide by Nora Beck Tan, entitled *Understanding Your Role as a Mentor*, recognizes this position when she states:

> There is no one-size-fits-all formula for excellent mentorship of postdoctoral Research Associates. Each individual Associate has their own set of strengths, motivators, challenges, and dreams. Research Advisers are unique, too, learning and growing over time as researchers and mentors. As such, each mentoring relationship you are involved in will be unique and "the right" approach to each individual that you mentor will be different. (2020, p. 1)

Mentoring is a series of discourses or narratives located within a variety of social contexts and, as I discussed above in the previous section, it is put to various purposes within those contexts. Bruner

argues that it is the people's contexts and not biological factors that shape human lives and minds (Bruner, 1990, p. 33), and he goes on to say:

> We shall be able to interpret meanings and meaning-making in a principled manner only in the degree to which we are able to specify the structure and coherence of the larger contexts in which specific meanings are created and transmitted. (p. 64)

Narratives involve language, and language, as a vehicle for communicating meaning plays an important part in human sense-making, as Webster (1980, p. 206) suggests: "Language is the primary motor of a culture" and "language is culture in action." At the heart of discourse is interpretation, and it is very clear that one person's interpretation is not the same as another's. Any interpretation of mentoring, for example, has to be made by taking into account the social context in which it is employed and the purpose to which it is put. To illustrate this, here are a series of mentoring definitions found in a range of different contexts: "Mentoring is defined as an intense interpersonal relationship where a more senior individual provides guidance and support to a more junior organizational member." (Kram, 1985, cited in Eby & Lockwood, 2005, p. 442).

In this definition, there are four main elements. The first is *intense interpersonal relationship*; the notion of intense is perhaps a value judgement. The second is that the relationship is positioned as senior to junior and this, therefore, implies experience and lack of experience and perhaps an assumption that the mentor is in the power position. The third is *guidance and support*, indicating what a mentor might do. The fourth element is the context, and in this case it is an organizational one.

> Mentoring is a one-to-one, non-judgemental relationship in which an individual voluntarily gives time to support and encourage another. This is typically developed at a time of transition in the mentee's life and lasts for a significant and sustained period of time. (Community Works, n.d.)

This definition has a social context in mind—the community. It emphasises *non-judgemental, voluntary, support, and encouragement* as key qualities and behaviors within the relationship. It also places an element of timeliness within the relationship and indicates that this relates to personal transitions. In this case, mentoring is aimed at helping social integration of migrant people coming to the United Kingdom. The holders of the power here are the UK home office. Governments do not invest money without an expectation of a social return. Social mentoring activity was a concept borrowed by the British government from the Big Brothers and Big Sisters program in the United States.

In the context of higher education in the United Kingdom, the following is employed by the Centre for Higher Education:

> Mentoring is a protected relationship which supports learning and experimentation and helps individuals develop their potential. A mentoring relationship is one where both mentor and mentee recognise the need for personal development. Successful mentoring is based upon trust and confidentiality. (Centre for Higher Education Practice, n.d.)

The emphasis in this definition is *learning and experimentation*, the *personal development* of both

parties to the relationship, and *trust and confidentiality*. The context is implied, given the location of the definition on a mentoring website for a university.

The next definition stresses *knowledge sharing* and articulates the key skills and behaviors associated with mentoring. Similarly, the context in this definition is also implied. It also clearly states what mentoring is *not confined to*, gives examples of who might be included, and positions the benefits of *collegial support*. The web page argues at length for the need for mentoring faculty:

> Sharing knowledge with colleagues, providing support, listening to and responding to questions, and strategizing solutions to problems. Mentoring is not confined to one stage of a faculty member's career but rather throughout it, as they take on new roles and follow their individual paths. And all faculty members—including both those who are not on the tenure track and those who are tenured—benefit from collegial support. (Misra et al. 2021)

Common Elements in Defining Mentoring

As can be seen from these examples, there are many ways in which people define mentoring, and it seems that there are five elements to the definition in general. The first element is to ask, what is the role of the mentor? This is sometimes specified in definitions; for example, giver of guidance and support, and in others it is implied; for example, helper, role model, guide. Second, what is the purpose of the mentoring activity? For example, sharing knowledge or dealing with transitions. Third, context, and it is here that the context is mostly implied by where the definition appears and, on occasions, it is specified; for example, with an organizational setting. Fourth, who is the mentoring is for? Fifth is the core skills of the mentoring.

The historical roots from the 18th century position mentoring as a fundamental and educative process. It was then, and in many cases still is now, a voluntary activity—that is, about learning and development. It is commonly set within a change or transitional situation for the mentee. Sometimes it is positioned as a mutual relationship where both parties learn and at other times there may be a career or performance orientation. Eby et al. (2007) argue, similarly to the National Academies of Sciences, Engineering and Medicine quotation, that the mentoring relationship is unique to the participants and tends to be defined by the type of support offered within the relationship; this could include personal or emotional support. Johnson (2007) suggests that role modeling plays a part, and career outcomes are relevant. Garvey (1994a) points out that mentoring relationships are dynamic and change over time, and Eby et al. (2007) suggest that this is what creates the uniqueness of mentoring relationships. Given this, an alternative approach to definition seems appropriate and gives rise to the following question: How may these commonalities be used in your program?

Let's now consider that question!

Dimensions of Mentoring

This section takes these commonalities and explores them through three pieces of research. The first makes use of my early research. Next, I draw on Salter's (2013) doctoral research, and the third is Stokes et al. (2020). All three pieces of research identified that mentoring (and coaching) relationships appear

to have dimensions. These are various points on a series of continuums.

I then bring these dimensions together into a framework that aims to help you position and define your own program.

Garvey's Dimensions (1994)

Garvey (1994a) identified five dynamic dimensions within the mentoring relationship, which represent continuums to describe the relationship.

Figure 1.1

Mentoring Relationship Dimensions

Open..Closed

Public ....Private

Formal…...Informal

Active….. Passive

Stable… ....Unstable

Note. From Garvey (1994a, p. 18).

The Open/Closed dimension is related to what the participants talk about within the mentoring relationship. In the Open dimension there are no off-limits topics of conversation, but in the Closed dimension the content is contained to a specific set of topics.

The Public/Private dimension is about confidentiality or who knows about the relationship and what they may need to know.

The Formal/Informal dimension is about the administration or management of the relationship. Formality might be part of a mentoring program and the Informal may be a more natural relationship.

The Active/Passive dimension is about the expectations of the relationship in terms of who does what as a result of the mentoring conversation.

The Stable/Unstable dimension is about consistency in the process. All these dimensions may change over time, and regular review by mentor and mentee of these dimensions is necessary.

Salter's Dimensions (2013)

Salter (2013) explored different perspectives on mentoring and coaching by interviewing people who identified with different forms of both mentoring and coaching. These included:

- executive coaching

- sports coaching

- coaching psychologists

- mentors of young people

- leadership mentors

- mentors of newly qualified teachers

Salter (2013) found that role, purpose, and context influenced how the participants understood either coaching or mentoring within their own contexts. (The framework holds for both mentoring and coaching, but for clarity I will only use words linked to mentoring.) She characterized these as four dimensions, shown in Figure 1.2.

Figure 1.2

Salter's Dimensions

Note. From Salter (2013).

The Developmental dimension assumes that the mentee has experience, knowledge, and skill. The mentor will work to develop and enhance the mentee's experience, knowledge, and skills. This is a desirable state.

At the Deficit end of the continuum, the mentor assumes that the mentee does not have experience, knowledge, or skills and the mentoring will help to fill that gap. This may be where the mentor gives advice, tells the mentee what to do, or teaches them. This may be a good approach where needed, but if this is the mentor's default, it can be a problem for the mentee.

The Directive, similar to the Deficit dimension, is where a mentor gives advice or instructions or tells the mentee what to do by simply assuming that this is the role of the mentor. As discussed earlier, this

is not always a helpful way to mentor. The Nondirective end of the continuum is where the mentor enables the mentee to think things through for themselves and make their own decisions.

The Long-term/Short-term dimension is about the duration of the relationship. In some programs, this may be specified; for example, lasting 1 year, and in other situations it may be a life-long relationship.

Depending on the context, purpose, and roles performed by the mentor, the emphasis on these different ends of the continuum will change. However, a mentor always needs to keep in mind that the ultimate purpose as an educative and developmental process is to enable people to stand on their own two feet!

Stokes et al. (2020)

Reminiscent of Dominguez and Kochan's (2020) reference to discourses in mentoring definitions discussed above, Stokes and colleagues explored the main discourses found in the literature about coaching and mentoring and based their dimensions on these discourses.

They called this approach a "continuum of meaning" to explain them. Their dimensions consider four contexts:

- Learning context
- Economic context
- Temporal context
- Sociocultural context

Within these contexts, the purpose, nature, timeframe, and skills employed are considered.

In the Learning context, they position "performance orientation" at one end of the dimension and "growth and learning" at the other. Much of the discourse in coaching is about performance, whereas in mentoring, it tends toward growth and learning. In the Economic context, they place "formal and paid" at one end and "informal and voluntary" at the other. The coaching discourse is often formal, where a coach may be external to the context of the coachee and subject to a contract and paid, whereas in mentoring it is often informal in contractual terms and voluntary. The Temporal context is about the time factor in both coaching and mentoring. At one end of the continuum is "high pressure" and at the other is "low Pressure." Coaching is often high pressure with an expectation of results in the short-term, whereas in mentoring, the timeline is longer term and more relaxed and organic. Within the Sociocultural context they consider the skills used by the coach or the mentor. In coaching, the discourse is often about the expertise and skills of the coach and their formal training to be a coach, whereas in mentoring there is an emphasis on the job-related experience and knowledge of the mentor. In my view, mentoring is just as skilled as coaching, and mentor development is often ignored in programs.

Using the Dimensions

So, how may these dimension frameworks be helpful to you as a program leader? Garvey (2004) argues that there can never be universal agreement on the meanings of mentoring, coaching, or counseling, but that "in whatever setting the terminology is used, there needs to be a common understanding of meaning within that setting" (p. 8).

Keep this in mind because all participants in your program will need a common understanding of what is meant by mentoring in their context. This is very important because if they don't know, it is a recipe for the whole program to fall apart! Rather than a definition, try to think of a description of mentoring for your program. A description is more likely to help your mentors and mentees understand the needs of your program. To help you create your own description of mentoring for your own context, Figure 1.3 brings together the three dimension frameworks discussed above.

Figure 1.3

A Dimensions Approach to Definition of Mentoring

	Performance/Career Discourse		Context ▼		Learning & Development Discourse
Relationship	⬅━━━━━━━━━━━━━━━━━━➡				
Purpose	Performance improvement Career advancement		**Learning**		Learner-oriented
Approach	Directive Deficit Formal, Closed content				Nondirective Developmental Informal, Open content
	Possibly paid or part of job role		**Economic**		Social, not-for-profit, Public sector, voluntary sector
Timeframe	Short-term Past/present		**Temporal**		Longer-term Future
Skills	Mentor's experience		**Sociocultural**		Mentee's potentials
Form	Traditional, Reciprocal, Reverse, Sponsorship, Executive				Traditional, Reciprocal, Reverse

First, ask yourself, "What is the main purpose of the mentoring in my program?"

Performance or Career

For the learning context, the content of the mentee's learning will be things to improve their performance or advance their career. The approach to facilitating this is likely to be more directive, deficit, and formalized. The subjects for discussion are likely to be on the Closed end of Garvey's (1994a) dimensions.

For the Economic context, the mentor may be external to the organization, paid, or it might be part of their job role.

In the Temporal context, the timeframe of the relationship is likely to be shorter and deal with the present and possibly past experiences.

For the Sociocultural context, the emphasis on the mentor's skills will be their experience—you will need mentors who have the relevant experience. The form the mentoring takes will be traditional, reciprocal, reverse, sponsorship, or executive mentoring as discussed above. The mentor's focus is likely to be on the organizational context and what is good for the organization.

These may change as the relationship progresses and it's possible that the relationship may not position itself at the extreme end of the continuum.

Learning and Development

For the Learning context, the content of the mentee's learning will be related to their agenda and things they would like to learn. On Garvey's (1994a) dimensions, the subject matter will be Open and determined by the mentee.

For the Economic context, the approach that is likely to be taken in the relationship is more Nondirective, Developmental, and on a more informal basis.

For the Temporal context, the timeframe of the relationship is likely to be longer term, possibly a year or more. The temporal perspective will be the mentee's future.

For the Sociocultural context, the emphasis is on the mentor's skill in drawing out the mentee's potential.

The form the mentoring takes will be traditional, reciprocal, reverse, sponsorship, or executive mentoring as discussed above.

These may change as the relationship progresses and it's possible that the relationship may not position itself at the extreme end of the continuum.

Current State of Mentoring in Academia

Unsurprisingly, mentoring is widespread in academia and in particular higher education (HE).

Mentoring takes on many forms in this context, for example:

- undergraduate mentoring
- graduate mentoring
- faculty mentoring
- staff mentoring
- self-mentoring

Undergraduate Mentoring

There are several different mentoring arrangements found in the category of undergraduate mentoring (see Chapter 16). One arrangement is where third-year students may mentor second-year students and second-year students may mentor first-year students. Another is where undergraduate students may volunteer to mentor in high schools and in some cases in primary schools. These arrangements can take the form of one-to-one relationships or groups.

Example

If the arrangement is undergraduate students mentoring in high schools as volunteers, the purpose of the mentoring is learning and development with the intent to help high school students understand something about university life, and the descriptive definition would be influenced by the right-hand column of Figure 1.3.

Mentoring is a year-long program to help the high school student understand the expectations of university life and to help them think about any worries they may have about entering university. It will involve the mentor asking questions and listening to the high school student so that he or she may enter university confidently.

From this description, your mentors and mentees will know who it is for, how long it will last, the purpose of it, the skills needed, and its ultimate aim. Any questions the mentors may have during their initial training can be answered with reference to the right-hand column of Figure 1.3. Similarly, any issues the mentee may have before starting can be answered with reference to the right-hand column.

Graduate Mentoring

An example here may be with graduate students mentoring undergraduates and, similar to the undergraduate arrangements, graduates may volunteer to mentor in schools (see Chapters 20 and 21). In some universities, graduate students may have mentoring arrangements with colleagues in an industry.

Example

The example here is colleagues in an industry mentoring the graduate student. The purpose of the mentoring is career development to prepare the graduate student for entry into the workplace. The descriptive definition would be influenced by the left-hand column of Figure 1.3.

Mentoring is an opportunity for Postgraduate students to engage with professionals from the relevant industry for a period of 3 months. The mentor will focus on job-related issues and questions that the mentee may have. The mentor will share their experiences with the mentee to enable them to enter the workplace with confidence.

Like the last example, your mentors and mentees will know who it is for, how long it will last, the purpose of it, the skills needed, and its ultimate aim. Any questions the mentors or mentees may have during their induction can be answered with reference to the left-hand column of Figure 1.3. The other temporal aspect is that the discussions are more likely to be around the past and the present.

Faculty Mentoring

There are different forms of mentoring arrangements with faculty (see Chapters 22-24). One may be an onboarding mentoring process where a newly appointed academic may get a mentor to support them in the first year or two of starting work in a university. Another may be where faculty members may have a "thinking partners" relationship with each other. This may take the form of a peer mentoring or reciprocal mentoring arrangement. Here, the two parties may provide mutual sounding- board support for each other.

In some universities, mentoring is employed to support faculty as they develop a research profile. The mentor may be an experienced researcher who may support the less-experienced researcher to develop their research ideas and to support them to get their work published.

In other universities, mentoring may be employed to assist the mentee to develop their career. In particular, this may be about gaining promotion or tenure.

In some universities, mentoring is employed for faculty to support a diversity agenda. Here the mentoring may be about supporting women or various ethnic groups to progress in the university system.

Example

The example here is mentoring faculty women of color for career advancement. The mentoring is to help the mentee navigate the social and political environment. This would include helping the mentee cope with microaggressions, oppression, and negative stereotyping in order to increase their confidence and positive self-identity.

> *Mentoring offers one-to-one support for women of color within the university as well as offering access to a wider network of mentors through our consortium and national networks. The mentoring provides an opportunity to learn and discuss social and political issues that may act as barriers to the mentee's career progression. The form and type of mentoring can be adapted to suit the mentee's needs; be this hierarchical, peer, reciprocal, reverse, or networked.*

This description offers a clear purpose but also considerable flexibility in the form the mentoring could take. Central to this program is the mentee's needs. This description is based on research by Tran (2014) that suggests a flexible and networked approach is appropriate for this type of mentoring.

Staff Mentoring

Staff in universities may have mentoring support for a variety of purposes, for example:

- onboarding
- career development
- diversity agendas

The form of mentoring could be peer or reciprocal (see Chapters 25 and 26).

Example

The example here is peer mentoring aimed at improving colleagues' understanding of diversity issues. The relationship is reciprocal. The primary purpose is part of a learning and development agenda. This takes us down the right-hand column of Figure 1.3.

> *Mentoring is a confidential relationship between two colleagues based on a mutual desire to understand social and cultural differences. It is additional to other forms of development offered within the university. Mentoring is a nondirective, nonjudgemental relationship that is broadly focused. The approach is aimed at systemic and individual change and is about creating genuine understanding of each other's lived experiences.*

In this description, the *confidential* nature is stressed first. In this type of program, this is essential. *Mutuality* is also stressed, as are the *nondirective* and *nonjudgemental* aspects. The timeline isn't mentioned in this description; however, it could be assumed that this is a longer-term relationship, and the discussions are about the future. The aim is *systemic* and *individual* change, so there is an organizational and individual focus. As both participants are both mentor and mentee to each other, the aim is mutual understanding and the development of the mentee's potentials.

Self-Mentoring

Self-mentoring is a relatively new development in mentoring. Described as:

A learner of any age, profession, gender, race, or ability who is willing to initiate and accept responsibility for self-development by devoting time to navigate within the culture of the environment in order to make the most of opportunity to strengthen competencies needed to enhance their leadership skills. (Carr et al., 2017, p. 120).

Self-mentors do not work in isolation, as the name suggests. Instead, self-mentoring is a process that may enlist others, as needed, to provide feedback and comment; however, it is essentially a self-reflective activity aimed at developing individual agency.

Although it is clear that mentoring can take many forms within the higher education sector, it is also clear that not all universities provide adequate and appropriate support for mentors in the form of professional development activities.

Developing Mentoring in HE

How might you develop mentoring in your institution?

Pololi and Knight (2005) found that a lack of good mentors may hinder an academic's career progress. Lindén et al. (2010) found that the degree of reciprocal learning was dependent on the behaviors of the mentor. To tackle these issues, Merrick and Stokes (2003) and Colley (2003) argue that the design of any mentoring program is critical to its success. A key question to ask at the outset is "whose agenda is it?" Colley (2003) argues in relation to social mentoring schemes that there are "often unacknowledged power dynamics at work such as, class, gender, race, disability, sexuality that may either reduce or reproduce inequalities" (p. 2).

Colley goes on to argue that unless this issue is addressed, the mentoring arrangements may not develop in positive ways. This is potentially a problem in all the mentoring arrangements raised above. Making use of Figure 1.3 may go a long way to help resolve this issue.

One such problem is that of advice-giving. Rosinski (2004), writing from a coaching perspective, suggests that mentoring is, potentially, at least, about gratuitous advice-giving, but as Moberg and Velasquez (2004) argue, advice is "potentially transformative." Advice should be relevant, address the issue under discussion, and be presented as an option for debate. Mentors who appreciate this may hold back on advice-giving, and this appreciation could also come from appropriate professional development of the mentors.

A mentor offering challenges to the mentee is an important aspect of the mentee's development, but challenge without support could be another problem. This could be ameliorated through the professional development of the mentors.

Consideration is also necessary regarding how each pair is matched. Megginson et al. (2006) suggest voluntary matching but also matching in relation to the program's purpose and, as a preference, for a small degree of difference between the pair (see Chapter 9 for a detailed discussion on matching).

It is clear that the professional development of mentors is important. Giebelhaus and Bowman (2002) and Pfund et al. (2006) find that mentors who are supported and developed for the role have statistically significantly better results than those that are not, and with this in mind, Ramani et al. (2006 pp. 404–407) offer the following practical tips for mentor development:

1. Mentors need clear expectations of their roles and enhanced listening and feedback skills.

2. Mentors need awareness of culture and gender issues.

3. Mentors need to support their mentees but challenge them too.

4. Mentors need a forum to express their uncertainties and problems.

5. Mentors need to be aware of professional boundaries.

6. Mentors also need mentoring.

7. Mentors need recognition.

8. Mentors need to be rewarded.

9. Mentoring needs protected time.

10. Mentors need support.

11. Encouraging peer mentoring unloads the mentor.

12. Continuously evaluate the effectiveness of the mentoring program.

It is also important, as in the example of the faculty mentoring program described above, to explore alternative and new forms of mentoring such as reciprocal, peer, networked, or self-mentoring.

Future Research Considerations in Academia

There is an abundance of research publications on mentoring in higher education. To date, much has focused on the potential efficacy of mentoring (see for example: Tagirova et al., 2020; Mazerolle et al., 2018; Muschallik & Pull, 2016 Gimmon, 2014). These types of evaluative studies on mentoring in higher education date back to the 1990s and as can be seen by the above examples, chosen at random, it persists. Although this approach to research has yielded some helpful insights into various forms of mentoring within the sector and has provided support for the notion that mentoring can and does work, it would seem that little attention has been paid to the issue of program design and mentor development as well as the use of online mentoring, and there is little on the potential power dynamics at play in mentoring in higher education and how it might work. Additionally, the question of ethics within mentoring in the sector is rarely considered.

Summary and Conclusion

This chapter has covered a considerable amount of terrain in relation to mentoring. I first explored the historical development of mentoring and concluded that mentoring's roots are in education, learning, and development. I then explored the similarities and differences between mentoring and other helping behaviors. Then I tackled the problems of defining mentoring. Due to its social constructivist nature, there are many variations, however, it is clear that the purpose and the context help to shape definition.

To overcome the problem of definition, I then explored the idea of dimensions in mentoring and how to use these in practice.

Then I looked at applications of mentoring within academia and again noted that there are many variations of practice; however, there was a lack of development and ongoing support for mentors in HE and the section concludes with some practical help on developing mentoring within the HE sector.

The question of research on mentoring in the HE sector is then considered, and I look at some suggestions for possible areas where more research is needed.

Overall, this chapter tracks the development of mentoring through into the HE sector, from its earliest beginnings in 18th-century France, and I can only conclude that something that has been around and involved in education for so long must have something going for it!

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RECOGNIZING MENTORING PROGRAM IDENTITY AND APPLYING THEORETICAL FRAMEWORKS FOR DESIGN, SUPPORT, AND RESEARCH

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Abstract

Mentoring programs in academic settings take multiple forms depending on the population being served, the context in which they develop, and the purpose and outcomes to be achieved. This chapter identifies critical variables in choosing a solid theoretical foundation for designing effective mentoring programs and interventions in academia.

This chapter specifically addresses four clusters of theoretical frameworks that include psychosocial supports for mentoring, mentoring as a learning partnership, mentoring as career support, and developmental network theories that can be applied to careers.

This chapter is broken into four distinct sections. The first section outlines the process of identifying key components and variables of an individual mentoring program. In the second section, we present two broad categories of frameworks to assist readers in customizing the appropriate theoretical framework that will align their program's needs and goals with their program's local mentoring identity. Section three explains and gives examples of the process for connecting the customized frameworks to the practice of a mentoring program. Finally, section four will share our thoughts on updating, rearticulating, and creating new frameworks to develop a research design to increase stakeholder support of individual programs and contribute to the important body of knowledge regarding university mentoring programs.

Introduction

Mentoring relationships in higher education have been shown to increase student persistence to degree and program satisfaction (Mullen et al., 2010). In addition, early career faculty have experienced greater job satisfaction when they judged their mentoring relationships to be higher quality (Lunsford et al., 2018). Similarly, higher-quality relationships were also related to enhanced scholarly productivity (Ogunyemi et al., 2010). Our focus for this chapter is mentoring relationships that support undergraduate and graduate students in developmental relationships with faculty, peers, and other developers within their broader academic and personal communities. Our goals for this chapter are to help you, program directors, and leadership to:

- Engage with a set of reflective questions to help you articulate your mentoring program's identity within your institution and the larger landscape of higher education;

- reflect upon key theoretical frameworks for the myriad ways mentoring may be enacted in higher education, which you may adopt and adapt to help you enact your identity to achieve your goals;

- design theory-based activities and structures that support mentors and mentees; and

- analyze your program's outcomes to ensure your activities align with your identity and achieve your goals, plan for growth and development, and inform internal and external audiences, including funders, accreditors, and the larger community of mentoring practitioners and scholars.

This five-stage approach is detailed in the Appendix. From this section and our diagram, you will see that we propose a cyclical and iterative process of what may be called a continuous improvement cycle. Reflection on big programmatic questions leads to identifying variables of your mentoring theory. From there, you are ready to analyze and select appropriate theories to guide your work and build program activities grounded in your theories. Once you have done those steps, you may assess your process and outcomes to inform future program growth and outside supporters. You may return to this process often over the course of your program's design, growth, and continuation.

This chapter outlines the process of identifying key components of variables of an individual mentoring program and choosing the appropriate theoretical framework that aligns the program's needs and goals with your local operational definition of mentoring. The chapter also explains the process for aligning the variables, frameworks, and definitions to determine the nature, scope, and identity of a mentoring program.

The proposed framework poses guiding reflective questions to define the purpose (why), the participants (who), the context (where), the objectives and outcomes (what), the processes involved (how), and the time frame of the program (when) while linking each element to the most fitting theoretical framework for practical applications, assessment, and programmatic research.

Under the premise that your program's identity and guiding theoretical framework drives the structure and content of your intervention, in this chapter we explore mentoring relationships first as

providing psychological and social support to help students join and engage with their academic communities; we explore Kram's psychosocial functions and Tinto's theory of social integration. It then moves into mentoring as a learning partnership and brings adult, developmental, social, and organizational learning theories to understand the characteristics and needs of the participants. We then explore career support theories to explain the milestones, transitions, and trajectories in academic careers, with the purpose of designing programs that provide systematic support for academic and personal growth and development. Our final area of mentoring theories embraces expansive developmental networks of peers, mentors, and collaborators. In the 21st century, with opportunities to collaborate globally, networks of mentors and developers can make important contributions to academic and career success.

We conclude by emphasizing the need for a paradigm shift from *transactional* relationships to relationships and programs grounded in greater reciprocity and mutuality. We also propose a translational model connecting theory to practice and practice to research for success in the dynamic landscape of mentoring in higher education.

This chapter will help mentoring program directors and their supporters identify the key mentoring theories and frameworks that make their programs succeed and which theories and frameworks they might add, change, or remove to better serve their goals and achieve their own definitions of mentoring success. To help achieve those goals, we will present a framework for identifying a local definition of your theory of mentoring that serves your program's unique nature and scope. This entire book has valuable information for the many different dynamic strcutures of mentoring relationships, faculty mentoring, peer mentoring, and student mentoring. The concepts covered in this chapter easily apply to all they various dynamics; for clarity, we will focus on student mentoring by faculty in our discussions and examples and leave it to the program directors to individualize the information to their specific mentoring dynamics. Existing models of mentoring may help you place your program into one of many areas:

- Psychosocial support systems (Kram, 1985; Tinto, 2012)
- Learning partnerships that afford participants and communities to develop both hierarchical and more reciprocal relationships and networks (Kolb, 2014)
- Career developmental theories that consider milestones within individual career trajectories
- The importance of developmental networks to growing and sustaining a career in the academy (Griffin et al., 2018)

It is important here to acknowledge mentoring theory's rich theoretical foundations drawn from many disciplines. Throughout this chapter we will highlight theories drawn from organizational science, psychology, human development, and education that are relevant to mentoring in academic settings and how they may inform programming and practice. We further recognize—and celebrate—that your unique identity and theoretical frame may borrow from several interwoven theories and disciplines. We have included several strategic citations and resources throughout this chapter, which you may find useful to consult as you build your theoretical framework. For example, programs often adopt a model to support mentees in career success and/or psychosocial growth, providing foundational mentoring functions long known to support individual growth (Kram, 1985). In today's 21st-century academy,

mentoring conversations may embrace several focal elements drawn from many of the theories we will discuss. Program directors, mentors, and mentees may also address the ever-increasing diversity in higher education and incorporate programs to embrace the rich skillsets and experiences individuals bring to their academic identities (Clutterbuck et al., 2012).

To conclude, we will return to these many theories of mentoring to propose a paradigm shift from transactional and hierarchical relationships to greater reciprocity and mutuality between and among mentors, mentees, and other developers participating in these relationships and programs. We will further propose—even challenge—program directors to adopt a translational model where mentoring theory may inform practice and local practices may inform programmatic and field research.

Identifying Key Components and Variables of an Individual Mentoring Program

Mentoring programs in higher education often start as grassroots initiatives driven by locally identified needs, program goals, or institutional initiatives. Your own programs may have begun with identifying a need to support student success, for which a mentoring program could offer a solution. An institutional or systemic call for mission-centric student engagement may prompt new mentoring initiatives. In each of these cases, we suggest your first step is to reflect upon those goals to establish your program's identity. Our reflective questions will help you develop your program's identity as you determine which theoretical frameworks best support programming that achieves your goals.

We encourage you to start your reflective process with an eye to the kinds of assessment that will serve you and your program best. Designing for formative assessment early will help you monitor your planning and progress, while summative assessment plans will help you prepare to collect and analyze ongoing process and outcomes data (see Chapter 13 for more on assessment, evaluation, and research). Some institutions, such as land-grant or state-funded universities, may be required to articulate and demonstrate achievement of measurable outcomes related to public funding. Private foundations or other internal and external community partners may also require data to support initial participation or continued support.

Here we pose reflective questions to help define your purpose (why), participants (who), context (where), objectives and outcomes (what), processes involved (how), and time frame of your program (when).

- **Why** do we mentor the way we do?
    - Why does our institution need to offer this type of support to students? Why does mentoring seem like a good idea for our campus? Why are we considering this program?
- **Who** participates in and benefits from our mentoring initiatives or activities?
    - Who is our target audience of mentors and mentees? For example, does our program model feature faculty mentors with undergraduate or graduate student

mentees? Do you wish to promote a more distributed mentoring model within networks of developers or communities?

- **Where** do we situate mentoring within our local institutional context?

    ◦ Where do resources, opportunities, and constraints in our context inform our programming model? Where is our program housed and supported? Is it situated in a student affairs department? Is our program institution-wide, enjoying and drawing resources from multiple constituencies? Are you reading this chapter because your program is struggling to find a home—and support—in your community?

- **What** are our program goals, objectives, and outcomes (see Chapter 8 for more on goals, objectives, and outcomes)?

    ◦ Answers to who and why may help you answer this question. What measures will you use to demonstrate program and mentor/mentee success? For example, are your goals based on metrics and milestones that demonstrate successful matriculation into and completion of your degree programs? Are you helping mentees engage with their particular scholarly communities as they develop academic and professional skills? Do your goals include psychosocial support for vulnerable populations to assure them the greatest opportunities for success?

- **How** does our program accomplish its goals? How do we know it is working?

    ◦ How do you engage your mentors and mentees in the activities that embrace your identity? What activities or community practices do you build into programming or support for mentors and mentees?

- **When** is our timeframe for our programming?

    ◦ Some programs are designed as long-term relationships across a student's academic career, while others are meant to provide more short-term initiatives and interventions. The context of your program may also influence timing if you are responding to welcome funding and support opportunities, such as a call for proposals for new models of student support.

Considering these reflective questions helps program designers, managers, and support staff craft their program's identity, so they may clearly state what their programs are about—and what they are not meant to do. Here is a sample identity statement to help you get started:

Community college transfer students sometimes have trouble adjusting to their new home colleges or universities (why). Our 1-year (when) mentoring program pairs faculty leaders with entering undergraduate transfer students (who) to provide them with strong social support networks (what) as they integrate into our 4-year college community. Our program is housed in the Office of Student Affairs (where). With our objective of strong social support, we encourage mentors to introduce their mentees to colleagues and peers who share their academic and social interests to provide a strong network of support from a variety of sources (how). Some of our program activities (how) include transfer student mixers and special club and organization

activities celebrating our transfer students and their place in our college community.

Once you draft your identity statement, we invite you to explore the numerous theoretical frameworks applied to mentoring in higher education. As you read through the frameworks, consider how their overall goals of psychosocial support, learning, career support, and development in social networks resonate with and reflect your own goals. If you already have a program designed, our model of programmatic change for this chapter may be one of "reverse engineering" as we move from these reflective big questions helping you identify your initial program identity and philosophy to theoretical frameworks that may inform or explain your design. From there, we suggest practical applications to embody your program identity as you newly understand it from the theoretical frameworks. Situating your supporting activities in your identity and theory can help translate them into program outcomes and metrics of success. How you achieve your metrics will reflect your identity and theories. Your outcomes may inform future program development, and you may need to share your analyses with internal and external audiences such as funders. Finally, we will encourage you to share your findings with other program directors and designers as part of the larger translational conversations among researchers and practitioners as we build the body of mentoring knowledge.

Mentoring was heralded in the 1970s with the aphorism, "Everyone who succeeds has had a mentor or mentors." (Roche, 1979). With this chapter and this book, we hope program directors will be able to identify the pathway or structure of *how* everyone succeeds in their unique mentoring settings.

Using Frameworks to Identify Program Needs

In this section, we will discuss popular, long-standing models of mentoring that may be present in your own programs. Then we will discuss how understanding these models will allow you to apply them effectively to your new or existing programs. This section will present theoretical frameworks in four sections, (a) mentoring as a psychosocial support system, (b) mentoring as a learning partnership, (c) mentoring as a support for career development, and (d) mentoring as a component of developmental networks.

Mentoring as a Psychosocial Support System

Psychosocial theories provide program directors and participants with language and images of ways to engage in mentoring relationships that attend to the softer, relational side of mentoring. Psychosocial support provides mentees with a sense of belonging and contributes to social integration into their new academic community. We describe Kram's (1985) theory of psychosocial functions and Tinto's (2012) theory of social integration below, along with short examples. As you read through these theories, ask yourself if they capture the relationship goals and activities that exemplify the mentoring theory within your existing programs or if they sound like what you wish to pursue as you design your program.

Kram's Model of Psychosocial Support Functions. Role modeling acknowledges the importance of having one or more models of a successful career and life in the academy on whom the mentee wishes to model their own career (Hager & Weitlauf, 2017). In more recent research, role modeling may stand separate from and complementary to psychosocial functions (Crisp & Cruz, 2009), but we discuss

it here with psychosocial support; it may look like having someone to look up to who demonstrates how one successfully engages with and navigates academic communities. Acceptance and confirmation demonstrate that the mentor supports, respects, and affirms the mentee's identity and skills in their relationships and organization. It may look like a mentor affirming the mentee's knowledge in research, or it may mean showing trust in the mentee's judgment related to pedagogical innovations. Important for today's higher education communities, it may also mean affirming that a mentee from an underrepresented group, such as a first-generation scholar or minoritized individual, truly belongs in the academy and institution.

Counseling support offers a nonjudgmental listener and sounding board; it may look like listening to and providing support for your mentee's academic or career insecurities and being ready to refer students to campus resources for more personal concerns. Finally, friendship is a unique personal quality, maintaining a friendly association beyond the campus and being more mutual and less hierarchical. It may look like shared informal conversations about mutual interests and shared social networks, or it may look like each bringing the other into their separate spheres.

Tinto's Social Integration Theory (2012). This theory proposes that students who are more integrated into the academic and social activities and communities in their colleges or universities are more likely to remain actively engaged and persist to completion. Mentoring programs that embrace a social integration framework provide structures and processes that support students joining social and academic interest groups, including developing relationships with mentors, coaches, and role models. Social integration theories may work well with social or developmental network theories as students may find models of identities within networks across the program and institution.

Program directors who design for social integration may guide students to relevant clubs and campus organizations. Students from underrepresented groups may find this especially affirming if they see others who share their identities integrated into and flourishing in the community.

Mentoring as a Learning Partnership

Kolb (2014) suggests that mentoring be structured as an experiential part of education. This service learning theory posits mentoring as a learning partnership that presents the mentor as more of a facilitator to the mentee's learning processes and presumes the mentee will take on roles and behaviors that demonstrate self-directed learning to provide for their own personal and professional growth. This type of mentoring framework benefits both the mentee and the mentor. Theories we explore here include: adult learning, behaviorism, cognitivist, constructivist, action learning, and transformative learning.

Learning Theories. In this section, we will briefly describe examples of learning theories; citations for each are included on the reference page for deeper investigation.

Adult Learning. Based on the work of Knowles and his colleagues (2014), the mentee is self-directed in their learning and reflects upon current and past experiences. These mentees adapt their learning to their contexts with internally driven purpose while mentors play a facilitating role. Mentoring in this context may look like mentors encouraging their mentee's self-direction and independence to demonstrate support and confidence in their mentee's abilities

Behaviorist. Peel (2005) acknowledged that learning and behavioral changes could occur via positive and negative consequences of those behaviors or reinforcement. In this context, it may look like the mentor is facilitating growth via encouragement and other feedback to support the mentee to adopt behaviors that achieve beneficial milestones like a strong GPA, retention to graduation, or promotion and tenure while avoiding detrimental consequences.

Cognitivist. Driscoll (2000) emphasizes information processing and memory, or recall and reflection on past experiences to determine current and future learning processes and outcomes; it may look like shared reflection to help the mentee modify their engagement to achieve their own best potential.

Constructivist. Baker and Lattuca (2010) state that the context of the mentoring relationship is a crucial element and facilitator of mentees' engagement and success. Knowledge is accumulated through experience with people and processes in the learning environment, and mentees construct meaning of those experiences through reflection to reconstruct new knowledge. It may look like mentors encouraging critical reflection upon achievements and failures to construct new knowledge and awareness of their growing identities.

Action Learning. According to Mullen (2000), action learning is experiential in nature; learning occurs in the doing and mentor-guided mutual reflection. It may look like mentor-supported shared actions and reflections or supported exploration in the professional environment via internships or volunteer work followed by debriefing, analysis, and planning for future engagement.

Transformative Learning. Mezirow and Taylor (2009) imply actively examining beliefs and values to arrive at one's own understanding. It may look like mutual brainstorming of ideas and analysis of learning situations to develop new visions of the mentee's identity and engagement in the academic world.

Mentoring as a Developmental Process

This section will discuss life stage theories, mentoring phases for career support, developmental stages, social theories, and organizational theories; citations are included on the reference page for a deeper investigation of each. Developmental theories approach mentoring by understanding that mentors and mentees are at different life stages as they progress through their educational and professional careers. Developmental theories may guide program directors to consider the phases and processes of mentoring relationships most relevant to their goals.

Life Stage Theory. Levinson's (1978) life stage theory states that careers progress through periods of stability and decision-making and then transitional periods where individuals make changes to established commitments and beliefs. Mentors may be seen as models of identity, guides on a career journey, or sponsors of career success, while mentees are more receptive to and observant of their mentors, embracing relevant behaviors and attitudes. Outcomes may include achieving key milestones of academic progress as mentees develop a sense of identification with the mentor and belonging to the institution or discipline. Mentoring may include structured learning plans for achieving short-term goals while approaching the mentee's big career dream or opportunities to observe the mentor in key aspirational roles.

Career Support Theory. Kram (1985) identified four progressive phases of the mentoring relationship: initiation, cultivation, separation, and redefinition. Mentors take flexible and evolving roles as both their and their mentees' needs change while mentees are still seen as attentive to the mentoring they receive for each stage of their growth. It may look like orientation for new students in the initiation phase, moving to greater depth in the cultivation phase, where the most learning and development occur via career and psychosocial support functions for mentees to achieve their goals of academic success. Finally, separation indicates that the relationship as it was structured has come to an end, but it may continue to evolve through redefinition as both partners adopt new, more reciprocal roles. In this later phase, it may become a friendly social or collaborative relationship as each assumes new roles in their institution or discipline. Throughout this model, a structured learning or career development plan may guide each phase, identifying developmental milestones and career progression.

Developmental Stages Theory. According to Kegan (1982), mentors and mentees actively engage and construct reality within the environment in periods of stability and change, similar to Levinson's (1978) life stage theory. Mentees progress from initial stages of dependence maturing through independence into mutual interdependence with their mentors. Confirmation of growth and development and sometimes contradiction of that growth are seen to progress in a continuous manner. This model offers the most mutuality of the three developmental theories as both the mentor's and mentee's roles will vary depending upon their own developmental stages. Your mentoring program may also be more mutual, adopting co-directed, self-directed, or institutionally derived learning plans.

Social Theory. If your program adopts one of the social theories, you will likely support faculty and peer mentors as role models of academic success in your discipline or program. You support mentors in introducing their mentees to members of their communities. You may pay special attention to how mentees develop crucial cultural capital in the forms of key academic and professional skills and social capital that will build their professional networks and enable them to succeed academically and later (Ahn, 2010). Or you may wish to ensure that mentors and mentees are engaged in mentoring relationships that provide for exchanges of social network contacts and the associated powers that accrue to successful participants (Scandura & Schriesheim, 1994). If this sounds like your program, then you may adopt one or more of these approaches: socialization, cultural/social capital, social exchange, and/or leader-member exchange.

Organizational Theory. Gottfredson and Mosher (2011) explain that if your mentoring program embraces a lens of organizational learning, you have likely designed processes and developmental milestones that support faculty, staff, and students to engage with and succeed at their individual and institutional goals. For example, you may establish protocols for providing reinforcement and feedback to mentors and mentees on their progress and achievements that move them and your program forward. As a director, you may pay special attention to demographic and generational shifts within your program, celebrating the presence of experienced faculty as you welcome the new contributions and perspectives junior faculty and students bring.

Types of Frameworks to Consider for Mentoring Programs

For this section, we have divided and grouped the frameworks into two manageable categories and suggested, in bold, authors and dates for your further research. Once you have considered which

category your program best fits into, you can move to the next section, in which we offer a more detailed explanation of frameworks and a discussion of how those may be blended and customized to meet the needs of your unique program.

Theoretical Frameworks of Mentoring Programs Designed for Career Support

This first category discusses mentoring via career support theories, including foundational mentoring functions (Kram, 1985) and career choice (Theobald & Mitchell, 2002; Holland, 1996). If your program has a career support focus, these functions and decision-making processes may help mentors and mentees to achieve key individual and programmatic milestones, such as required GPA or project completion.

Programs for Career Development Functions

Kram (1985). Sponsorship promotes growth opportunities for the mentee by helping a mentee join a research team that would show them in a positive light to community members and leaders. Protection helps shield mentees from unwanted attention and assignments by advising them to take on manageable loads until they are better situated to launch their scholarly careers. Finally, coaching provides guidance on developing professional skills and navigating institutions and disciplines. It may mean helping a mentee prepare to present a low-stakes local brown-bag talk before an academic conference or suggesting they tackle more rigorous academic work to enhance their progress.

Programs for Career/Vocational Choice Models

Holland (1996). Holland proposed a career choice model grounded in six key personal orientations that may inform your mentoring program theory. If you apply Holland's model, you support mentoring relationships that are realistic, investigative, artistic, social, enterprising, or conventional (RIASEC). As a director, you may pay special attention to matching mentors and mentees with complementary orientations and approaches to their scholarship and student development.

Theobald and Mitchell (2002). Theobald and Mitchell proposed a model that incorporates elements of career and psychosocial development functions with a master-novice element of social networks to foster students' skills and knowledge growth. If you adopt this model for your program, you also attend to mentoring as socialization into career and organizational values and practices. Your model helps mentors and mentees to set individual learning goals that map onto larger institutional or programmatic goals. And you provide mentors with the necessary systemic scaffolds to achieve both of those goals.

Theoretical Frameworks of Mentoring Programs Designed for Supporting Developmental Process

This category of frameworks works well if your program embraces and supports the idea that mentoring occurs within broader communities and networks and that it need not be exclusively dyadic and hierarchical; you may be adopting a developmental network or communities of practice framework. Networking as a practice provides mentees access to the mentor's professional network of internal and external colleagues. Networks are further defined in Chapter 27 and highlighted in the Chapter 28 case

study. Mentees in these models are encouraged to work with, learn from, and model themselves upon various mentors and developers connected to their discipline, program, and institution. While there is great complementarity and even some overlap among these theories, we highlight important distinctions.

Programs for Social Network Support

Blancero and DelCampo (2005), Higgins and Kram (2001). Supported by the work of Blancero and DelCampo (2005) and Higgins and Kram (2001), social network programs support a broad constellation of mentors and developers in a developmental network with the mentee as the hub. Programs designed with a developmental or social network theory provide interactions within established social and academic networks and across network boundaries to foster newer contacts that benefit mentors, mentees, and the institution.

Programs for Social and Developmental Support

Borgatti and Halgin (2011). Social and developmental networks may also include personal developers, such as friends and family who support a new college student with important psychological support or employers who help a student balance work and school to support their aspirations (Hager et al., 2019). Having such a rich and diverse network helps mentees experience greater social integration and institutional commitment, which, for students, may lead to enhanced retention to graduation.

Programs for Communities of Practice Support

Dominguez and Hager (2013) commented that communities of practice act as "nodes of information exchange," in which all community members develop greater mutuality and expertise to enact the practices of the community. This theory derived from Lave and Wenger's (1991) research and builds upon the knowledge within the developmental networks research. A diversified network of multiple mentors provides opportunities for greater depth of socialization as mentees may see more aspects of their identities having legitimate roles in the practices of the community. In addition, it recognizes the legitimate expertise that entering student mentees bring to the community and helps them find a place to share that knowledge while they gain from other members. Finally, it also supports collegial, peer-to-peer mentoring across the network, inviting colleagues to contribute to the shared enterprises of higher education and student development.

Discussion: Connecting Theory to Practice

Arriving at this point in the chapter, you have examined many different yet complementary theories of mentoring and developmental relationships. The broad theoretical frameworks we covered include mentoring as a psychosocial support system, learning partnership, career support, and developmental network models. Now that you have read the chapter and reflected on our big questions, we hope our discussion has helped you identify those key theoretical frameworks that exemplify your current or proposed mentoring program.

Considering your emerging theory of mentoring, we will provide some additional ideas for how some

of the frameworks might look in action. Remember, these recommendations are general, and you will want to adapt them as best suits the theories you have identified along with your institutional and programmatic context to achieve your program's goals.

Mentoring as a Psychosocial Support System

Applying a theory of psychosocial support to your mentoring program helps program directors and participants focus their mentoring engagement around key developmental roles that support mentees in their growth.

Role Modeling

Program directors and mentors could help identify aspirational strangers or community partners on whom the mentees wish to model their success. Mentors should strive to model the norms, behaviors, and attitudes that demonstrate success in their field. Mentees may identify their own best set of role models in their networks and the broader field.

Counseling

Program directors who incorporate counseling into their models may see mentors as friendly and accepting sounding boards for mentees to express their interests and doubts, while directors ensure mentors and mentees are aware of institutional resources for mental well-being concerns.

Acceptance and Confirmation

Program directors can provide welcoming language and activities in their programming model. This psychosocial support may be an especially important element of your programs for marginalized or underrepresented students to help them see their identities represented and feel accepted and confirmed in the academy or the program/institution. Mentors who are members of underrepresented communities may find that students gravitate to them for their shared experiences, providing valuable support to students.

Friendship

If your program adopts a networked approach, you may guide both mentors and mentees to establish and appreciate appropriate boundaries of friendly advising versus friendship. Reminding mentees to establish friendships with a variety of community members and to nurture their personal networks helps them create a rich developmental network. Program directors, mentors, and mentees may also wish to consider friendship as a longer-term aspiration as their relationships progress from collegial but hierarchical to greater reciprocity and mutuality.

Social Integration

Orientation activities to both the program and the institution can provide students opportunities to integrate with like-minded peers. Directors may encourage mentors to develop their own pedagogical skills to capitalize on collaborative learning inside and outside the classroom to encourage peer-to-

peer cooperation and integration. Programs engaged with social integration benefit from collaboration with other academic and student affairs offices, such as Student Affairs and Mental Health Services. Mentors may provide opportunities for groups of students to collaborate on shared projects and congregate in shared academic and social spaces; celebrating students' shared engagement and accomplishments may serve as a reinforcement for those behaviors, further encouraging them to engage and ultimately persist.

Mentoring as Learning Partnership

Program directors who frame their programs with one or more of the learning theories we discussed are likely to see mentoring as a facilitated relationship where they and their programming support self-directed learning and experiences that achieve the mentees' goals. Grounded in theories of adult learning, mentees take an active role in crafting and negotiating their learning goals and experiences. Learning in partnership models helps promote autonomy and self-confidence as mentees approach and achieve their independently or collaboratively designed learning goals, often with the reinforcement of their mentors and communities.

Behaviorist

Program directors who embrace a behaviorist theory reinforce achievements to encourage more behaviors and activities that lead to success. Cultural practices like public recognition can reward mentors and mentees when they achieve key developmental milestones or program successes. Mentors may reward mentees for large achievements like successful completion of a big project or incremental achievements like attending a tutoring session for writing or oral presentations.

Cognitivist

Program directors can design program materials or activities that encourage mentors and mentees to reflect upon their current levels of understanding and achievements along with struggles toward new goals to help them process their learning and plan for future achievements. Mentors should be aware of mentees' prior knowledge, strengths, and challenges, to build upon that structure and scaffold their growth. Mentees can take the initiative to create their own reflection and analysis process that may include progress to desired outcomes and recognition of where and with whom they are experiencing their greatest learning opportunities and where they may be struggling.

Constructivist

Program directors are aware of the strong role their program's context plays in supporting mentees' learning; directors help mentors and mentees to see that constructing learning takes place over time. Mentors create opportunities for mentees to explore their emerging academic identities and express their creativity as they reflect upon what they have learned thus far to create new objectives and construct their identities.

Action Learning. Program directors may establish activities that mentors and mentees ought to accomplish to support active learning by doing. For example, program activities may scaffold scholarly writing and public speaking through authentic practices like community brown-bag lectures

or ensuring that mentors invite mentees to give lectures and lessons in their classes.

Transformative Learning. Program directors with this theoretical framework shape their program to support mentees' transformation of ideas, prior knowledge, and frames of reference via opportunities for innovation and reflection on their learning and the changes it can bring. Mentors may introduce challenges for mentees to analyze and resolve; mentees can engage in diverse networks of communities of practice to approach diverse challenges in their broader communities. Mentees are supported to be active learners, open to transforming, rather than relying solely upon prior knowledge. Mentees learn to embrace the new challenges their mentors and programs introduce as they critically engage their environments to build, expand and transform their frames of reference.

Mentoring With Developmental Theories

Like learning theories, developmental theories acknowledge that learning and growth occur across time and social contexts. Depending upon your approach, you may encourage cyclical passages from stability to more dynamic and transitional periods or a more sequential path across stages.

Levinson's Life Stage Theory

Program directors who adopt Levinson's theory of adult development acknowledge that adults move through periods of stability where mentors and mentees make life choices and commitments and then transitional periods where people change commitments as they reevaluate beliefs about themselves, their careers, and their relationships. Your program model may invite mentees and mentors to reflect on how their relationships have changed or are changing as both grow into their newer identities. Mentors working within this framework support mentees to know that transitions are a natural part of professional life and model how to engage the transitional periods. Mentees will gain valuable perspectives on necessary transitions from mentors and program directors who help them envision their mentoring relationships as evolving and developmental for both parties.

Kram's Mentoring Phases

Program directors can build their program philosophy and activities around the phases of initiation, cultivation, separation, and redefinition. For example, program directors and mentors may actively engage in orientation activities that situate the relationship as supporting both program and professional goals. In addition, program directors, mentors, and mentees who attend to the separation and redefinition phases acknowledge that mentoring relationships evolve, and the relatively short timeframe of undergraduate or graduate studies requires them to plan for these transitions. Directors may establish activities or rituals that mark developmental transitions, and separation may be celebrated as mentees establish their own independent identities.

Kegan's Developmental Stages

Program directors and mentors provide structures and experiences for mentees to move through key stages. Early dependence upon their mentors may suit new students, but greater independence occurs as they develop their skills and construct their academic identities; mutuality and interdependence arise as mentees take on greater responsibilities for their academic work and career trajectories.

Mentors may establish activities like annual check-ins that help identify how mentees are gradually acquiring more sophisticated skillsets they can use with greater independence, ultimately taking a collegial or even leadership role within the work of the community as they redefine their roles and identities. Mentors are encouraged to have frank conversations about mentees' entering skills and developmental needs; mentors and mentees may then create developmental learning plans incorporating signals that mentees are preparing to take on greater responsibility. This may require mentors to identify where they are comfortable handing over the reins and responsibilities to the mentee and how the mentee should demonstrate their own readiness.

Mentoring With Social Theories

Socialization

Program directors provide self-directed, co-directed, and mentor/program-directed learning plans as they socialize mentees into the community. Pay special attention to the context of your program to ensure you have a good mix of professional and social mentors and role models for your community of mentees. Program directors may need to "mentor the mentors" to be those role models, especially when they may not share key identity elements with their mentees. Mentors may share their earliest approaches to academic success by seeking tutoring and study skills, competencies some first-generation students have acknowledged would benefit their performance while contributing to greater social integration as they strengthen their academic skills.

Cultural/Social Capital

Program directors who wish to help mentees develop cultural capital ensure there are opportunities to develop key skills that facilitate their participation and success in their studies and careers. Attending to social capital implies you designed your program to help participants access social networks and the opportunities they may bring. Mentors in this model leverage their skills and cultural capital to help mentees develop theirs as their mentors introduce them to vital social networks and grow their social capital. Mentors may introduce student mentees to key academic or professional associates and associations to generate social capital and networks as they also model cultural skills necessary to engage those networks.

Social Exchange

Reciprocity appears in these relationships as mentors and mentees approach the relationships to gain skills or access cultural and social capital; contexts that support mutual benefits may have elements of social exchange. In this context, your program recognizes that such relationships may anticipate trade-offs or exchanges of time or resources that each is willing to make to achieve individual or programmatic goals; mentors have valuable cultural and social capital in their expertise and professional networks, while mentees bring the enthusiasm of novice practitioners, willing to make new connections. Directors ensure that participants have clear goals and that each can bring something to that exchange.

Leader-Member Exchange

Mentors may provide their mentees access to their networks in exchange for contributing their skills to achieving individual and community goals. Mentees may feel empowered to seek multiple models of academic practices and identities if your program design provides for it. This may look like mentors and mentees identifying their shared goals for the relationship and then assessing how the mentor can bring the relevant individuals and skillsets to support the mentee's development while also maintaining or enhancing the mentor's own institutional and disciplinary power.

Mentoring With Organizational Learning Theories

Organizational Learning Supports

Under this model, your program helps mentees "learn the ropes" of the institution and discipline (Dawley et al., 2008; Thompson, 2016). Your program provides clear individual and big-picture institutional and program-level learning goals, and you and your leadership team have articulated processes to achieve them. As a result, mentors and mentees know what goals are expected, how to achieve them, and how they contribute to your program as they contribute to individual learning and development.

Reverse Mentoring

As a program director, you are acutely aware of the great knowledge bases your faculty mentors bring to their disciplines, research, and pedagogy. You also embrace the idea that students can bring key knowledge, skills, and experiences into the community that more senior members may not have been aware they needed (Chaudhuri & Ghosh, 2012). Cutting-edge methods and ever-increasingly diverse life experiences expand our scientific perspectives as they enrich our scholarly communities.

Mentoring With Career Support Theories

Career Development Functions

Holland (1958) proposed that people choose careers in line with their preferred orientations, so program directors may align their activities with his RIASEC model to promote activities that capitalize upon those orientations in mentors and mentees (Holland, 1996; Theobald & Mitchell, 2002). Kram (1985) provides program directors with rich material for moving from theory to practice in programs designed around career support theoretical frameworks. These include the following.

Sponsorship. Program leadership can provide structural support for faculty to sponsor their mentees in opportunities that highlight their skills and contributions, helping them stand out in the community, especially if you tag them on professional social media. Students who identify as members of marginalized or vulnerable groups may benefit from sponsorship if they lack the social and cultural capital to engage with higher education or access these networks strategically. Your sponsorship shows them and others that they belong in higher education and your community.

Protection. Program directors can provide systemic guidance to help mentors shelter mentees from activities detrimental to their growth. Clear guidelines on program goals for mentors and mentees ensure that mentees engage in activities most likely to help them achieve milestones on their academic paths, such as appropriate GPAs and milestone projects. Conversely, directors and mentors may discourage mentees from taking on too many activities, diluting their attention, and slowing their mastery of skillsets needed in their academic community.

Coaching. Program directors can guide coaching practices that enact your mentoring theory and are relevant to the individual, program, and institutional goals. For example, if your program has established activities that help mentees and mentors achieve key milestones, you can guide mentors to coaching behaviors that are equally focused.

Challenge. As a program director, you may incorporate systemic challenges to encourage mentors and mentees to reach for higher achievements. Mentors are often best positioned to guide mentees   to take on greater challenges by taking a more demanding class or applying for a "reach" fellowship. If their relationship exists within a developmental network or communities of practice model, the mentee may actively seek challenges within and beyond the main mentoring relationship.

Connecting Program Theory to Research

Our next section addresses programmatic assessment and research and asks program directors and leadership to identify how their theoretical frameworks can be used to understand the processes and outcomes of their theories in practice. Your program model may include ongoing institutional research and assessment cycles to measure achievements and plan for future growth; accreditation bodies and funders may require you to report an analysis of program outcomes. You may be interested in communicating your findings to other communities of scholars and practitioners. Professional meetings like the American Educational Research Association or the University of New Mexico Mentoring Institute can provide venues for you to contribute to and update the body of knowledge on mentoring programs. Sharing research from your theoretical frameworks may encourage others to do the same as they learn from your experiences and analyses and vice versa.

Using the Reflective Questions to Continue the Process Into Research

Research and writing can be demanding tasks in addition to managing your program while guiding mentors and mentees, so we encourage you to consider ways to "double dip" your research with your program assessment activities. This may help you join these translational research conversations sharing your analysis and reflections. Returning to our big reflective questions will help you identify relevant measures and programmatic research you wish to conduct.

Here we frame each big question as an assessment tool to help start your own brainstorming. This section is intentionally broad, introducing language across the mentoring theories we have discussed, so you may tailor your own assessments and research to the models you have adopted and adapted. To help you get started, consider these two steps to apply to each reflective question and the more minor questions or examples based on mentoring theories: (a) Start with your theory, then (b) state your research or practice goals associated with each big question. For example:

Why

Why do we mentor the way we do? Why did you select particular theories to frame your program goals and activities? How do your chosen theories help you achieve your goals?

> Our mentoring theory is grounded in a **learning partnership** model of **action learning**. It helps us achieve our goals of helping students develop practical workplace skills as they participate in their mentors' research/creative activities and in the community engagement element of our institutional mission. We measure this with student performance data in "real world" activities and settings such as internships.

If larger institutional goals or systems drive your program and theory, your statement might look like this:

> Our mentoring theory is based on a **psychosocial support systems** model because our institution is committed to providing clearly articulated support for students to establish strong **social integration** and connections with their academic communities to help them achieve their academic and career goals. This model allows us to focus on and measure engagement with key mentoring functions to achieve our goals of students' social integration.

Who

Who participates in and benefits from our mentoring initiatives or activities? Who is our target audience? Context may matter here as well; if your institution has established focal audiences such as first-generation or transfer students for mentoring support, you may be guided by these larger institutional objectives; such goals may also indicate the availability of systemic support and resources. A sample statement could sound like this:

> Our mentoring program applies a **developmental networks** model as it serves the entire undergraduate population of our institution. We provide students many opportunities to identify, meet, and join different academic, professional, and social networks over their undergraduate careers. One measure of our success is students' personal nominations of the faculty, staff, and student communities they engage. We also monitor how many students participate and from which programs, to ensure our program outreach connects with the broadest audiences.

Where

Where do we situate mentoring in our local institutional context, and how do resources, opportunities, and constraints in our context inform our programming model? What elements of the program or institutional structures shape your mentoring program? A sample statement:

> Our **social network** theoretical framework of mentoring is based on **legitimate peripheral participation by our mentees in communities of practice** that include their mentors and other faculty and students. Our mentoring program is sponsored by the Office of Student Success, an interdepartmental student resource. We enjoy the support and oversight of the VP of Student Affairs and VP of Academic Affairs to provide mentoring programs that apply our theory as they support the institutional mission and vision. To recognize and measure the important

contributions that mentoring makes to faculty and student success, our sponsors have secured funding for faculty release time to ensure they can engage with their mentees in formal program activities, informal meetings, and collaboration. Our assessment includes reports of those formal and informal activities and evidence of collaboration that demonstrate mentees' moving from a peripheral role in their mentors' communities to greater participation and independence within those communities.

What

What are our program goals, objectives, and outcomes? How do you translate your theoretical framework into measurable process and product outcomes? For example:

> Our program embraces the theory of **career support**. Our career goals include sponsorship of mentees to new opportunities, provision of challenging opportunities to expand their skill sets, and coaching by their mentors to achieve those challenges and be secure in their public sponsorship. We measure those outcomes with evidence of public or private sponsorship of new opportunities, evidence of increasing challenges undertaken by mentees, and directed learning plans that demonstrate coaching by their mentors. Our long-term measures include first destination employment and graduate programs that alumni report.

What outcomes will help you measure benefits to mentees and mentors to show program success? What are your metrics of success to determine that your process and product outcomes have achieved your goals? Another sample:

> Our mentoring theory applies **behaviorist** elements of reinforcement to encourage mentees to adopt key behaviors and reward them when they do, to achieve their—and our—goals. With that model in mind, we measure success as 80% of our first-generation, first-year undergraduate mentees will participate in a mutually agreed-upon number of academic support activities and achieve a GPA of 2.0 or better in their first year of college.

How

How does our program accomplish its goals? First, consider context in how you form your goals. Then, look at how your activities enact your theory and support your program's goals. A sample statement:

> Our **transformative learning theory** of mentoring means our program staff and mentors ensure that mentees engage in challenging and meaningful activities that contribute to the work of their mentors' communities while pushing mentees to think critically about the scholarly community and their roles in it. To measure these outcomes, we gather documentary evidence of how our mentors increase the challenges they pose to their mentees and the mentees' performance of increasingly sophisticated work; we also require mentees to write reflections on the growing challenges they are undertaking and how they shape their participation in their communities.

When is your timeframe for our programming? Long-term developmental relationships? Short-term initiatives and interventions? For example:

> Our mentoring program is a multi-year model designed to support entering graduate students from historically marginalized communities to join and engage with the academic communities of their mentors. Our organizing **developmental network** framework for this mentoring program relies upon **diverse communities of practice** to help entering students engage with multiple university communities to develop the necessary cultural and social capital for successful participation in those professional networks. To assess the contributions of our model to student success, we have devised a series of survey and interview prompts as students complete each year; the prompts ask students to reflect upon the many individuals they are meeting, collaborating with, and learning from (quantitative reports on who works with whom and how) and how those relationships are contributing to their own academic engagement (qualitative reflections).

Future Research Considerations

Now that you are thinking of how you can apply your theoretical frameworks to understanding and analyzing your program's achievements and we have suggested that you disseminate your findings as research-informed practice, we want to turn to promising directions for future research in the field of mentoring within higher education settings. For this section, we apply a more macro lens of future research, and once again propose examining intersections of complementary theoretical areas—psychosocial support systems, learning partnerships, career and developmental network theories—rather than focusing on singular theoretical frameworks.

We propose that future research analyze the contributions of using a framework like the big reflective questions to establishing a mentoring program identity. This chapter has highlighted how numerous theories can integrate and complement each other. We propose that researchers examine program-level outcomes of mentoring models appropriating elements across the different theoretical frameworks. Our approach of reflecting on big questions to craft a unique program identity may help program designers do just that as they adopt an integrated model and examine its processes and outcomes.

Theories in the mentoring field were once built upon homogeneous populations of individuals in industry and corporate America. However, faculty mentors and student mentees now make up a much more diverse and complex world of higher education. Future research should continue to examine how these theories do or do not help us support the experiences of individuals historically and culturally underrepresented in higher education.

Throughout this chapter, we have encouraged you as program directors, mentors, and mentees to create activities and scaffolds to support mentoring relationships and mentor/mentee success. Future research should continue to elaborate on the outcomes we seek and those we achieve through our mentoring programs. Higher education and mentoring researchers have identified many quantitative metrics and milestones of achievement where mentoring can make a difference. We propose that future

research apply a mixed methods approach to more fully examine and understand the experiences of directors, mentors, and mentees. Doing so will elevate the science of mentoring research as it better elucidates the outcomes and nuanced processes inherent to successful mentoring programs from those three perspectives.

We encourage program directors to participate in translational research conversations and to join research communities to inform and shape the mentoring field. Future research should capitalize on this new community of scholar-practitioners to examine how your theoretically informed practices translate to program outcomes to contribute to the growing body of evidence-based practice and research.

Our chapter concludes with the promise of networking models of mentoring, such as developmental networks and communities of practice, and a challenge to reframe our mentoring models with greater mutuality and reciprocity. Future research should continue to examine the contributions of participation in numerous and varied communities to mentor and mentee success and engagement (Hager & Weitlauf, 2017; Baker et al., 2013). As directors and faculty mentors, we may neglect the contributions of personal communities to supporting student success (Hager et al., 2019). Given the increased diversity present in higher education (Clutterbuck et al., 2012), it is reasonable to hypothesize that a diversely populated community will provide numerous role models of identities and opportunities for acceptance and confirmation of individuals' experiences. Consider how social network analysis can demonstrate the contributions of communities of practice to marginalized scholars (Buchwald & Dick, 2011).

Conclusion

We hope this chapter has provided you, program directors, supporters, and participants with the tools necessary to design or reverse-engineer your program's guiding identity and the theoretical frameworks that can inform and shape your activities, engagement, and assessment. Our reflective questions are tools you may return to routinely to assess how you maintain alignment with your identity or how your program identity may evolve with time and reflection. Cycles of reflection, a theme you noticed in many of our theoretical frameworks, may also inform how you engage with your own theories of mentoring. Your institutional context may change so that a program of traditional dyadic relationships has new access to networks and communities. To capitalize on networking possibilities, you may wish to adopt more elements of developmental networks and communities of practice as you adopt more organizational learning goals in line with institutional shifts. We encourage you to embrace this dynamic and evolving approach as you refine your program identity and theories to design activities that achieve your goals. One of the most expansive and optimistic elements of program design, and often the place designers start, is program activities. We hope our approach helps you design theory-based programming to engage mentors and mentees and support them in their academic journeys.

Grounding your goals, programming, and outcomes in research-based theories can also guide your program assessment. Once your programming is up and running, you will be able to frame assessment metrics that map to your identity and the theories that enact it. For example, if your program uses key developmental milestones to demonstrate success, you can track mentees' achievements like GPA,

retention, transition to candidacy, and completion. If your goals are for psychosocial support, you may measure how the provision of key support functions like acceptance and confirmation contribute to mentees' feelings of social integration and examine their persistence. Your internal assessment will likely have an external audience with funders and supporters within your institution or beyond. From these assessments, sharing your findings with the broader community of mentoring researchers and practitioners is a short, hopefully more approachable, goal.

At this point in the chapter, we bring a bold challenge to program designers: As you craft unique localized mentoring models that capture your program identity, share those with other researchers and practitioners. We propose moving our mentoring models from traditional transactional and hierarchical approaches to embracing greater mutuality among mentors, mentees, and other developers in your communities. This paradigm shift capitalizes on generational demographic changes as our current and future faculty and students are more engaged with collaborative work and learning than in prior generations (Chaudhuri & Ghosh, 2012). The shift invites program designers to embrace the collaboration and reciprocal development inherent in social and developmental network theories and communities of practice while it integrates roles, functions, and practices across the spectrum of mentoring theories. Thus, we have the opportunity to appropriate and extend elements of more transactional mentoring theories into realms of greater reciprocity as we move our field into a more transformational approach.

With a transformational and reciprocal mentoring theory, your relationships and their overarching goals could be housed more expansively within the resources of the broader community instead of within individual dyads. This may help participants and programs establish relationships with the potential for far-reaching scientific and creative collaboration.

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Questions Reflective

Identify Variables

Mentoring Program Continuous Implementation Cycle

Choose Theory

Connect Theory to Practice

Connect Theory to Research

<p style="text-align: right">3.</p>
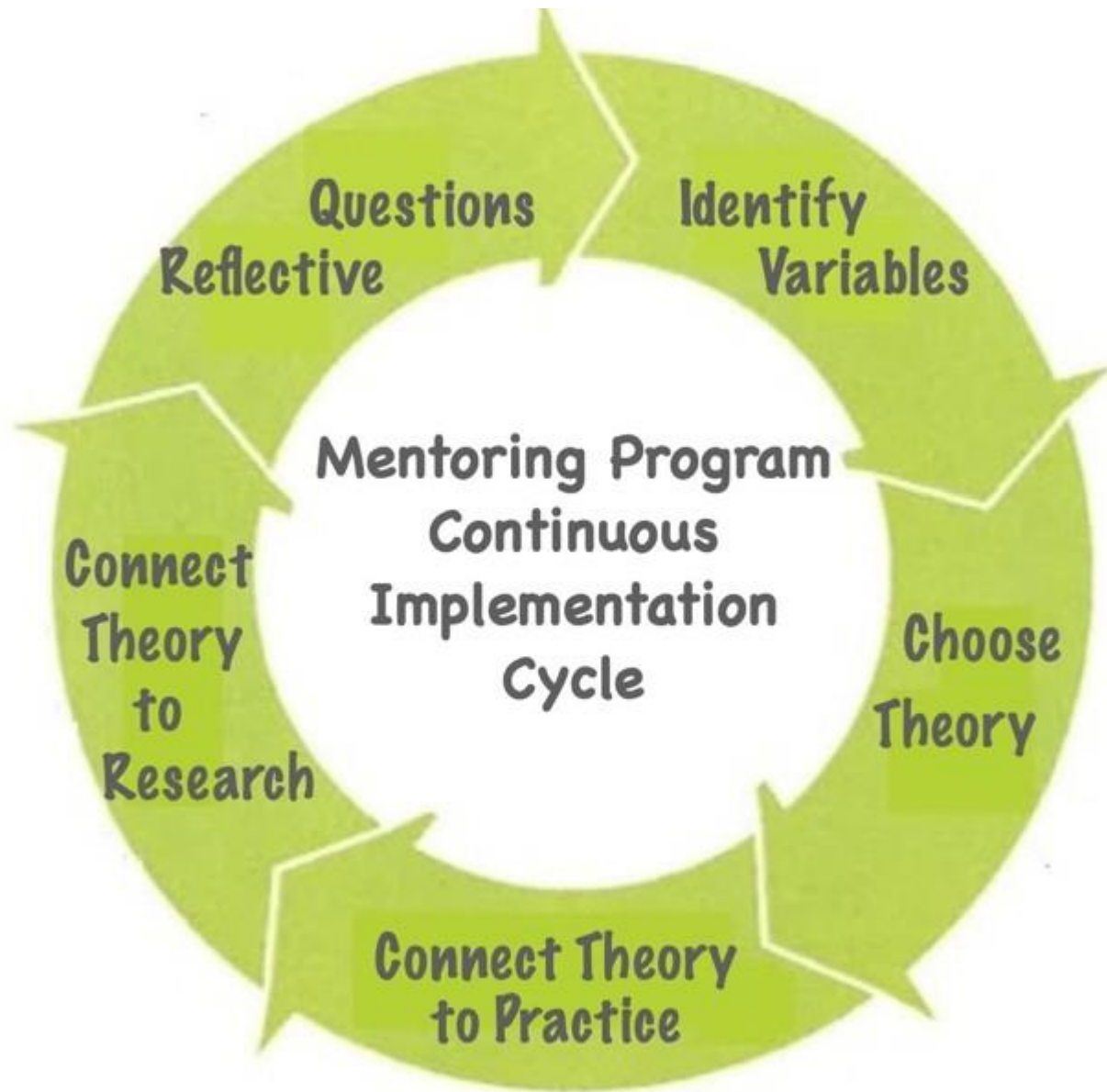
CULTIVATING DIVERSE FORMS AND FUNCTIONS OF MENTORING RELATIONSHIPS WITHIN ACADEMIA

Audrey J. Murrell and Gloria O. Onosu

Abstract

While mentoring is shown to have several positive benefits within academia, it is necessary to focus on the range of different high-quality relationships that are a necessary yet complex aspect of mentoring relationships. Thus, mentoring represents a complex, dynamic, and diverse range of mutually beneficial developmental relationships across diverse functions (career and psychosocial) and types (hierarchical, peer, group, and reverse) of mentoring. The impact of mentoring within academia demonstrates that these relationships are essential for developing a wide range of knowledge, skills, and abilities and developing social relationships and networks that are significant for learning, development, success, and well-being. Our chapter looks at the various forms and functions of mentoring within an academic context that includes hierarchical, peer, group, and reverse mentoring. In addition, we outline directions for future research and practice that explore the ideas of mentoring as a buffer, a tool for social influence, and a catalyst for identity work as people journey throughout their academic and professional pathways.

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Cultivating Diverse Forms and Functions of Mentoring Relationships Within Academia

Traditionally, mentoring is defined as a relationship between a mentor, as a more experienced individual, and a mentee, as a less experienced individual, aimed at promoting personal and professional development (Allen et al., 2017; Chan et al., 2015; Ragins & Kram, 2007). In traditional academic mentoring relationships, a single and more senior or experienced mentor often acts as a role model and adviser, to help the mentee navigate academic and career pathways (Gammel & Rustein- Riley, 2016). However, ongoing mentoring work has expanded the types of relationships beyond the traditional hierarchical mentoring to include different forms such as peer mentoring (Kram & Isabella, 1985; McManus & Russell, 2007), virtual mentoring (Ensher et al., 2003), group mentoring (Friedman et al., 1998; Mitchell, 1999), and reverse mentoring (Murphy, 2012). Our chapter examines various forms of mentoring within an academic context. We suggest that when mentoring is viewed from a traditional lens, it fails to capture the complex and reciprocal nature of high-quality mentoring relationships and thus may limit the impact of diverse forms and functions of mentoring relationships within academia (Ragins, 1997; Murrell et al., 1999).

Our understanding of mentoring relationships continues to evolve based on research and practice that shifts our view away from traditional forms to examining mentoring as diverse and dynamic relationships (Ragins, 1997) within a developmental network (Ragins & Kram, 2007) or mentoring constellations (Higgins & Kram, 2001). Emerging work clearly provides a necessary shift in how we view mentoring from a one-dimensional and transactional perspective to a multidimensional and relational perspective. A relational approach challenges us to view mentoring as a series of mutually interdependent and diverse arrays of reciprocal and complex relationships that can support both the mentor's and the mentee's development (Fletcher & Ragins, 2007; Allen et al., 2004). A relational view of mentoring also includes the mutually interdependent and complex types of mentoring relationships that are dynamic and involve diverse forms or types of mentoring (Gammel & Rustein-Riley, 2016). Also, a relational view is consistent with work by Ragins (2016), who views mentoring as an interdependent series of relationships that supports mutual learning, growth, career, and psychosocial functions. Thus, when the focus is on students, faculty, and staff within an academic context, key outcomes are realized and enhanced through a diverse array of both formal and informal mentoring relationships (Denton et al., 2020).

As a core part of a relational perspective, Kram (1988) originally conceptualized mentoring as providing distinct purposes or functions that are defined by two categories: career and psychosocial. Career functions are those aspects of mentoring that enhance learning the ropes and preparing the individual for advancement within an organization. In Kram's original model, career functions include activities such as sponsorship, exposure and visibility, coaching, protection, and challenging assignments. Psychosocial functions are those aspects of the relationship that enhance a sense of competence, clarity of identity, and effectiveness in a professional role. Psychosocial functions include activities such as role modeling, acceptance and confirmation, counseling, and friendship (Allen & Eby, 2011; Chun et al., 2012; Fowler & O'Gorman, 2005). This perspective is crucial to expanding our view of mentoring as dynamic, diverse, and reciprocal yet often complex developmental relationships (Higgins & Kram, 2001).

For example, Young and Perrewé (2000) found that mentors typically focused their expectations more on career-oriented outcomes while the mentees emphasized psychosocial benefits. In a similar

study, researchers found that mentees' high expectations for receiving both career and psychosocial functions directly influenced their level of satisfaction with each relationship and shaped expectations for future mentoring relationships (Santos et al., 2020). Some scholars eventually pointed to the need to look at mentoring as a series of diverse relationships, as reflected by Ragins's (1997) notion of diversified mentoring and Higgins and Kram's (2001) concept of mentoring constellations. These perspectives allow us to expand our view of mentoring to include a broad array of forms and functions of mentoring that can provide a range of different outcomes from social support, career development, identity formation, a sense of belonging, and social influence across different types of mentoring relationships. Thus, how we define and facilitate mentoring within academic settings must consider not only the relational perspective but also a multidimensional and dynamic view of the forms, functions, and impact of these significant relationships.

We explore several forms or types of mentoring relationships that are frequently used within academic and other related settings. We include research that challenges us to broaden our view of mentoring beyond the traditional one-to-one mentoring to include other relationships such as peer mentoring (Collins et al., 2014; Kram & Isabella, 1985; McManus & Russell, 2007), group mentoring (Friedman et al., 1998) and reverse mentoring (Marcinkus, 2012). Within our chapter, we examine these various forms of mentoring relationships frequently used within academic settings: hierarchical, peer, group, and reverse mentoring (see Figure 3.1). Our goal is to better understand the positive impact of these diverse forms of mentoring relationships that are relational, mutually beneficial, and provide the full range of mentoring functions and beneficial outcomes. We also explore some opportunities for future research and practice by reexamining mentoring relationships as a buffer, as a source of social influence, and as identity work for both mentors and mentees within academic settings and beyond.

Figure 3.1
Diverse Forms of Mentoring Relationships
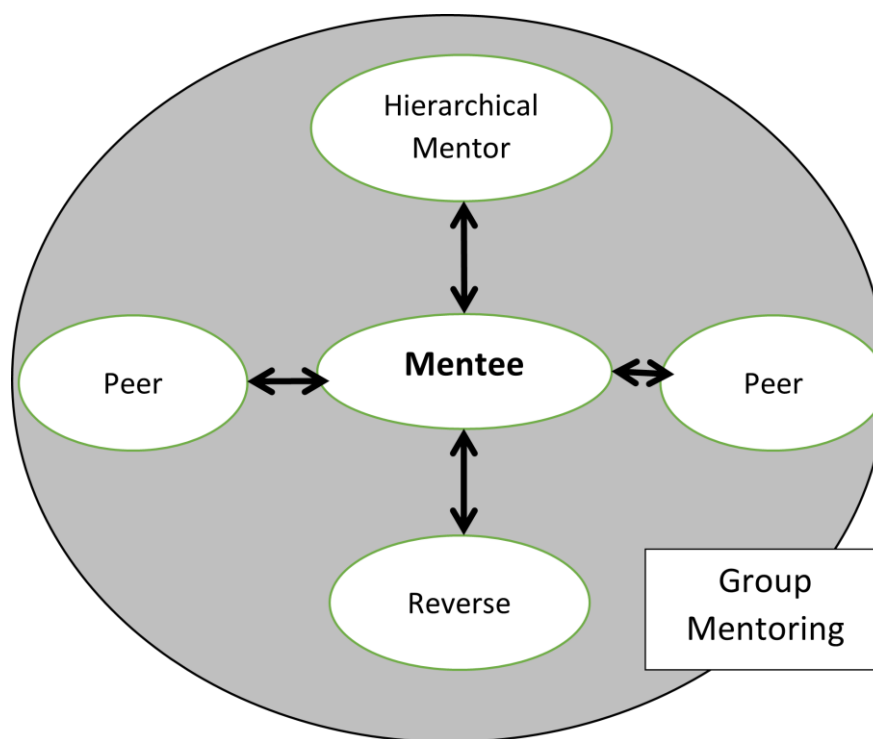
Types of Mentoring Relationships

Hierarchical Mentoring Relationships

Mentoring has traditionally been defined as a one-to-one hierarchical relationship where a more senior or knowledgeable individual uses their influence and experience to help with the advancement of a protégé or mentee (Kram, 1988). These traditional mentoring relationships have been linked to several positive outcomes that include socialization, learning, personal development, well-being, and positive performance outcomes (Allen et al., 2004; Wanberg et al., 2003). Within both academic and work contexts, prior research shows that mentoring is an imperative source of academic, social, career, and emotional growth for both mentors and mentees (Jones, 2013). For example, research shows that individuals receiving mentoring support acquire new skills, self-efficacy, and positive career clarity (Scandura, 1992; Chun et al., 2012). Wang and Shibayama (2022) also observed that mentoring was an important factor in transferring creativity skills between mentors and mentees. Individuals can also develop valuable professional and leadership skills through the mentoring process (Murrell, Blake-Beard, et al., 2008). Thus, developing traditional hierarchical mentoring relationships is relevant to effective mentoring efforts within academic settings.

While traditional hierarchical mentoring has been shown to have a range of positive benefits, there are noted limitations as identified by existing research. Hierarchical mentoring is typically between individuals who differ in organizational level, experience, status, and power within the institution (Lopez & Duran, 2021; Turner, 2015; Wilson et al., 2012). For example, Wilson et al. (2012) investigated hierarchical mentoring as a tool for improving diversity and retention rates for undergraduate students within STEM (science, technology, engineering, and math) fields. They found that students who participated in the hierarchical mentoring program improved significantly in their academic performance. Students in academic programs that included mentoring gained both academic and psychosocial support from these mentoring relationships.

Similarly, hierarchical mentoring programs positively impacted the academic effectiveness of students who participated in the disciplined-based mentoring programs (Sorte et al., 2020). Mentoring also opens up an opportunity for the mentor and the mentee to expand their social networks, which are significant for personal and professional development (Allen & Eby, 2011; Dobrow & Tosti-Kharas, 2012). Other studies found that mentoring positively affected intellectual and social capital development in a program developed for nursing students (Thomka, 2007). Clearly, these types of traditional hierarchical relationships as part of formal programs within academic settings are central to both the personal and professional development of individuals within academia and within their chosen professions (Abalkhail & Allan, 2015; Liu et al., 2020; Giscombe, 2007).

Despite the benefits of traditional hierarchical mentoring, a major challenge of these relationships is the unequal power status between the mentors and the mentees, especially when the relationship involves individuals from underrepresented or marginalized groups (Jones, 2013; Rekha & Ganesh, 2019; Wilson et al., 2012). Some suggest that there is a significant difference in traditional hierarchical mentoring between formal versus informal mentoring relationships, especially in the degree to which they are supported by the institution (Chandler et al., 2011). Whereas informal hierarchical mentoring organically develops between parties in a relationship, formal mentoring is facilitated by the institution between individuals who typically differ in power, status, knowledge, and experience (Burke, 1984; Thomka, 2007; Haggard et al., 2010; Haggard & Turban, 2012).

Pololi and Knight (2005) argue that traditional one-to-one mentoring can produce a range of issues, including unequal power dynamics, diversity clashes, over-dependency, and "cloning" behaviors (trying to duplicate ones own behaviors or approach within the mentee) rather than beneficial developmental relationships. These behaviors are similar to those identified within the typology of negative mentoring relationships outlined by Eby and her colleagues (Eby et al., 2004). Factors such as dominance, exploitation, unconscious bias, and other forms of discrimination can contaminate traditional hierarchical mentoring relationships within academia. Often noted is a failure of traditional mentoring dyads to move beyond the embedded hierarchical structure and relationships found in many academic institutions. We suggest that an exclusive reliance on hierarchical dyadic relationships may perpetuate power differences that produce homogeneity, especially if mentors are allowed to select or are matched to mentees who are similar to themselves, which merely perpetuates sameness within the academy and the workplace (Higgins & Thomas, 2001).

Some suggest that coupling traditional hierarchical mentoring with other types of mentoring, such as facilitated peer-to-peer mentoring, can offer significant benefits, especially for mentees from diverse or underrepresented backgrounds versus traditional hierarchical mentoring alone (Bussey-Jones et al., 2006). Our discussion points to the need for diverse forms and functions of mentoring to be developed within academia to realize the positive outcomes and offset any barriers and potential threats to mutually beneficial and inclusive mentoring relationships. Thus, in addition to understanding the impact of traditional hierarchical mentoring, we expand our discussion to include other forms such as peer, group, and reverse mentoring relationships.

Peer Mentoring

Peer mentoring occurs between individuals operating at similar levels, experience, or power status within the institution (Arthur & Kram; 1985; Kram & Isabella,1985). Relationships that develop as part of peer mentoring can often provide a safe environment for listening, sharing, and developing trust, which helps peers enhance confidence and self-efficacy (Buck, 2020). Peer mentoring has been shown to be mutually beneficial for academic, career, and professional advancement (Lunsford et al., 2017). For example, a study that used a multilevel meta-analytic approach to examine cross-age peer mentoring found clear benefits for those engaged in any formal academic program (Burton et al., 2021). Lagally (2000) evaluated the impact of peer mentoring for trainees within a midwestern organization. The findings from their study found a strong connection between peer mentoring and the development of self-confidence, positive performance, and overall effectiveness among these trainees.

Similarly, Voldsund and Bragelien (2022) explored the role of peer mentoring in fostering effective learning techniques using experiential learning methods. The findings from their research support the notion that when peer mentoring is applied as a learning tool, it can positively affect academic outcomes for students. Their finding is also similar to consistent findings that peer mentoring was identified as the most valued experience during their development among now senior faculty members within a study of academia (Pololi & Knight, 2005).

While we tend to view peer relationships from the broadly defined category, Kram and Isabella (1985) identify several distinct types of peer relationships as effective tools for mentoring within academia and in work settings. They argue that peer relationships can serve the same functions as traditional hierarchical mentoring relationships yet can be more readily available to individuals because of both

sheer numbers and overall accessibility. In addition, Files et al. (2008) suggest that peer relationships may achieve a greater degree of communication, support, and collaboration than hierarchical mentoring relationships. They examined peers across various career and life stages by conducting in-depth interviews of a "focal person" and significant others who were identified during the interview process. Their results supported the notion that peer mentoring provides much of the same range of career and psychosocial support functions as traditional hierarchical mentoring relationships. Peer relationships were shown to provide information sharing, career advice, exposure, coaching, and some aspects of sponsorship and emotional support, feedback, and friendship (Ensher & Murphy, 2011).

Previously, Kram and Isabella (1985) identified several types of peer relationships that help to capture the range of mentoring functions that are also relevant for academic settings. *Information peers* focus on exchanging information or knowledge about work and the institution. These types of peer relationships involve very little personal exchange and may have moderate to infrequent amounts of contact between individuals. Examples in academia include early socialization programs, student peer groups, and efforts to provide career or academic coaching and tutoring (Sachdeva, 1996; Straus et al., 2006). Kram and Isabella argue that individuals can maintain a large number of these types of relationships, which appear to be essential for socialization, knowledge development, and information sharing (Swap et al., 2001).

In contrast, *special peers* involve strong interpersonal ties and a sense of bonding between individuals. Unlike information peers, special peers are involved in more self-disclosure, intimacy, and emotional connection. One may have fewer special peers within academia compared to information peers. Examples of special peers may include programs that directly link peers together with others who share similar academic aspirations or social interests (Lunsford et al., 2017). Their approach is frequently used within campus efforts toward early exposure and socialization, especially for underrepresented students within the academy.

Lastly, they identify *collegial peers* that involve both moderate amounts of self-disclosure and information sharing. While not to the extent of special peers, the personal exchange among collegial peers allows for developing trust and opportunity for honest feedback. Their results find that collegial peers tend to be people with whom a person has worked, shared information, and formed some type of identification through the relationship as both knowledge and personal information was being shared. These types of collegial peer mentoring relationships are often part of ongoing career development efforts within academia that involve partnering with young professionals for early socialization and recruitment efforts. Findings from the interviews conducted by Kram and Isabella (1985) also showed that during early career stages, collegial peers helped individuals define themselves in terms of professional identity, career clarity, and aspirations.

Since early descriptive and conceptual work, a focus on peer mentoring, or what has been labeled "lateral mentoring," has received increased attention, especially as a critical source of both career and psychosocial functions of mentoring (Eby, 1997; Eby et al., 2013; McManus & Russell, 2007). Within academia, peer relationships are a frequently tapped source of both career and psychosocial functions of mentoring involving individuals who may differ by academic discipline or areas of focus within the institution but are similar or equivalent within the organizational hierarchy (Pullins & Fine, 2002).

Peer mentoring can lead to valuable personal feedback, long-lasting friendships, and feelings of support that can fill some of the gaps left by a lack of access to senior or high-status mentors (Bussy-Jones et al., 2006). These findings suggest that paying attention to the impact of peers is a vital area for beneficial academic and career-related outcomes, especially for individuals from diverse backgrounds and identities within both the academic and work settings (Murrell et al., 2021).

Interestingly, some argue that given the changing nature of organizations in terms of being more networked and flatter peer or lateral mentoring is more readily available within the environment and thus provides critical social and career support (Eby, 1997; Ensher & Murphy, 2011; Higgins & Kram, 2001; Higgins & Thomas, 2001). Peer mentoring relationships can provide invaluable task-related knowledge (Eby, 1997) and be a valuable resource for learning, knowledge sharing, and knowledge transfer that are essential for individuals to be effective within their chosen academic pursuits (Young & Perrewé, 2000, 2004). Especially within academia, peer mentoring should be viewed as an essential component of program offerings especially given that peers can be a powerful conduit for the transfer of what is known as tacit knowledge into explicit knowledge (Nonaka, 1994). Some of the knowledge shared between peers is learned from personal experiences and thus not typically part of the formal knowledge management processes within academia (Swap et al., 2001). More importantly, peers may actually compensate for an absence of hierarchical mentoring because peer relationships are less dependent on status, power, and access to formal institutional resources (Ensher & Murphy, 2011; Murrell et al., 2021). In fact, McManus and Russell (2007) argue that mutuality may be more commonly found in peers compared to traditional one-to-one mentoring relationships. Reciprocity may serve as a defining feature of peer mentoring that distinguishes it from traditional hierarchical types of mentoring (Burton et al., 2021).

The notion of reciprocity has been noted as essential for effective mentoring relationships in general (Young & Perrewé, 2000, 2004), we agree that reciprocity, defined in a manner similar to McManus and Russell's (2007), is uniquely facilitated by peer mentoring. However, Ragins and Verbos (2007) argue that what may be central is what is being reciprocated rather than the presence or absence of reciprocity in making any direct comparisons of traditional versus peer mentoring. In some earlier research, three distinct types of peer mentoring (information, collegial, and special peers) were identified by Kram and Isabella (1985) and McDougall and Beattie (1995) as having significant benefits, including reciprocity among peers engaged in these lateral mentoring relationships.

One of the clear benefits of mentoring, especially among peer or lateral relationships, is the access to relational or social ties that provide mutual benefits for both parties. These social ties among peers are not only a strong source of social exchange but also for social influence (Collins et al., 2014). While the strength of these peer mentoring relationships may vary across time and among different individuals, the presence of reciprocal social ties could be a key indicator of effective peer mentoring and social influence (Zagenczyk et al., 2008). Such assumptions of reciprocity have typically not been the case for traditional hierarchical mentoring. Thus, the focus on reciprocity and strong social ties may be another way to distinguish peer from hierarchical mentoring relationships in terms of benefits within academia. Peers may influence the behavior of others in ways that can support individuals' personal and professional development yet not pose a threat to social status or position. There is also some evidence to suggest that peer mentoring may better meet the needs of the millennial and later generations for whom structure, position, and hierarchy are not strongly emphasized (Bussey-Jones et

al., 2006). Frequently, peer mentoring is facilitated within educational programs and other efforts that place students into formal academic, social, or identity groups (Lagally, 2000). Thus, it is vital for us to also explore the impact of group mentoring within academia.

Group Mentoring

There is a wide array of research and educational programs that utilize group-based mentoring approaches used in academia. Typically, group mentoring happens within the collection of individuals who share some affinity (e.g., academic major, social interests, geographical similarity) or identity group (e.g., race, gender, gender identity, culture, ethnicity). These types of group mentoring are the basis for mentoring relationships that could include both peer and hierarchical mentoring (Lunsford et al., 2017; Lutz et al., 2017). Diverse types of group mentoring have been used extensively in both academia and workplace settings. For example, Lutz et al. (2017) found that well-designed group mentoring programs are essential to improving academic and professional development. In a qualitative study of women in academia who participated in group mentoring, Collins et al. (2014) found that the women experienced a strong sense of psychological safety, which was beneficial to career development and overall satisfaction.

Similarly, Kupermine et al. (2020) showed the importance of group mentoring in promoting resilience among vulnerable student populations. Their study found that although participants experience role-modeling benefits with senior mentors who have more experience, group mentoring provided access to individuals who may be at the same level and those who may be more advanced within the institution. Their findings also showed that there was an improvement in problem-solving abilities among peers within group mentoring academic programs. Perhaps a unique aspect of group mentoring provides exposure to a wide array of mentoring forms (e.g., hierarchical, peer-to-peer, reverse) while simultaneously supporting a range of different mentoring functions (career and psychosocial).

Huizing (2012) reviewed the diverse array of definitions and typologies of mentoring relationships, including what they termed one-to-many mentoring, many-to-one mentoring, and many-to-many mentoring. Huizing points out that group mentoring has the unique advantage of facilitating a wide array of mentoring functions that include both career (e.g., personal and professional advice) and psychosocial (support, identity development, validation) dimensions. Mentors within group structures can also play a range of different roles, including ally, champion, role model, advocate, and guide. Group mentoring can include multiple functions (career and psychosocial) as well as multiple forms (peer, traditional hierarchical, reverse mentoring) of mentoring. In addition, these multiple functions and forms can be provided by multiple and diverse relationships with the group mentoring context. The various forms of group mentoring has been cited as a clear advantage on dimensions such as flexibility, inclusiveness, shared knowledge, personal growth, and building organizational capacity (Limbert, 1995).

A significant advantage of various forms of group mentoring within academia that has been noted by previous scholars is the diverse range of skills and competencies that can be developed among both mentors and mentees within these various group structures. Competencies such as knowledge sharing, collaborations, high impact communication, negotiation, and creativity are examples of essential skills

that can be facilitated across various forms or in group mentoring (Huizing, 2012). While these skills can also be developed in traditional one-to-one mentoring (hierarchical, peer, reverse mentoring), the complexity of various forms of group mentoring can provide unique and dynamic context for the development of these competencies, which are essential, for example, given the importance and increase in the use of team science within academic settings and research endeavors (Hall et al., 2018). There is also significant relevance of group mentoring for the development of diversity, equity, and inclusion as group mentoring often cuts across traditional boundaries such as title, rank, position, academic discipline, location, and demographic differences (Fernandez et al., 2019). The use of group mentoring for supporting the development of core competencies among mentors and mentees as well as supporting academic objectives such as diversity and inclusion or effectiveness of team science are valuable areas for attention by future research and practice.

One frequent example of group mentoring within academia is the use of affinity, resource, or identity-based mentoring groups (Denton et al., 2020). Research shows that utilizing group-based mentoring has been a preferred tool for increasing the diversity of women and people of color, especially within science, technology, engineering, and math (STEM) professions. There has also been significant work that shows the positive impact of academic group-based mentoring for supporting first-generational college students and students with disabilities (Byars-Winston et al., 2010). Increased support for diverse student populations reflects a shift in focus within academic programs from what is called an asset-based view is in contrast to a deficit-based approach (Gandara & Contreras, 2009; Valencia, 2010). Having identity-based group mentoring that is sponsored by the institution or organization can be a strong signal of value, legitimacy, and support for diversity as an asset within the institution (Randel et al., 2020; Roberts & Creary, 2011). Some also argue that traditional socialization approaches are often more focused on helping people adapt to the dominant culture versus valuing diverse cultures and identities. Using group mentoring as a tool to support diversity, equity, and inclusion has been extensively used in disciplines and professional fields that are viewed as unwelcoming or lacking inclusiveness of diverse racial, gender, cultural, abilities, or ethnic groups (Denton et al., 2020).

Developing a sense of belonging, inclusion, and overcoming stigmatization are also cited as critical outcomes of group mentoring as part of diversity efforts (Murrell & Blake-Beard, 2017). Group-based mentoring can provide access to relational role models, which are vital for diverse groups within academia to connect with role models of success and resilience. These identity-based mentoring groups can help mitigate feelings of marginalization that individuals from diverse backgrounds experience, especially within higher education, where some argue that issues of privilege are extremely prominent (Randel et al., 2020; Roberts et al., 2009). Others suggest that group mentoring can be a powerful tool for developing interdisciplinary collaboration and knowledge sharing as transferrable experiences that are highly valued in numerous professional settings (Ragins, 2016). Interestingly, affinity groups may also provide a unique opportunity for what is called *reverse mentoring*, where less experienced or positioned individuals "mentor up" to more experienced or advanced mentees.

Reverse Mentoring

Reverse mentoring frequently involves an intergenerational mentoring relationship that occurs where a mentee (less experienced) becomes the provider of skills and knowledge to a mentor (more

experienced) within the mentoring relationship (Chaudhuri, 2019; Chaudhuri & Ghosh, 2012; Chen, 2013). Recently, because of generational differences in the workforce, reverse mentoring has become a valuable tool for personal, academic, and career development (Cismarut & Iunius, 2019; Chaudhuri & Ghosh, 2012). For example, research on reverse mentoring shows that it be helpful for older and more experienced mentors to gain new technological skills or become enlightened about diversity- related issues and emerging social or workplace trends (Baily, 2009). Chaudhuri and Ghosh (2012) observed in their research that mentors gain new and updated skills through these reverse mentoring relationships. Using a qualitative study to investigate the effect of reverse mentoring on development for generations X and Y individuals, Chen (2013) found evidence of both career development and psychological support that allow intergenerational learning to occur within these relationships. For example, a study of dyads by Chen (2013) clearly showed the presence of several mentoring functions (career, psychosocial, and role modeling support) as part of these relationships. While reverse mentoring has some clear benefits, other research finds that individuals had high expectations for reverse mentoring relationships as part of a formal program but often lack trust in their institutions to effectively implement a nontraditional mentoring approach (Cismaru & Iunius, 2019).

Research on reverse mentoring has increased in recent years, yet we still need a great deal of additional research to document both its benefits and its challenges. Some emerging research directly links the benefits of reverse mentoring to the goals of diversity, equity, and inclusion. For example, Murphy (2012) theorized that in reverse mentoring relationships, cultural insights are often shared and, as a result, institutions may better understand and support ongoing diversity efforts. The idea is best illustrated by ongoing research on identity or affinity groups, which may include the potential for reverse mentoring as part of the other mentoring functions that take place within these groups (Chan et al., 2015).

Mentoring as Developmental Networks

Once we acknowledge the diverse forms and functions of mentoring relationships that have been identified by previous research and best practice, it becomes clear that mentoring is beyond a single mentor-mentee relationship and the result of a diverse range of multiple relationships that can form a social network of both personal and career support. Diverse types of mentoring were essential to the redefinition and reconceptualization of mentoring, as outlined by Higgins and Kram (2001). Based on extensive theories and research on social networks, a reconceptualization of mentoring creates a powerful lens through which mentoring programs can be envisioned, designed, and evaluated within academic settings. For example, the extensive research on social network theory within an education context has created a necessary change in perspective on mentoring that moves away from traditional single mentor-mentee approaches toward looking at multiple mentoring relationships that can simultaneously involve group, hierarchical, peer, reverse, and other mentoring forms (Daly, 2010; Paquette et al., 2022). Thus, once we acknowledge and reconceptualize mentoring as diverse forms via a developmental network, we can further expand our perspective toward better understanding the different benefits and resources that are provided by these diverse mentoring networks.

For example, the act of asking for advice, which is core to mentoring relationships, involves the advice-seeker's expectations that a mentor as an advice-giver possesses potentially valuable information and specific competencies to provide useful information. Thus, the exchange of knowledge

is valuable in academic mentoring relationships and often involves the transfer of knowledge, the creation of new knowledge, and reciprocal learning. Also, the sharing of expertise and building a sense of efficacy within these developmental relationships is another resource provided by networked mentoring (Zagenczyk et al., 2008). In fact, Chanland (2022) argues that effective formal programs should include opportunities for multiple relational dimensions across all forms and functions of mentoring as an explicit criterion of overall effectiveness. Reenvisioning mentoring via a social network lens means designing programs that facilitate a range of diverse relationships that enhance personal learning, and provide career clarity and a beneficial educational experience. In addition, Paquette et al. (2022) recommend a targeted approach to mentoring programs that deliberately employs a networked approach to support the diversity of students across both demographic characteristics and developmental stages in order to create an inclusive mentoring community.

Taking a network perspective for understanding diverse forms and functions of mentoring is essential as we look toward building effective formal mentoring programs within academia. These mentoring networks can build an individual's sense of competence or self-efficacy and create a sense of shared capabilities or what has been identified by previous research as collective efficacy (Moolenaar et al., 2010). Looking toward the future, we must expand our view of mentoring beyond specific relationships and toward the value and importance of these networked relationships as an essential element for effective program design, delivery, and long-term impact. Thus, we expand our view to examine mentoring as diverse developmental networks that serve as a buffer, as a means of social influence, and as an opportunity for identity work.

Expanding our View of Mentoring Within Academia

Once we view mentoring as a dynamic and diverse network of developmental relationships that takes on different forms and provides a range of functions, we can then explore some interesting ideas as we look toward future research and practice in academia. While paying attention to the different functions of mentoring relationships (career, psychosocial) and the different types (hierarchical, peer, group, reverse, networked, etc.) is relevant, it is not the only lens through which we can view the design and overall effectiveness of formal mentoring programs. Thus, we outline three emerging perspectives on mentoring and mentoring networks that can expand our existing knowledge about mentoring and its impact within academia: mentoring as a buffer, mentoring as social influence, and mentoring as identity work.

Mentoring as a Buffer

While mentoring has been well-documented to provide both career and psychosocial support, more recent work has examined mentoring as a buffer. The core idea is that mentoring can serve as a buffer, especially for the negative effects of novel, nonsupportive, discriminatory, or even toxic institutions or programs (South-Paul et al., 2021). High-quality mentoring relationships can not only provide support but help mentees cope with the negative impact of an unwelcoming environment or institutions that lack diversity and/or an inclusive culture. The buffering effect means that negative experiences do not derail the advancement and well-being of diverse individuals by providing a buffer against any negative effects on core dimensions such as psychological safety, commitment, and perceptions of institutional support. A buffering effect is impactful in situations where both blatant and subtle forms of bias or

discrimination occur. Research also shows that individuals can experience ambient discrimination, which is the knowledge or awareness of discrimination in the external environment that is aimed at others similar to oneself can trigger the same reactions as if direct actions of bias or discrimination occurred (Ragins et al., 2017; Randel et al., 2020).

Mentoring as a buffer for both direct and ambient experiences of discrimination provides a safe space from potential negative consequences in order to offset the impact of noninclusive cultures and unwelcoming environments. For example, peer mentoring relationships can be a source of empathy that provides much-needed confirmation and validation, especially in the face of subtle forms of discrimination, harassment, and microaggressions. In addition, formal academic mentoring programs that provide senior role models can serve as a buffer by sharing experiences, insights, and advice that helps mentees make sense of negative experiences and effectively navigate the environment (Murrell et al., 2021).

The idea of mentoring as a buffer is documented by research studies examining the notion of psychological contract breach (Zagenczyk et al., 2009). The concept of the psychological contract is based on a person's expectation and perception that a reciprocal relationship exists between them and their institution. Research shows that mentors are able to help individuals recognize a "breach" in the psychological contract when it occurs. These breaches occur when people feel that the institution does not reciprocate with the support that equals their investment and efforts on their behalf. The impact of these breaches produces a negative impact on engagement, satisfaction, commitment, and retention. While having a mentor does not guarantee that all promises by an organization will be kept, mentoring can help with the recognition, interpretation, and identification of coping behaviors that may offset the negative consequences of a psychological contract breach (Zagenczyk et al., 2009).

Coping with the consequences of a psychological contract breach is especially valuable for underrepresented and minoritized individuals who are often the target of both direct and ambient discrimination along with the consequences. In fact, recent research has shown that mentors and role models can reduce the negative impact of psychological contract breaches more effectively than formal relationships such as supervisors and advisors (Haggard & Turban, 2012; Haggard et al., 2010). Thus, mentoring relationships can help diverse mentees to recognize, interpret, and cope with discriminatory experiences that take place within the organization, profession, or external environment. Thus, the need for organization-sponsored mentoring that provides both direct and indirect benefits of different mentoring relationships (e.g., hierarchical, peer, or group mentoring) is both necessary and beneficial as a buffer for the experience of diverse individuals within academia. In explaining the benefit of such formal sponsored programs, McCormack and West (2006) described the impact of a women's group mentoring program at a university where women worked with both mentors and peers to develop and advance their careers into leadership roles. Some formal group mentoring programs reflect elements of the networked mentoring program discussed in Chapter 13. Understanding the working of networked mentoring is a significant aspect that needs to be considered in expanding the view of mentoring within academia.

Mentoring as Social Influence

Looking at mentoring from a relational view can provide a unique perspective that regards these relationships not simply as a resource for support or information but also as having an impact on shaping learning and knowledge-sharing as central to social influences processes. The idea that mentoring relationships can act as agents of social influence is supported by several well-known theoretical perspectives that include social learning theory, social cognitive theory, social information processing theory, and social comparison theories (Bandura, 1986; Nonaka, 1994; Ostroff & Kozlowski, 1992).

Social learning emphasizes the importance of observing and modeling behaviors and interactions as part of the learning and personal development process. For example, a study by Bommer et al. (2003) showed that the likelihood that individuals will perform collaborative citizenship behaviors is directly related to the frequency and consistency of organizational citizenship behavior performed by peers within their environment. Clearly, social learning can influence behaviors, attitudes, and perceptions of individuals who share a social connection within mentoring relationships (Zagencyk et al., 2008). In addition, when these relationships involve some level of reciprocity, the strength of social influence is enhanced (Higgins & Thomas, 2001). Shifting away from a behavioral understanding of social learning, Bandura's (1986) social cognitive theory explained that learning occurs in a social context. Bandura's social cognitive framework viewed the social learning process as triadic reciprocity, which involves a cognitive process that balances the relationship between personal, environmental, and behavioral, thus viewing social learning broadly (Bandura, 1986). Based on their discovery, the social learning theory was revised and renamed social cognitive theory (Kihlstrom & Harackiewicz, 1990). Looking at mentoring through the lens of social influence also focuses on the ideas of knowledge development, knowledge sharing, and knowledge transfer, which have also been associated with effective mentoring programs (Viator, 1999, 2001). It is true that mentoring involves traditional hierarchical relationships, peer-to-peer mentoring, and reverse as well as group mentoring. For example, Files and her colleagues conducted a pilot program for the advancement of women in academic medicine. They found that peer mentoring facilitated knowledge sharing, academic productivity, and enthusiasm for the profession as focal outcomes (Files et al., 2008). Peer mentoring is especially relevant for disciplines where often the types of knowledge shared are complex, dynamic, and contextual in nature (Jarvis-Selinger et al., 2012; MacPhee et al., 2013). We have seen mentoring used as an explicit component of various traditional academic development efforts, such as the preceptor model that is frequently used within training programs for medical and health care professionals (Sachedeva, 1996). Clearly, the power of social influence within mentoring relationships is seen as a core aspect that facilitates knowledge exchange and socialization, which ultimately leads to social influence (Zagenczyk et al., 2008). Knowledge sharing and social influence processes are enhanced where there is a strong connection among those involved based on vital social, professional, or personal identity-based affiliations or identities (Ragins & Verbos, 2007). Thus, we see mentoring as "identity work" as a critical area for future research and practice in academia.

Mentoring as Identity Work

Illeris's notion of identity transformation shows a clear connection between different types of mentoring relationships and identity work that includes personal identity, professional identity, and social group identity (Illeris, 2014). The idea is that challenges of identity formation and

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transformation, which often take place within academic settings, can create distinct challenges or "developmental triggers" that require resources, support, and awareness of identities in order to have positive and productive outcomes (Randel et al., 2020; Roberts et al., 2009). For example, work by Onosu (2021) shows that students who are exposed to cultural immersion experiences engage in facilitated identity work together with both faculty and their peers as mentors. Existing research showed that these cultural immersion experiences impacted students' views of themselves and their relationships with others as part of an identity transformation process. These experiences were facilitated by faculty via hierarchical mentoring relationships coupled together with peer-to-peer mentoring as part of a formal academic program. Evidence supports the role of both hierarchical and peer mentoring as providing a safe space for identity work to occur as students were challenged to understand diverse cultures, reevaluate assumptions, and correct misjudgments about themselves in relationship to others from different backgrounds.

Similarly, feminist models of mentoring and leadership development advocate for developing effective and inclusive leadership development efforts that require providing a safe environment for critical "identity work" to take place (Ely et al., 2011; Murrell & Onosu, 2022). The notion of identity work has also been found to be essential for a range of pipeline development programs, especially those that seek to increase racial diversity in emerging leadership positions (Murrell et al., 2021) and for the identity development of ethical leadership among undergraduate students (Murrell et al., 2020). More research is needed to better understand how different forms of mentoring can support the critical identity work within academic settings that would include diverse forms, functions, and types of mentoring.

Practical Considerations for Mentoring Program Coordinators

Clearly, we have known about the importance of mentoring in developing people for decades. Mentoring has a range of different forms and provides a wide variety of important functions for both mentors and mentees. Yet few organizations have successfully leveraged it as part of their overall approach to enhance academic outcomes and experiences. Our review reminds us that mentoring programs are about more than a single program that is able to solve all of the academic and developmental needs of mentors and mentees in any higher education organization. It is also not about how mentoring programs are used only to make up for lack of support or insufficient infrastructure for academic development and other essential objectives such as diversity, equity, and inclusion. We suggest that practical considerations for mentoring program coordination should take into account the need for *intelligent mentoring*, or developing a comprehensive approach for how institutions can leverage mentoring in a way that aligns with its mission, strategy, and overall institutional (or academic unit) culture (Murrell et al., 2008). Considering any specific mentoring program or effort should begin with moving beyond the ease of one-shot mentoring programs or efforts. These types of approaches may provide an isolated or temporary solution and reinforce the myth that a single mentor or sponsor can address all of the needs of the individual. In order to address the individual's or the organization's diverse and dynamic needs, we should focus on comprehensive mentoring efforts that include a number of different approaches that are grounded in both research and best practices (Murrell & Blake-Beard, 2017).

Intelligent mentoring defines as its core goal the development of a fully integrated, diverse portfolio

of mentoring initiatives into academic goals, program objectives, and the development of students, faculty, and staff across the organization. The efforts toward effective program development must focus on building a diverse portfolio of effective mentoring programs, using mentoring to strengthen institutional capacity, creating sustainable communities of mentors and mentees via training and ongoing support and linking mentoring to core values within the institution, such as diversity, equity, and inclusion. While there are a number of different approaches or strategies to achieve these goals, there are four important keys to intelligent mentoring that are relevant to coordinators who are designing and delivering mentoring programs: *purpose*, *process*, *participation*, and *portfolio*.

Once mentoring has been identified as a tool for use in an organization or within a unit or team, there needs to be significant clarification on what the *purpose* of mentoring is. While it may seem obvious and perhaps easy, it takes a focused effort that engages a diverse array of stakeholders (e.g., students, faculty, staff, alumni, employers, and external partners) to help develop a clear purpose or vision for the overall purpose and desired outcomes of any mentoring program. Thus, intelligent mentoring means first understanding the link between the needs of the organizations and the specific mentoring tool or program that can best fit these needs across essential stakeholders (e.g., students, faculty, etc.) and the organization's culture. Too often, we think of mentoring in a homogeneous fashion, which takes power out of the range of different mentoring structures, types, functions, and methods. Intelligent mentoring means spending a significant amount of time thinking, discussing, clarifying, and reaching a consensus on what the mentoring *purpose* is.

Once clarity and consensus over the purpose of mentoring has been reached, intelligent mentoring then turns a program coordinator's attention to the *process*. The process involves how the program coordinator or leader becomes knowledgeable about the current work of mentoring within their institution as well as best practices across other organizations. It requires a process where stakeholders are not merely surveyed but actively engaged in the process of design, implementation, and ongoing improvement as part of the mentoring program. A focus on customizing the process is significant because mentoring programs should not be considered a one-size-fits-all tool. Instead, program coordinators should engage critical partners and stakeholders to engage in an ongoing process that is evidence-based so the program and its outcomes fit within the organization's culture. Clearly understanding how decisions are made, how successful initiatives have been done in the past, and gaining clarity on the unspoken rules within the institution's culture must be part of the process for developing effective mentoring programs. Thus, a mentoring program coordinator must move beyond "doing some mentoring" or merely copying what has worked for other institutions. The process of learning from other institutions but adapting to the current culture, history, and environment in creating a quality mentoring program is essential and begins with a commitment to an effective and inclusive *process*.

Along with focusing on purpose and process, intelligent mentoring must put forth effort to ensure that there is diversity of stakeholders and perspectives across all stages of program design and implementation as inclusive *participation*. Often, mentoring programs or efforts are designed and delivered in a vacuum. A leader or small planning team often designs a mentoring program without meaningful engagement from the individuals who will be responsible for delivering the program. In addition, these decisions are often made without input from the targets of the mentoring effort. Effective tools for program coordinators mean understanding how to engage a broad array of

individuals who actively participate not only in providing input into the need for mentoring but also into the design, delivery, and ongoing assessment of mentoring programs. Often ongoing assessment is overlooked by program coordinators because active and inclusive participation takes time, effort, and resources. However, the irony is that programs designed without active and inclusive participation are often unsuccessful and create a future need for program redesign, which is ultimately more costly in terms of time, resources, and ongoing support. A central lesson of intelligent mentoring is that effective design, delivery, and assessment of high-quality mentoring programs requires active and inclusive *participation*.

The fourth key for effective program design and delivery is what we have labeled as *portfolio*. Based on valuable lessons learned from examining and facilitating actual mentoring programs across different types of organizations over the years. Effective mentoring programs should not be considered a one-shot or a one-off initiative. Mentoring is most effective when it is part of a holistic portfolio of programs, resources, and efforts to achieve the overall objective outlined by the program coordinator and engaged stakeholders. Thus, designing, implementing, and providing resources for not just a single mentoring effort but for a *mentoring portfolio*. A one-shot approach to mentoring may help a small segment of individuals in the short term; however, to have a lasting and transformational impact, there must be a commitment to address the wide range of needs with different and distinct mentoring tools. Each mentoring tool must be selected to meet the specific purpose, be designed using a clear process, and involve diverse participation to be most effective. No one mentoring program, single design, or web-based platform can accomplish a core objective. Intelligent mentoring means a long- term commitment to providing the strategy, resources, and support for any effort to be sustained over time and to complement ongoing efforts across targeted academic outcomes. Thus, program coordinators should focus on moving beyond a one-shot or quick-fix approach and toward building a mentoring *portfolio*.

Conclusions

While mentoring has been shown to have a number of positive benefits within academia, it is necessary to focus on the importance of developing diverse, high-quality relationships as a necessary aspect of formal mentoring within academia. As we have discussed, mentoring represents a complex, dynamic, and diverse range of mutually developmental relationships across all functions of mentoring (career and psychosocial) and types of mentoring (hierarchical, peer, group, and reverse) within both formal and informal efforts. Mentoring as a resource focuses on the development of different knowledge, skills, and abilities, as well as the cultivation of networks of people and communities that are essential for the development of both knowledge as intellectual capital and relationships as social capital within academia (Swap et al., 2001; Yosso, 2016). Looking at mentoring as a buffer from the negative experience or toxic environments, as a tool for social influence, and as a catalyst for identity work to take place are exciting opportunities for future research and practice within academia that utilize the powerful and beneficial impact of mentoring.

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4.

FORMAL MENTORING PROGRAMS: CHARACTERISTICS, BENEFITS, AND OUTCOMES

Rachel Arocho and Benjamin A. Johnson

Abstract

In this chapter, we review the characteristics of mentoring that distinguish so-called formal from informal mentoring opportunities. Through this discussion, we provide a broad view of what could be formalized and how to distinguish these opportunities. We then turn to a discussion of the observed and anticipated benefits of formalized mentoring (and some benefits of mentoring broadly) and provide an argument for why mentoring, with all its recognized importance and impact at multiple levels, should not be left to chance. By formalizing mentoring opportunities and practices, to varying and customizable degrees, programs and institutions stand to distribute the benefits of such relationships more equitably and more effectively among their members and guard against the recognized risks of mentorship gone wrong. The benefits are clear to both mentees and mentors within formalized mentoring frameworks.

Introduction

Formal and informal mentoring experiences can benefit students, faculty, and staff, though universities tend to focus on the benefit to students or other mentees. Mentoring relationships can certainly exist between faculty members, between staff members, and between students (or any combination of these). Considering the emphasis on mentoring, faculty and staff may ask, what are the defining characteristics of mentoring programs and otherwise so-called formal mentoring opportunities? As faculty and staff more fully understand and plan their mentoring opportunities, or as program coordinators develop support services and resources for mentoring on a campus, mentors can help mentees acquire important skills to become more successful in higher education and in work. While informal mentoring can be extremely valuable, it can be very difficult to consistently make lasting impacts when potential mentors have so many other obligations. As Johnson (2017) argues, it is unrealistic to expect "harried and overtaxed" faculty to develop and carry out their own informal mentoring programs (p. 40). More significant for larger numbers of potential mentees are institutionally supported mentoring programs that formalize the roles of those involved and provide programs through which those being mentored can progress. Rather than leaving mentoring to chance, colleges and universities should create meaningful opportunities for mentoring within an established framework.

Mentoring experiences have lasting impacts on many levels. Individuals who participate in mentoring are likely to experience a wide variety of positive and beneficial outcomes (though the risk of negative outcomes of mentoring should be acknowledged, too), which will be described later. First, though, it can be useful to take a step back and look at the benefits of overall cultures of mentorship; why should an institution or program be interested in supporting mentoring activities and cultures in the first place? Perhaps even more importantly, when considering implementing formal mentoring programs: why add formality to a relationship that may flourish naturally without intervention? In other words, what outcomes of formal mentoring experiences justify the effort of formality?

Common Mentoring Characteristics

Chapter 1 in this handbook invokes the origin story of Homer's *The Odyssey* and the initial use of the term "mentor" to describe someone who cultivates understanding or skills in another. While the mentoring process itself is ancient and predates *The Odyssey*, the popularization of the term dates from the early modern period, and it has especially risen to prominence in the last half-century (Dominguez, 2013).

According to Nora Dominguez (personal communication, August 15, 2022), mentoring opportunities, whether formal or informal, share the following characteristics:

- A proximal connection
- Common interest and a reason to work together
- Affinity for another

These three characteristics may be expressed in different ways, but elements are found in each mentoring relationship. The proximal connection can be in the form of a shared space, perhaps working in the same department or classroom. As technology has developed, this could also be in the form of

an online forum or project. Their common interest in a topic brings the two parties together, and then the relationship (affinity) can develop or struggle over time.

Faculty and staff who value mentoring will likely be drawn to mentor in both formal and informal situations, but there are some differences between formal and informal mentoring that are important to understand when choosing the types of mentoring to pursue. Perhaps the most important distinction of formal mentoring programs is the incorporation of a third party. Indeed, researchers note that third-party affiliation is the *defining* difference between formal and informal mentoring (Eby et al., 2008; Dominguez, personal communication, August 15, 2022). Often involved as some form of affiliation with university administration, this third party clearly affects the other characteristics of formal mentoring. Other significant differences between formal and informal mentoring programs may include the specificity of the content, the way the programs are structured, the culture within the program, and the reporting and funding needs. These characteristics merit a closer look.

Content – More typical of formal mentoring will be a specific expectation of curriculum to be shared. While in either type of mentoring, the focus may be on particular knowledge or discipline- based content, a formal mentoring experience more often has predetermined skills or knowledge those being mentored expect to acquire. This will be largely due to the structure of the program and the expectation by stakeholders that progress and goals will be reported by the end of the mentoring experience. That is not to say that content will not shift during the mentoring experience. It may simply be that formal mentoring programs will see less deviation outside of pre-arranged expectations of learning. This should hold true whether the mentoring experience is research- or program-focused and whether it is catered to faculty, staff, or students. Formal mentoring programs may also provide training or support to the mentors (Campbell, 2007) at a level not typical of informal mentoring.

Structure – To be sure, there are manifold mentoring organizational structures at universities, across or within departments, colleges, centers, or programs. There certainly is a "value of design" in a formal program, as the mentoring experience is set up in a way that will allow it to continue beyond the founding personnel. Successful formal mentoring programs that survive over time are created with specific structures, goals, and metrics (Chubin & Ward, 2009, p. 21). This structure should allow for a way to recruit both mentors and mentees and specify the boundaries, time expectations, and matching of mentors and mentees (Campbell, 2007). See Chapter 9 in this handbook for a discussion of matching, including Chapter 16. In sum, the formalized structure of the experience allows it to be sustained over time and provides some consistency of expectations among the mentors and mentees.

Culture – Every mentoring program has a culture with expectations of how much effort will be expended by any party, the way the parties will communicate, and how each will enter, sustain, and conclude their part in the program. Within formal mentoring programs, however, it is more likely that the culture will be affected by the structure of the program and the built-in reporting system. Formal programs will also usually have a specific target group of mentees, whether related to their area of study, their status as a minority population, or a specific need they share (Campbell, 2007). Another factor that may affect the culture of formal mentoring programs is the value placed on the program by department-, college-, and university-level administrators. Because a third party (often administration) is involved in formal mentoring, the third party's priorities, values, and expectations cannot help but affect the culture of the program.

Reporting – Funds allocated to university mentoring programs are often contingent on reporting and results. Stakeholders wish to see and understand the impact of the mentoring program. Required reports may be a one-time event or based semesterly, annually, or seasonally. While reporting on the mentoring program will take more time and effort, this may also be an important opportunity to assess progress, change strategies as needed, and continue to improve program outcomes. The need for reporting can also be of benefit to new mentors joining mentoring programs. As success and improvements are documented over time, mentoring programs can achieve a more permanent status despite the fact that mentors, of necessity, must come and go in service opportunities. This leads to the continuity and stability of mentoring programs, ultimately benefiting mentees who engage in these opportunities.

To summarize, while formal and informal mentoring may share many common characteristics, formalizing a mentoring program promotes specific features. These include stability, more accountability and reporting, a culture more particularly affected by the priorities and emphases of stakeholders, and the potential for better continuity and maintenance of program identity over time. These characteristics ultimately allow mentoring experiences to be more beneficial to a higher number of mentees.

Purpose and Benefits of Formalizing Mentoring

Mentoring serves many purposes. For the individuals within the relationships, a significant number of benefits have been identified for those receiving mentoring and for those doing the mentoring (Dominguez, 2013; Johnson, 2017; also see Chapters 8 and 10 in this volume). However, an overall mentoring culture also serves an institution well, and by encouraging a healthy mentoring culture through formalized mentoring programs, an institution can harness these relationships and direct energies to the initiatives and outcomes that matter most (see Chapter 6 in this volume for more on gaining institutional buy-in and Chapter 8 for more on identifying outcomes).

It should go without saying that successful mentoring-style relationships can develop out of organic, unmitigated interaction—or "informal" mentoring in the context defined in this chapter. Typically, the term "informal" is utilized to highlight a satisfying mentoring experience compared to the term "formal." Whether or not this is accurate really depends on the context. Informal collaborations with faculty and students, for example, in the hallway, at lunch, or at the office, are typically seen as positive. These microinteractions that extend beyond the classroom are seen as beneficial because of their informal, often personalized nature. Here, the appeal for informal mentoring resonates deeper than that of formal mentoring programs (Nottingham et al., 2017).

It is difficult, however, to make these informal mentoring experiences as impactful as we would like. For example, the ideal that mentoring new teachers "occurs naturally and with enthusiasm" has tended to be the exception; in reality, the mentoring of new teachers "tends to be irregular and short- lived" (Sherif Trask et al., 2009, p. 441). Without a third party (usually including funding or formal recognition) to assist with the mentoring experience, informal mentoring (even sometimes highly structured informal mentoring) may not be the best modality for many mentoring experiences. The power and key distinction of formal mentoring comes when a third party supports the experience through a formal recognition structure. From here, informal mentoring opportunities may occur but

initially lack sufficient impetus to generate the mentoring experience on its own.

There is indeed evidence to suggest that formally and informally mentored individuals receive different levels of benefit, though both receive more advantages than nonmentored individuals (Chao et al., 1992; Eby et al., 2008). Informal mentoring among a workplace or educational institution can absolutely help to achieve the priorities of the institution. Nevertheless, by formalizing the creation and maintenance of mentoring relationships and by supporting, recognizing, and encouraging the continued application of mentorship among faculty, staff, and students, an institution can further enhance the effects of mentoring and spread the benefits more equitably among its members (Crisp et al., 2017). The National Academies of Sciences, Engineering, and Medicine (NASEM) report, *The Science of Effective Mentorship in STEMM* (2019), highlights the way in which formalizing mentoring may more equitably distribute the benefits of mentoring and boost the overall ability of the institution to support its members and pursue its goals as well as support the overall diversification of STEMM (science, technology, engineering, mathematics, and medicine). Indeed, given a history of less-than-encouraging results of some popular diversity-aimed initiatives (such as diversity training for diversifying managerial positions in business; Kalev et al., 2006), the (at least slight) positive results seen of mentoring for diversity in multiple areas might lead one to believe any mentoring is better than none. However, care should be taken when encouraging mentoring and particularly when formalizing it. Although not specific to *higher* education, a review of mentoring literature (Ehrich et al., 2004) in education studies (both alone and compared to medicine and business) suggests more benefits than risks to mentoring for the mentors, mentees, and organizations; though Ehrich and colleagues also highlight the considerations that must be kept in mind when planning to implement mentoring in any setting, including considerations of gender, race, and other identities that will play a role in the mentoring relationships.

One need not fear formalizing mentoring. Formalized mentoring does not refer to one specific type or model of mentoring, and it does not inherently mean that relationships will be robotic, forced, or less beneficial to those involved. In fact, the formalization of mentoring can be as small and simple as helping to match mentors to mentees (e.g., Bell & Treleaven, 2011; see Chapter 9 for more on matching processes) or could be as elaborate as facilitating not only the initial matching but also a proscribed list of activities, interactions, and goals (a variety of experiences is given in the case studies of this volume). Even when the intervention is minimal, however, the benefits of formalizing mentoring can be compelling, particularly by allowing for greater equity in the experiences of receiving mentorship and the benefits these relationships can bring (Crisp et al., 2017; NASEM, 2019; see Chapter 12 in this volume on mentoring for underrepresented populations). Underrepresented students, staff, and faculty may especially benefit from formalized mentorship experiences because they may have the chance to access relationships and resources that would be unavailable to them otherwise. For example, if an undergraduate student does not know to introduce themself to faculty, perhaps due to being the first of their family to attend college, they may miss out on mentoring opportunities from the beginning. Indeed, one of the expected benefits to institutions that formalize mentoring programs is the equitable support of minority students (such as described by Crisp, 2017; NASEM, 2019). For faculty (and postdoctoral trainees with goals to become faculty), receiving formalized mentoring may be one way to overcome gender gaps in research productivity and resulting promotions (Kalpazidou Schmidt & Faber, 2016). Faculty and staff may both benefit from formalizing a mentoring process so that the perceived and realized benefits of such relationships are not concentrated among only those who

attract the attention of mentors or who know to pursue mentoring options (Bhopal, 2019).

Programs that introduce formalized mentoring may do well to monitor the level of formality that best helps their participants. For example, simply providing an opportunity for networking among prospective mentors and mentees may not be enough, and more formalized one-to-one matching worked better for at least one program aimed at mentoring junior faculty (Bell & Treleaven, 2011). Additionally, even when involved in formalized mentorships, both mentors and mentees may default to a sink-or-swim approach that could defeat the purpose of formalizing the mentorship in the first place (Thomas et al., 2015). For both mentors and mentees, various levels of formality may provide benefits in different ways (Komarraju et al., 2010) and should be considered. Continual monitoring and evaluation of a program's functioning and outcomes are essential to providing the most effective and efficient benefits; see Chapter 13 of this volume for more on this point.

For both the individuals doing the mentoring and those receiving mentorship, the potential benefits are numerous and powerful. For an overview, it is useful to consider the benefits relevant to different entities and persons in the mentoring equation. It is also important to note that because of academe's unique cultural and hierarchical contexts, the results from mentoring programs in other sectors may not apply readily to academic situations (Sherif Trask et al., 2009; Zellers et al., 2008). Therefore, careful attention should be paid to the unique nature of academia when considering the context of mentoring relationships.

Benefits to Universities

Formalizing mentoring experiences and encouraging effective mentoring within that formalization has the potential to produce outcomes important to universities and institutional stakeholders. One of the first outcomes universities might be interested in is student retention or graduation outcomes; some work has suggested this may be a benefit of mentoring (Lunsford et al., 2017, see also Chapter 18). One would be hopeful that the other positive benefits identified from mentoring experiences (detailed below) would lead to outcomes like retention and graduation rates. However, some of these results must be interpreted with caution, as the field of mentoring evaluation has not always attended to program evaluation characteristics required to assess cause (Gershenfeld, 2014) or studied a program long enough to see the long-term outcomes of such efforts. In some studies, researchers have attempted to isolate the effects of mentoring experiences through advanced techniques and found encouraging results. For example, in a matched-control, long-term evaluation of a 1-year formalized mentoring experience, a positive association was found between mentoring experiences and first-year retention, but after a long-term follow-up, mentored students' eventual GPA and graduation rates were not statistically different from those of the nonmentored students (Campbell & Campbell, 2009). This is not to say mentoring does not have an effect! Rather, it just means that results should be interpreted with wisdom and that some effects may not be as immediately measurable or profitable as others. For example, after graduation and in later employment, students who report having experienced positive relationships with a professor (although not specified whether it was a formal mentorship, that may be one context in which such a relationship would develop) are more engaged with their work and more likely to be considered thriving than those who cannot report such experiences (Gallup & Purdue University, 2014/2016). Also, although not specific to employment in higher education, undergraduates are more attracted to organizations with stated formal mentoring. This is particularly true of those

students with learning-goal orientation (Allen & O'Brien, 2006). A plethora of positive personal, emotional, and academic outcomes besides graduation and GPA are also noted in prior work (e.g., Lunsford et al., 2017) and reviewed below. The characteristics of the mentoring relationship must also be considered when thinking about mentoring outcomes for students; both mentoring configuration and the match between mentor and student are imperative to understand outcomes (see Chapter 3 for types of mentoring and Chapter 9 for more on matching).

For faculty and staff, a strong mentoring culture and positive mentoring experiences are powerful predictors of outcomes important to institutional priorities (Davis et al., 2016). In fact, because of the growing workload and changing nature of faculty roles, having multiple mentors and an overall supportive mentoring culture may be the best way to implement positive faculty development from mentoring (de Janasz & Sullivan, 2004; Kalpazidou Schmidt & Faber, 2016). Also for certain groups of faculty, mentoring may help reduce gaps often seen at the highest level of the professoriate. In one example, women faculty receiving a mentoring program stayed at their institution more, received more grant money, were promoted more, and had better perceptions of themselves compared to nonmentored women (Gardiner et al., 2007). Indeed, drawing on the work of those before her, Dominguez highlights how formal mentoring can help mentees address "the complexity of work settings" and how "mentoring programs have been proven to be an effective strategy to increase personnel retention and satisfaction, to accelerate the development of leadership, and to reduce the learning curve in response to a more demanding, competitive, and global market" (Dominguez, 2013, p. 2).

Importantly, effective and intentional mentoring could be a way to move faculty energy and institutional recognition for faculty work toward the scholarly teaching model proposed by Boyer (1990). For example, actively mentoring graduate students into the teaching side of faculty life could encourage intentional, scholarly, and reflective teaching (Sherif Trask et al., 2009). The proposed changes would then result in better, more effective teaching, leading to better experiences for students who are working under and with more engaged faculty. Other significant benefits to universities that promote formal mentoring programs are the prestige and emphasis assigned to these programs by donors, alumni, and members of the higher education community. Sometimes such programs are research-focused and may provide more prestige to the university via publications. There is also the direct and very tangible value of grants and monetary donations given to student-focused programs. Beyond just carrying out research, a goal of the university setting is to teach a new generation of scholars, and mentorship at all student levels—from undergraduate to graduate to postdoctoral—can aid this mission (Gonzalez, 2001). Closely related, the reputation and status of the university may also be directly and indirectly promoted by the cultivation of formal mentoring programs and a supportive mentoring culture.

Benefits to Mentors

The role of mentoring others is an important and weighty position. The opportunity of the mentor to shape others' experiences and potential futures is not to be taken lightly. Mentors themselves are in a prime position to also grow from the experience. For example, mentors often report benefits associated with collaboration, reflection, and personal satisfaction from mentoring (Ehrich et al., 2004). Faculty who mentor other faculty also report benefits to their own career and experience, such

as improved leadership and communication skills as well as expanded networks, relationships, and awareness (Kalpazidou Schmidt & Faber, 2016). Mentoring can provide opportunities for one's own development of skills and knowledge as well as psychological and emotional benefits of generativity, or an active contribution to the wellness of the next generation and a way to leave a legacy.

Faculty who mentor students, particularly undergraduate students or early graduate students, must be careful that they do not expect the same level of reciprocity or outright benefit to their careers that they may receive in other mentoring relationships. Indeed, undergraduate faculty mentors must recognize that the majority of their mentoring activities will be quite different from other academic mentoring relationships and adjust expectations and behaviors accordingly (Anderson & Shore, 2008). With appropriate intentionality and care, however, the intrinsic rewards of undergraduate mentoring can be immense. Indeed, students themselves often do not recognize just how much faculty can actually benefit from a mentoring relationship (Campbell & Campbell, 2000).

Faculty are, of course, not the only academic players to mentor, nor are they the only ones to benefit from the role. Students assigned to mentor other students experience benefits as well. For example, experienced undergraduate students who were assigned to mentor first-year students reported benefits ranging from personal and altruistic to cognitive benefits such as communication and leadership skills (Beltman & Schaeben, 2012). Furthermore, another peer-mentoring study found that more effective mentee learning was associated with higher benefits to mentors, suggesting a mutually beneficial relationship (Stockkamp & Godshalk, 2022). Graduate students or postdoctoral trainees who mentor undergraduates may experience instrumental (e.g., research support), socioemotional (e.g., work satisfaction), interpersonal (e.g., developing communication skills), professional (e.g., clarity in career interests), and cognitive gains (through being required to explain and think through research in more detail than usual) from their mentoring experiences, though those experiences are likely not without challenges as well (Dolan & Johnson, 2009).

Benefits to Those Being Mentored

For those in the fortunate position of receiving effective and intentional mentorship, the outcomes can be numerous and potent. From educational outcomes to emotional benefits, those who are (broadly) mentored have generally displayed an advantage over those who do not receive such guidance and support, though the particular context of mentoring absolutely plays a role (Eby et al., 2008). Indeed, educators who receive mentoring report benefits in terms of general support (both personally and professionally), discussing or sharing ideas, and receiving feedback (Ehrich et al., 2004). Faculty and postdocs who receive peer mentoring regarding research describe benefits such as gains in professional skills, career guidance and planning, acceleration of experience, and improved well-being, among other positive outcomes (Kalpazidou Schmidt & Faber, 2016; Tran & Gibson, 2016). Specifically pertaining to research output, formally mentored researchers display gains above both nonmentored and informally mentored individuals (Muschallik & Pull, 2016), and women who received formal mentoring reported gains in grant money and promotion over nonmentored women (Gardiner et al., 2007). When looking directly at early career researchers (defined as those within 10 years of their terminal degree, including doctoral students, postdocs, and early career faculty), evidence was found for both positive, albeit sometimes small, and potentially negative effects of mentoring, as has been suggested elsewhere and is discussed in more detail later (Boeren et al., 2015).

As one of the major recipients of mentoring, it is not unexpected that students, undergraduate and graduate, have reported numerous benefits from receiving mentoring. From relationships with faculty being associated with greater academic motivation and achievement (Komarraju et al., 2010) to participation in mentored research allowing undergraduates to develop as students, future scientists and professionals, and leaders (Crisp et al., 2017; Dugan, 2011; Johnson & Harreld, 2012; NASEM, 2019), these various relationships could have powerful impacts. Students who are mentored by other students also experience positive outcomes. For example, a systematic review of graduate student peer mentoring found positive results ranging from academic outcomes (including but not limited to factors such as program norms as well as disciplinary knowledge, methodological skills, and publishing competencies) to social, psychological, and career benefits (Lorenzetti et al., 2019). For students completing their studies partially or entirely online, the results of peer-assisted learning are less immediately positive (Tibingana-Ahimbisibwe et al., 2022; Watts et al., 2015); however, with further work in this area, more specific challenges and benefits for these unique circumstances may come to light.

Staff should not be overlooked as either mentors or mentees. For example, higher-education IT staff can and do benefit from mentoring opportunities in a variety of settings and forms, and formal mentoring opportunities can further help staff achieve their goals and have safe spaces for processing workplace dynamics (Galanek & Campbell, 2019). In the absence of a formal mechanism for receiving mentorship, some university staff, particularly those in leadership or management positions, lament what they did not learn and wish they would have received from mentors (though it should be acknowledged that some do end up with informal mentors; Owusu-Agyeman, 2022).

Risks of Negative Outcomes

It would be naïve to assume that all mentoring results in positive outcomes for those involved. Indeed, it is documented that poor mentoring can hinder the development of those receiving such mentorship (Ehrich et al., 2004; Long, 1997; NASEM, 2019), and furthermore, negative outcomes and poor mentoring may be missed because the general perception of mentoring is often quite positive (Boeren et al., 2015). These poor mentoring practices could range from incompetence in technical matters to a lack of adequate time to interpersonal friction and a variety of experiences in between (Anderson & Shore, 2008; Campbell, 2007; Johnson, 2017). Those practicing these poor behaviors as mentors are also unlikely to experience the benefits discussed above, particularly if they do not see the outcomes that they expect their mentees to experience. As with any skill, mentoring is an ability that can and should be developed intentionally, and formalizing a mentorship practice can help ensure that mentors and mentees are both prepared for the relationship (see Chapters 10 and 11 in this volume for mentor and mentee preparation, respectively).

A major risk of an unregulated or unethical mentoring relationship is the possibility for boundaries becoming blurred or broken (Campbell, 2007; Johnson, 2017). Mentorship relationships can become intense, and both mentors and mentees can and often do develop affinities for each other, but all those involved in mentoring relationships should be aware of risks and attentive to boundary violations. One of the benefits of formalizing mentoring experiences, even in a very low-structure way, might be to broadcast an expectation of best practices and to arrange encounters in such a way as to support the greatest likelihood of positive, valuable, and lasting outcomes for all involved (Ehrich et al., 2004). A formalized relationship also increases the likelihood that problems may be recognized, or at least it can

provide a third party to which a mentee or mentor might share challenges and receive support or who could step in to modify (or end) a mentoring relationship that is in danger of harming those within it. Indeed, the National Academies of Sciences, Engineering, and Medicine's 2019 report, *The Science of Effective Mentorship in STEMM*, specifically describes four steps for the mitigation of negative mentoring experiences. First, appoint someone, such as an ombudsperson, who can be a visible and active point of contact for those in mentoring relationships who may need third-party support. Second, program coordinators and other leaders should also monitor mentoring relationships and be prepared to step in if necessary. Third, mentors should be well-trained in both the risks of negative mentoring experiences and resources for dealing with issues that arise. Finally, mentees should maintain mentorship and support networks outside of a single individual. In these ways, formalized mentoring programs can help reduce the risk of negative mentoring practices occurring or address them more quickly if they do. However, it should also be noted that a potentially unique risk of a formalized mentorship program may be that those who are struggling within it face pressure to maintain the public image of the program (Eby & Allen, 2002). This should be kept in mind by program organizers and those monitoring the progress of a program.

Measuring Benefits

It is worth noting the variety of methods of evaluation used to determine the myriad benefits and risks described in the proceeding paragraphs. As has been stated elsewhere (Boeren et al., 2015; Eby et al., 2008; Gershenfeld, 2014; Zellers et al., 2008), one must attend to the causal (or lack thereof) methodologies employed in evaluation when interpreting findings. Because many of the studies reviewed in the discussion above collected data in ways that did not allow for manipulation or control, one must interpret these findings with caution and an eye toward confounding variables or alternative explanations. For example, those who are most able to access or respond to mentoring opportunities may already be those most likely to experience success in their educational or academic careers. A mix of quantitative and qualitative methodologies allow for a better understanding of the outcomes from these experiences as well as *how* the experiences were received. For example, formal program evaluation techniques, such as random assignment, as well as in-depth, fluid techniques, such as phenomenological analysis, are both valid and important methods to evaluate experiences and outcomes of mentoring. Therefore, all methods of evaluation should be welcome and considered as we further collective knowledge on mentoring and evaluate individual programs, a topic discussed in depth in Chapters 13 and 14.

Does it Have to be Formalized to Work?

Although we have given extensive attention to formalized mentoring opportunities within this chapter and, to some extent, this entire book, it is worth revisiting the question of the purposes of formalizing mentoring. Mentoring does not, by any means, have to be formalized to work. In fact, when pitted directly against each other (at least insomuch as they can be, given the challenges in defining and measuring formal mentoring that were mentioned above, let alone informal mentoring), those who came to mentoring relationships organically report sometimes better outcomes than do those who experienced a formalized mentoring relationship (Eby et al., 2008; Ehrich et al., 2004). This is not always the case; however, in Muschallik and Pull's matched study, formally mentored individuals were more research productive than either informally mentored or nonmentored individuals, who did not

differ from each other (2016). In any case, a comparison between the two experiences is unlikely to be direct (or simple, given the challenges in defining "formal" throughout much of the mentoring literature), and the immense variation that is—and likely should (Ewing et al., 2008)—be present in mentoring programs, means that direct comparison may be difficult to quantify. Indeed, *because* of the informal nature of informal mentoring, it may not be included as "mentoring" in comparisons of formal mentoring programs to ostensibly unmentored individuals (Gardiner et al., 2007, for example, specify as such in their use of a control group of unmentored women). The potential for formalizing mentoring on some level for increased access and equitable distribution of the potential benefits on a variety of characteristics is the real purpose of formalizing these relationships, however, and should not be discounted (Ehrich et al., 2004). Additionally, by potentially bolstering an overall culture of supportive mentorship (Zellers et al., 2008), institutions might also allow for the natural growth of informal mentorships among their populations. This development of a mentoring culture would further allow for positive developmental outcomes and provide options for individuals to have their diverse needs met (Goerisch et al., 2019; Guzman Johannessen et al., 2012).

An additional benefit of formalizing mentorship on some level is also the potential for recognition of mentoring as part of one's workload. For both faculty and staff, much of the challenge of mentoring is finding appropriate time amid other job responsibilities (Bean et al., 2014; Law et al., 2019). Faculty and staff are more likely to achieve professional recognition for their work in mentoring when they engage in department, college, or university-supported formalized mentoring programs (and administrators and tenure committees can understand participation in a larger program where roles and outcomes are standardized and delineated). They may also be more likely to get compensation monetarily for participation or have it be part of their formalized service load. This signals the importance of the mentoring activity and may allow for greater participation by those who could both benefit from the activity and benefit others through their mentorship (Etzkorn & Braddock, 2020).

Conclusion and Future Directions

This chapter's purpose was to provide a definition of formal mentoring (versus informal) that allowed for a greater, clearer discussion of the purposes, experiences, and outcomes of mentoring. By classifying experiences as formal, one acknowledges an outside interest in the mentoring relationship but also opens the opportunity for external support for the relationship. Formalizing mentoring may also allow for greater access to the potential benefits for those who would traditionally be less likely to receive mentoring through informal means.

Researchers and practitioners in the field of mentorship should further clarify and explore the boundaries of formal and informal mentoring. One of the challenges of detailing the benefits of formal mentoring is the lack of distinction made in some mentoring literature and the conflicting or muddy definitions in others. Therefore, analysts of this scholarship need to attend to the differences between formal and informal mentorship whenever possible to truly understand mentoring contexts. Definitions are a sticky point throughout this literature (Campbell, 2007; Dominguez & Kochan, 2020; Kalpazidou Schmidt & Faber, 2016), but clearly defining what is meant by mentoring can help in determining what benefits can and should be attributed to various experiences and relationships. It is also worth noting the richness of the research findings that have been documented and presented here, as well as the limitations that should be addressed in future work, as discussed earlier.

In this chapter, we have also overviewed some of those potential benefits. The outcomes reviewed in this chapter are not exhaustive; indeed, the reader is encouraged to consider other comprehensive reviews of mentoring benefits (e.g., Dominguez & Kochan, 2020; Crisp et al., 2017; Johnson, 2017; NASEM, 2019; other chapters in this volume), which delve into both current and classic works evaluating the outcomes of various mentoring experiences. For the institution and the individuals in these relationships, there is much to gain from good mentoring. However, there are risks that must be clearly acknowledged so mentors and mentees can be best prepared and equipped for successful relationships. Future research into mentoring must critically examine the experiences and be aware of the potential for negative outcomes (Boeren et al., 2015). Having third-party involvement is one way to potentially mitigate some risks, but this is not a task to be undertaken without information (in particular, see Chapter 7). Indeed, formalizing mentorship within an institution is a noble cause; doing it backed with research and examples, such as are given in this handbook, is imperative.

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PART II

DESIGNING, IMPLEMENTING, AND EVALUATING EFFECTIVE MENTORING PROGRAMS

The 11 chapters of Part II of this book address the "how" questions related to program design, implementation, evaluation, and funding. These questions include:

- How do I conduct a needs assessment? (Chapter 5)
- How do I secure institutional support and organizational alignment? (Chapter 6)
- How do I execute my many roles as the program coordinator? (Chapter 7)
- How do I develop the program's activities, objectives, goals, and outcomes? (Chapter 8)
- How do I match mentors and mentees? (Chapter 9)
- How do I prepare effective mentors? (Chapter 10)
- How do I prepare effective mentees? (Chapter 11)
- How do I promote equity and inclusion in the program? (Chapter 12)
- How do I assess and evaluate mentoring relationships and the mentoring program? (Chapter 13)
- How do I conduct research on the mentoring program? (Chapter 14)
- How do I fund the program? (Chapter 15)

The authors' answers to these questions are explored in the following chapters. Conducting a needs assessment is often overlooked because it may seem redundant; after all, university leaders know what their unit needs, right? However, conducting a needs assessment is an essential early step that ensures program resources go to prioritized institutional needs. In chapter 5, Legler presents a systematic process to collect and analyze quantitative and qualitative data to identify organizational needs. Next, Legler describes how the needs assessment committee works with stakeholders of the university unit to prioritize needs and identify possible solutions. Finally, Legler concludes chapter 5 by exploring how big data can focus on actual behaviors that allow for greater audience segmentation.

For a formal university mentoring program to succeed, it must have executive support from the university leadership. In chapter 6, Taylor and Dart outline the importance of administrative support, mission and vision alignment, incentivizing participation for both mentors and mentees, and how mentoring fits into retention efforts for students, faculty, and staff. Next, Taylor and Dart discuss the resources needed to create and sustain a formal mentoring program. Following the section on resources required, the authors discuss challenges, barriers, and pitfalls that administrators should consider before implementing a mentoring program. And finally, Taylor and Dart emphasize the importance of making explicit the programs' goals, objectives, and outcomes.

As mentioned in the book's introduction, we recommend reading chapter 7 first, as Christiansen and Busenbark give an overview not only of the roles of the program coordinator but also an overview of this book. Using Figure 7.1, the authors diagram the six phases of mentoring program design, execution, evaluation, funding, and sustainment. Christiansen and Busenbark begin by describing the characteristics of an ideal mentoring program coordinator. Next, these authors make a unique contribution to this handbook by providing a job description in the chapter's Appendix, which describes a program coordinator's duties, responsibilities, and qualifications. Following this description, Christiansen and Busenbark describe the roles of the program coordinator within the six phases of the mentoring program.

Using a case study, Fain and Crites use chapter 8 to describe how to craft goals and objectives to align with desired outcomes. Mentoring programs are not an end in themselves; instead, they are a tool to achieve a broader outcome at the institutional, departmental, or individual level. Next, the authors consider how seven design elements help frame the goals, objectives, and outcomes. Lastly, Fain and Crites use logic modeling to communicate goals, objectives, and outcomes to key stakeholders within the university system.

In chapter 9, Law first describes the processes and infrastructure that program coordinators use that lead to the successful recruitment of mentors and mentees. Secondly, Law explains how the desired characteristics of mentors and mentees factor into the selection process. Lastly, in chapter 9, Law focuses on the critical elements program coordinators should consider in matching mentors to a mentee.

If not the most critical, certainly one of the most vital responsibilities of the program coordinator is to prepare mentors to be effective. Chapter 10, written by Mickel, explores specific characteristics of effective mentors, focusing heavily on communication and communication styles. Effective communication considers personality characteristics, mentor-mentee expectations, trust, motivation, and considerations for possible career pathways. In this chapter, Mickel provides detailed tools to develop effective mentoring plans that foster mentor and mentee expectations, engagement, and goals. And finally, Mickel demonstrates a step-by-step process of designing a curriculum for academic mentoring programs.

In chapter 11, Clabaugh promotes program structures that prepare mentees to be effective by helping them become self-directed. First, Clabaugh explores mentee dispositions to be self-directed. Next, Clabaugh gives suggestions for activating mentees' disposition of readiness, willingness, and ability. Clabaugh then explores mentee motivation in the context of self-determination theory. And finally,

Clabaugh describes how program structures such as policies, procedures, expectations, cycles of activity, and relationship-building strategies can promote self-directed mentees.

Zerai and López present a new vision for promoting equity and inclusion in academic mentoring programs in Chapter 12. First, Zeria and Lópex examine the challenges and possibilities regarding equity and inclusion that consider simultaneous and complex social identities and statuses of faculty, staff, and students. Next, they highlight common missteps that hinder equity and inclusion in academic mentoring programs. Finally, these authors close chapter 12 with recommendations for several promising practices for mentoring Black, Indigenous, and other people of color, persons with disabilities, LGBTQIA+ people, first-generation college students, and other minoritized students, staff, and faculty.

Chapter 13, by Lunsford, begins by distinguishing between program assessment, program evaluation, and program research. Next, Lunsford presents three theoretical frameworks to guide assessment and evaluation: (a) Kirkpatrick's four levels of evaluating training programs, (b) logic models, and (c) the mentoring ecosystem. Lastly, Lunsford concludes chapter 13 by providing formative and summative assessment guidance. A unique contribution to this handbook is Figure 13.5, found in the Appendix, in which Lunsford gives a condensed overview of formative and summative activities.

The content in chapter 14, by Law, Vouvalis, Harris, and LaMuth, is for program coordinators, university leaders, and other stakeholders who choose to include a research component in their mentoring program. Because it can be difficult to distinguish between evaluation and research, the authors explore the differences and similarities. When evaluation does include research, it will be necessary for the program coordinator to obtain approval from their respective institutional review board (IRB). Law, Vouvalis, Harris, and LaMuth describe the process of obtaining IRB approval. The authors explore how theoretical frameworks, operational definitions, and methodology factor into programs that contain research. The chapter ends with Law, Vouvalis, Harris, and LaMuth providing examples of measurements for consideration as part of the evaluation or research.

Few mentoring handbooks contain a chapter explicitly devoted to funding the mentoring program. Author Castañeda-Kessel makes this unique contribution in chapter 15. She begins by giving a brief overview of theoretical and methodological frameworks for funding. The critical section of Chapter 15 guides decision-makers through six steps for identifying mentoring program funding. Lastly, Castañeda-Kessel provides a modified rapid review of mentoring program funding opportunities.

NEEDS ASSESSMENT AND DATA ANALYTICS: UNDERSTANDING YOUR CONSTITUENCIES

Neal Legler

Abstract

Needs assessment is an important early step in the development of a mentoring program because it helps ensure that program resources go toward improving prioritized institutional results. Needs assessment should involve key stakeholders, organized into a needs assessment committee, and then follow a systematic process to collect and analyze quantitative and qualitative data and identify existing organizational needs. Needs are defined as the gap between desired organizational results and current results. They should be considered holistically and at all levels of the organization. As needs are identified, the needs assessment committee works with stakeholders through a combination of group management techniques to prioritize needs and identify solutions. The results are shared in a needs assessment report. Big data can provide additional insight to needs assessment by focusing on actual behavior and allowing for greater audience segmentation.

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Needs Assessment is Worth the Effort

Let us begin this chapter with some assumptions. First, we will assume that you want to operate a mentoring program that will be successful and cost-effective. You want to identify a demographic of individuals who will benefit from mentoring and then get them to participate and achieve results you can show for your efforts—results that will help you grow your program and reach more people. Finally, you would like to minimize your risks in the process.

If these assumptions are correct, then you need to take the time to perform a proper needs assessment. This recommendation likely comes as a statement of the obvious. Performance-improvement specialists and their like usually think of needs assessment as a useful step in planning. Still, they often skip it (Kaufman & Christensen, 2019) or fail to do it right (Watkins & Kavale, 2014).

The reasons are common. It may seem that needs assessment will take too long—that results are needed before the assessment would permit. Needs assessment may seem redundant. After all, what brought you to this point in the first place? Was it not a recognition by you and/or your administrators that students, faculty, or staff *need* mentoring? Why put time and effort toward formally identifying something you already seem to know (or have been mandated to do)? Professionals who plan mentoring programs rarely have much formal training or experience in needs assessment, so determining where to start, whom to involve, how and where to find information, and when to stop can all prove challenging.

In this chapter I attempt to remove barriers to doing needs assessment by providing basic information about how to conduct one and what the results ought to be. We begin with definitions, basic steps, and leading models and then move on to methods. We will draw heavily from two sources that go into great depth on the subject. The most comprehensive is the five-volume *Needs Assessment Kit* produced in 2010 by James Altschuld in collaboration with David Kumar, Nick Eastmond, Jeffrey White, and Jean King. The second is *A Guide to Assessing Needs: Essential Tools for Collecting Information, Making Decisions, and Achieving Development Results*, written for the World Bank in 2012 by Ryan Watkins, Maurya Meiers, and Yusra Visser. In this chapter I attempt to compile and summarize the advice of these two excellent works. Readers who finish this chapter and want more detail are encouraged to seek them out. In addition to these, I will add to my summary some ideas from the literature on needs assessment for training programs, which has applications to mentoring.

Outcomes of Needs Assessment

In the sense of a needs assessment, a need is defined as a gap between current results (*what is*) and desired results (*what ought to be*). A needs assessment focuses on the noun form of the word *need* rather than the verb form, which is common to statements like "they need" and "we need" (Altschuld & Kumar, 2010; Kaufman & Guerra-Lopez, 2013). A needs assessment defines the gap between current results and desired results. At its conclusion, a successful needs assessment should accomplish the following:

- a clarification of the *desired results of the organization* (more on this later) and its efforts
- an *identification of needs*, or in other words, a definition of the relevant gaps between current

results and desired results

- a *prioritization of needs* to identify which should receive attention
- an *analysis* of the highest priority needs to identify relationships, causal factors, and what is working and not working
- an *identification of possible solutions* that could achieve desired results
- an *evaluation of possible solutions* to assess their value and feasibility
- a *needs assessment report* that summarizes findings and provides recommendations
- *buy-in by key stakeholders* on the findings and conclusions of the needs assessment (Watkins & Kavale, 2014; Watkins et al., 2012)

Rarely can stakeholder buy-in be achieved when a needs assessment is conducted as an individual exercise (Watkins et al., 2012). Needs assessment often results in resource allocation decisions and can therefore have political ramifications (Altschuld & Kumar, 2010). Various stakeholders may also experience the same needs in different ways (Barbazette, 2006). For these reasons and more, needs assessments should be collaborative exercises that seek to involve representatives from each stakeholder group. This may include students, faculty, staff, administrators, industry representatives, or others who would contribute to or benefit from a mentoring program.

Preconditions for Successful Needs Assessment

To achieve the outcomes listed above, several conditions should be in place before embarking on a needs assessment. These include, but are not limited to, administrative support (see Chapter 6), a budget, a reasonable (but relatively close-range) time frame, a needs assessment coordinator, who may or may not be the program coordinator (see Chapter 7), a preliminary plan of action, an awareness of existing data sources, and access to individuals who can help collect and analyze data.

Needs assessments typically do not require approval from an institutional review board unless the results will be published to the larger academic community or public. However, data security and privacy remain of utmost importance. Needs assessors should be aware of their institution's data management and security policies. They should have systems and processes in place to ensure that sensitive data is kept and shared securely and that participants in the process are properly trained in handling sensitive data. Of particular importance in educational mentoring is an understanding of the implications and guidelines set by the Family Educational Rights and Privacy Act (Family Education Rights and Privacy Act, 1974).

Defining "Desired Results"

In this chapter, I define *results* as the outcomes (see Chapter 8) of what the organization and its program seek to achieve. In the context of higher education and mentoring, *results* entail things like academic or professional performance, persistence and graduation (for students), or retention and promotion (for faculty and staff). It may also entail other priority outcomes, such as participation in research, service activity, internships, and other high-impact practices (Kuh, 2008).

As noted above, a *need* is a discrepancy between current results and desired results. However, "desired results" can mean different things to different people. They could mean the most *ideal* results—even if they are unattainable. They could also be interpreted as the *most likely results*, which can be reasonably accomplished but may not be perfectly ideal. In fact, there is value in identifying *both* the ideal and most likely results in a needs assessment process. It then becomes the job of the needs assessment team to decide upon the desired results against which needs will be assessed (Altschuld & Kumar, 2010).

Needs assessors should also be careful to separate needs from wants, in some cases categorized as *felt needs* (Bradshaw, 1972). A felt need may seem important to stakeholders but does not meet the definition of a need as the gap between current and desired results. An example of a felt need would be a department head saying she needs more resources. Her department may very well benefit from more resources, and more resources may later be identified as one solution to a need, but they do not constitute a need in the sense of needs assessment. Instead, it is better to focus on where the department may be falling short of its desired results. In so doing, keep in mind that desired results are not only achieved at the level of the recipients of service but also at the community and employee level. Hypothetically, a department could be doing a good job taking care of its students, but employee morale may suffer while additional important projects go untended.

Bradshaw (1972) also categorized some types of needs as *normative* or compared against some kind of standard of what is to be expected or normal. Thinking of desired results in a normative sense can help a needs assessment committee define what those desired results ought to be. Scriven and Roth (1990) suggest a *reasonable person* rule, which implies asking what a reasonable person would say is a need. Hopefully, the needs assessment committee is composed of mostly reasonable people.

Before we move on, let us delve a bit further into the notion of *levels* at which desired results can be achieved. One of the leading proponents of needs assessment, Roger Kaufman, developed the organizational elements model (OEM) to serve as a hierarchy of planning for needs assessment (Kaufman, 1987; Kaufman, 1992; Kaufman & Christensen, 2019). The OEM states that organizational results occur at the following levels of a hierarchy:

- Mega/Outcomes (societal contributions)
- Macro/Outputs (organizational contributions)
- Micro/Products (individual contributions)
- Processes
- Inputs

Keeping our focus on higher education, the Mega/Outcomes level is the level at which the educational institution impacts society—through the types of graduates it produces, the research it produces, its impact on the economy, and so on. The Macro/Outputs level entails the metrics most university administrators are comfortable thinking about, such as persistence, graduation, GPA, admissions, funding, research, teaching, service, morale, and so on. At the Micro/Products level, we start to focus on the job performance of individual faculty and staff and the quality of specific courses and programs. Then at the Processes level, we evaluate the impact of policy, practices, timelines, information systems, and the like. Inputs, then, include the funding, tools, materials, human resources,

and other ingredients that go into the institution's outcomes and outputs.

Altschuld and Kumar (2010) provide a similar categorization of needs. They define three levels:

- Level 1: Recipients of services (students, if they are the target audience)
- Level 2: Deliverers of services (teachers, advisors, and mentors)
- Level 3: The system supporting Levels 1 and 2 (support staff, buildings, software, policies, and procedures)

Both the Kaufman approach and the Altschuld and Kumar approach to categorizing needs suggest the same thing—the level at which the needs assessment committee begins can make a significant difference in the quality and nature of the needs assessment recommendations. Kaufman and Christensen (2019) suggest entering the hierarchy at the highest level possible. Kaufman assures that "by starting where your external clients are, at the Mega level, and linking to all other organizational elements, you may be better assured that you will be considering root issues and not just the presenting symptoms" (2019).

Focusing on external clients sounds like an obvious recommendation at the start, but Altschuld and Kumar (2010) caution that the focus can easily shift:

Since needs assessments are often conducted by Level 2 personnel, it is no great surprise that many stress, overtly or implicitly, the concerns of Levels 2 and 3 over those of Level 1, with lip service given to the latter.

Losing sight of Level 1 needs can come easily because data is often most available for Levels 2 and 3.

In short, needs assessment should be driven by a careful clarification of desired results and considered at a more holistic level than members of the committee may initially want to focus on. It behooves the coordinator of the needs assessment process to make sure this happens.

Process of a Needs Assessment

Let us briefly recap what we have discussed so far. Needs assessment is an important part of program planning because it helps ensure that time and resources spent on solutions will go toward improving results in critical areas. Needs assessment should be a collaborative activity that involves multiple key stakeholders. It should focus holistically on the results of the organization across multiple levels and succeed in identifying relevant needs, prioritizing those needs, analyzing their nature and causes, and then producing recommendations for activities and solutions. Next, we will discuss the process of conducting a needs assessment.

Minimum Steps

According to Watkins et al. (2012) and Stefaniak (2021), a needs assessment should, at a minimum, involve three steps, listed below and then shown in Table 5.1 with a little more detail:

1. **Identify**: Collect data and build the initial list of needs.

2. **Analyze**: Prioritize needs and analyze their causes.

3. **Decide**: Consider possible solutions and make recommendations.

Table 5.1

Minimum Needs Assessment Steps and Activities

Step 1: Identify	Step 2: Analyze	Step 3: Decide
- Identify the problem. - Select internal/external partners. - Identify required data and sources. - Arrange data collection, tools, and methods. - Collect data. - Review data and identify needs at multiple organizational levels.	- Clarify desired results. - Collect and analyze information about the causes of identified needs. - Establish an initial prioritization of needs. - Analyze what is working/ not working for highest priority needs.	- Review possible solutions to identified needs and their value. - Prioritize needs again based on the cost of meeting vs. not meeting them. - Summarize recommendations regarding which needs to focus on and recommended solutions.

Note. From Watkins et al. (2012).

The various models that exist for conducting needs assessment have these three minimum steps built in. However, additional models can provide recommendations for various contexts.

Altschuld Three-Phase Model for Larger-Scale Needs Assessments

One of the most well-known needs assessment models is the three-phase model developed by Altschuld and Kumar (2010). This model roughly aligns with the minimum steps above, but its focus is on committee management, so it is useful for larger-scale needs assessments. The three phases are:

- Phase I: Pre-Assessment: Organizing the committee and reviewing existing data.
- Phase II: Assessment: Organizing the committee to collect and analyze new data
- Phase III: Post-Assessment: Organizing the committee to select, plan, and implement solutions.

Table 5.2 lists some of the activities associated with the three-phase model. For the purposes of this chapter, the steps of Identify, Analyze, and Decide are also included, about where they first occur within each phase.

Table 5.2

Aldschuld and Kumar's Three-Phase Model for Needs Assessment

Phase I: Pre-Assessment	Phase II: Assessment	Phase III: Post-Assessment

—Identify—
 	
• Get the committee organized.
• Focus on potential areas of concern.
• Find out what is already known or available.
• Make decisions on what is understood with respect to the foci. Decide whether to:
 	
  ▪ Collect more info (Phase II).
  ▪ Stop further work.
  ▪ Go to Phase III to resolve identified needs.
	• Collect new information based on what has not been learned in Phase I.
	
	—Analyze—
	
	• Determine the initial priorities of needs and analyze them for solution strategies.
		—Decide—
		
		• Select, plan, and implement solutions for high-priority needs.
		• Evaluate the needs assessment process.

Note. From Altschuld and Kumar (2010).

Phase I

We will now review some recommendations relative to each phase of the Altschuld model (mostly according to Altschuld and Kumar unless otherwise noted). Phase I is all about organization. It involves getting the right team together, making sure they know the purpose and targets of the needs assessment, and then identifying existing data to review and new data to be collected.

The needs assessment committee facilitator performs three roles—planner, maintainer, and coach. It is important for the facilitator to stay on top of tasks and maintain contact with subcommittees as they do their work. Organizers should try to find the optimal size for the committee—one that includes an

appropriate cross-section of stakeholders but does not become unwieldy. A small committee may have 5–10 people. Larger ones may have 12–25. Pros and cons exist for both large and small committees, so the decision on size depends on feasibility, what the group will be doing, and the criteria for participants (Altschuld & Eastmond, 2010). When inviting stakeholders to join the committee, it helps to leverage existing campus partnerships for support. Organizers should seek to build a "coalition of the willing" to avoid internal friction (Educational Advisory Board, 2021).

Phase I begins with an orientation meeting in which committee members learn how the assessment got started and what its focus, general process, and budget will be. Everyone should be clear about the current phase of the assessment and the organizational levels it is targeting.

Phase I is the time to appropriately define the scope of the assessment—one that is not so broad that it becomes overwhelming or so narrow that it loses efficacy. Where possible, the focus should be on short-term needs that can be quickly resolved and needs that are of high priority to all involved stakeholders (Witkin, 1984).

Success relies on open communication with stakeholders, budget managers, and decision-makers throughout Phase I (Witkin, 1984). Organizers should plan and budget for ongoing communication with the larger institution and with stakeholders—especially if organizational change is a possibility. The data-collection process should always start by identifying and evaluating data that already exists in the organization. Altschuld (2010) writes:

> Too often it is assumed that it will take a good deal of time and resources to study needs and to draw action-based conclusions from their results. The assumption is not quite correct. Organizations are frequently awash in information, or external groups can supply much that is relevant.

However, the committee should use existing data carefully. It was probably not collected for their exact purposes. It might not even be true, but only perceived as true. Other data sources should be checked for potential shortcomings with the data in later recommendations (McGoldrick & Tobey, 2016). Altschuld and Eastmond (2010) suggest the generic timeline shown in Table 5.3 for Phase I committee meetings.

Table 5.3

Generic Timeline for Needs Assessment Committee

Session	Description of typical activities
First session	• Provide a basic orientation to the needs assessment and the role of the committee. • Encourage preliminary reactions of members and schedule next meetings.
Second session (1–2 weeks later)	• Outline specifics of the local assessment (procedures and timeline). • Approve or revise draft plan for collecting Phase I existing data.
Third session	• Assign responsibilities for collecting data. • Report back on activities accomplished to this point. • Show completed data collection thus far and discuss preliminary findings and trends. • Continue obtaining data and information as needed and discuss whether more and/or different data are needed.
Fourth sessions and/or others	• Continue activities of prior session as needed.
Fifth session	• Go toward one of the three crucial Phase I decisions: Stop, initiate Phase II, or engage in prioritization and causal analysis as required for movement into Phase III, Action Planning. • Draft completed summaries of Phase I activities and prepare to meet with the organizational decision makers about them and potential next steps.

Note. From Altschuld and Eastmond (2010).

As noted in Table 5.3, at the conclusion of Phase I, the committee should decide whether to stop the needs assessment process altogether, proceed to Phase II if more data collection is deemed necessary, or skip to Phase III if there is enough data to allow for analysis and decision-making

Phase II

If the committee determines that more data is advisable, then Phase II is where the collection and analysis of new data occurs. The committee should be informed when they have moved on to Phase II. The next section of this chapter will focus more on various data collection methods. Meanwhile, we will review some general considerations for Phase II, again attributable to Altschuld and Kumar (2010), unless otherwise noted.

The needs assessment committee should feel that new information is warranted before it is collected because it is usually expensive to obtain. When collecting new information, quantitative and qualitative methods should be used together and budgeted for. It may be useful to recruit the assistance of a statistician or statistics graduate for population sampling and statistical analysis (McGoldrick & Tobey, 2016).

The goal of data collection should be to collect enough data to make decisions (Watkins et al., 2012), but only data that will actually be used. Data collection should stop when the data starts to get repetitive (McGoldrick and Tobey, 2016). The main objective is "action, not understanding" (Block, 2000). When selecting collection methods, the time, resources, and other costs needed for each method should be considered. Could cheaper methods yield the same data? What are the logistics? (McGoldrick & Tobey, 2016).

To control for bias, more than one person should be involved in data collection, and where possible, data should be shared with the people from whom it was collected (McGoldrick & Tobey, 2016). It is important to document the data collection process to show how priorities were determined and help with continued data interpretation later. Documentation also helps for later program evaluation. Data tables should be dated in case they are used for later projects.

One of the last steps of Phase II is to spend time determining the activities to occur in Phase III.

Phase III

Phase III is where data is analyzed; needs are identified, refined, and prioritized; and potential solutions are identified and recommended. It is a highly collaborative phase that requires various group management techniques, conflict resolution tactics, and negotiation skills for evaluating data and reaching agreement. Some of these methods will be listed in a later section of this chapter. In Phase III, it might make sense to adjust the needs assessment committee as the focus shifts to action plans (Altschuld & Kumar, 2010).

Needs assessors should not shy away from needs that are not related to mentoring or training. Although the needs assessment may have been initiated with a specific focus on mentoring, the final report should include recommendations and solutions for any relevant needs, regardless of whether they relate to mentoring. Why? Because resolving needs and achieving desired results is the goal of the needs assessment process—not just implementing a specific preidentified program. After all, if nonmentoring recommendations are made but not implemented, and then desired results are not achieved, the mentoring program itself is less likely to be used as a scapegoat. Either way, there is documentation (McGoldrick & Tobey, 2016). A question to continually keep in mind, according to McGoldrick and Tobey, should be "If the ultimate [mentoring] program is perfect, what else is going on in the organization that will result in the [organizational] needs not being met?"

The committee should take time for benchmarking. According to Altschuld and Kumar (2010), "There is no substitute for seeing first-hand how similar needs are being handled by other organizations." How long have solutions been in operation? What changes were needed and how were they dealt with?
As solutions are identified, plans should be made to pilot test recommended solutions before full implementation. Time should also be taken to debrief and evaluate the needs assessment process and record lessons learned.

The Needs Assessment Report

The final product of needs assessment will be the creation of a needs assessment report. McGoldrick

and Tobey (2016) recommend separating analysis from recommendations in reports and presentations—presenting analysis first and then moving on to recommendations while focusing on the items that are within the institution's power to address. Watkins et al. (2012) suggest the following typical contents of a needs assessment report:

- executive summary

- introduction

- purpose, goals, and objectives

- needs
    - methods for identifying needs
    - data identifying needs

- actions considered
    - methods for identifying alternatives
    - data on alternatives
    - criteria for comparing

- conclusion

- decisions or recommendations

- acknowledgments

- appendices: Support data and tools and instruments

Data Collection and Analysis Methods

The heaviest proverbial lift of needs assessment is the collection and analysis of data. We now move from a high-level overview of needs assessment outcomes, processes, and models to focus on the nitty-gritty details of obtaining and sorting through data and information. The general order of steps to follow when collecting and analyzing data is:

1. Determine what information and data are needed.

2. Extract information from existing data sources.

3. Collect additional data as needed, using a mix of quantitative and qualitative methods.

4. Analyze data to use for decision-making.

Using Existing Data: The Document or Data Review

As mentioned earlier, data that is valuable for a needs assessment may have already been collected and made available in the form of documents, data files, published data sets, reports, and more. Working with existing data is the best starting point because it is usually inexpensive and doesn't rely on significant input from other sources. When working with existing data, needs assessors should keep in mind that the data probably was not collected for the same purposes as the needs assessment, and the level of quality control used in the data collection process may have been uncertain. Needs assessors should take time to determine the quality of existing data and verify it against other resources (Watkins et al., 2012). Some techniques for systematically reviewing existing data are as follows (Watkins et al., 2012):

•   List characteristics to look for when selecting existing data resources. Data does not necessarily have to be organizational. It can come from external sources as long as it can be applied to your population of students and staff.

•   Assign at least two people to review existing data resources for the sake of obtaining multiple viewpoints.

•   Develop a document review form or checklist to guide document reviewers and help them record their findings in a standardized way that can be compared and coded.

•   Collect, consolidate, and code the observations gathered from various reviewers and document sources.

Collecting and Analyzing Additional Data: Methods

Outside of existing archival data, additional methods of collecting data will likely be needed. These can be both qualitative and quantitative in nature. Altschuld & Kumar (2010) recommend a mix of both. Assessors should not rely on just one source of data measurement to identify needs. Table 5.4 provides a compilation of various data collection methods and their typical nature and purposes. References to hard versus soft data are indications of whether the data can be verified with another source (hard) or not (soft) (Altschuld & Kumar, 2010; Watkins et al., 2012; Altschuld & Watkins, 2014; McGoldrick & Tobey, 2016).

Table 5.4

Various Data Collection Methods

Method	Strengths	Weaknesses	Nature
Surveys	Scaled questions address desired and current results. Can be administered to many people. Allows for multiple perspectives.	It's easy to conflate perception and performance data. Follow-up questions are difficult.	Quantitative, but based upon the values, judgments, and opinions of respondents. Soft data (not externally verifiable).
Performance assessment /test	Collects current performance, knowledge, skill, and mastery. Identifies gaps in outcomes.	Does not provide much opportunity for unforeseen insights. Dependent on the quality and validity of the assessment.	Quantitative. Hard data (externally verifiable).
Performance observations	Identifies current performance and can identify desired performance.	The presence of an observer can change performance on the part of the observed.	Qualitative. Hard data, if multiple sources are used.
Job/task analysis	Defines the desired level of performance and learning.	Can be subjective and idealized. More complex than the actual task.	Qualitative and quantitative. Hard data, if multiple sources are used.
Individual interviews	Identifies current performance, values, judgments, and opinions. Allows for discovery and follow-up.	Takes time and can be difficult to analyze.	Qualitative. Soft data.
Critical incident interviews	Identifies current performance and can identify desired performance.	Recollections of past behavior can be subjective, idealized, and modified.	Qualitative. Hard data, if multiple sources are used.
Guided expert reviews	Defines desired performance. Provides perspectives on needs and decisions. Can increase buy-in.	Experts' lack of internal knowledge can diminish from recommendations. Personal agendas may interfere.	Qualitative. Hard data, if multiple sources are used.
Focus group interviews	Identifies current performance, values, judgments, and opinions. Allows for discovery and follow-up. Collects data from multiple people at once. Allows comments to build on each other. Can form consensus.	Unequal participation, group think, tangents, and concealment of sensitive information can skew results.	Qualitative. Hard data (with caveats relative to group dynamics).
SWOT analysis	Group identification of strengths, weaknesses, opportunities, and threats can assist with prioritization.	Does not directly address identification needs, but is supplemental. Subjective to group dynamics.	Qualitative. Hard data, if multiple sources are used.
Delphi technique	Achieves consensus from a distributed group of experts on needs, desired results, probable causes, and/or solutions.	Outcomes could be compromised if the facilitator fails to select a representative panel, choose good initial questions, or follow an effective implementation strategy for the technique. Participant dropout is also a risk.	Quantitative and qualitative. Hard data.

Tutorials and literature abound on these techniques, and higher-education professionals have experienced many of them to some degree. However, we shall attempt a brief, nondefinitive overview of each technique with some additional focus on tactics relative to needs assessment.

Surveys

Using Multiple Response Scales. Surveys are common to needs assessment, and they provide a unique opportunity to present respondents with a question that can be answered from multiple perspectives using two or more scales. The use of multiple scales is helpful in identifying the discrepancy between "what is" and "what should be." Consider the following simple example:

Figure 5.1

Simple Example of a Double-Scaled Needs Assessment Item

Academic support services	To what extent is this service important to you? (1 = Not important at all, 5 = Extremely important)	To what extent do you use this service? (1 = Never, 5 = Very frequently)
Tutoring center	NA 1 2 3 4 5	1 2 3 4 5
Academic advising	NA 1 2 3 4 5	1 2 3 4 5
Online study skills courses	NA 1 2 3 4 5	1 2 3 4 5

Note. Adapted from Altschuld and Kumar's (2010, p. 87) *Needs Assessment: An Overview* and Altschuld's (2010, p. 50) *Needs Assessment: Phase II: Collecting Data*.

In Figure 5.1, responses can help the researcher identify the perceived value of a service compared to the actual use of the service and therefore begin to quantify gaps between desired results and actual results. An additional scale could be added, perhaps asking respondents to rate their satisfaction with a service. Multiple scales also allow the needs assessor to ask, with a single question, "Are we accomplishing *x*," and "Should we be accomplishing *x*," where *x* represents a given result. They are a good idea for needs assessment surveys.

Additional Survey Design Recommendations.

However, designing an effective need assessment survey is not quite as simple as just that. More considerations go into effective survey design. Altschuld (2010), Barbazette (2006), and Watkins et al. (2012) suggest several principles.

Researchers should gather preliminary information from preexisting sources before writing the survey. This will help them understand what information gaps to fill and tailor the survey accordingly. They should know ahead of time what will be done with the results of the survey and write survey objectives. Keeping the desired end results in mind will help them avoid asking extraneous or poorly worded questions. The content of the survey should be carefully selected by referring to early

committee decisions on what information is most needed. Those who will interpret and report the data should also be include in the survey design.

Researchers should design and deliver separate surveys for different targeted levels of the organization, such as service recipients, service providers, and members of the support system. Surveys should be tailored to each level, paying attention to the wording and order of questions. If in doubt, survey designers should err on the side of oversampling the most important groups to ensure compiling enough information.

Needs assessment surveys should use at least two scales for survey questions, as noted above. The audience should be considered in order to make sure the scales are easy to understand, and someone should proofread the survey for double negatives, big words, typos, and the like. A good survey usually includes some open-ended questions to collect additional clarifying information. Too many of these questions should be avoided. They can take a long time to analyze.

Researchers may consider asking a few additional questions about obstacles and solutions. Although the needs assessment survey should be primarily focused on needs and not solutions, there might not be a second survey, so it may not hurt to add a few questions that will prove informative to later phases of the needs assessment process.

The survey should be pilot tested and checked for reliability by administering it at different times under the same conditions and seeing if the results match. Pilot testing can help ensure respondents share a common understanding of the survey questions. Pilot testing is also a way to check the validity of the content to see if the questions measure what they were intended to measure.

Surveys have some limitations. They should not be used alone in needs assessment but should be combined with other data collection methodologies. Watkins et al. (2012) caution specifically against confusing the perception data that comes from surveys with performance data. Survey responses are subjective and only represent the respondents' perceptions of how they, their peers, and others are performing. The data from surveys is quantitative and quantifiable, but it is not hard data. Surveys also do not provide the opportunity to ask follow-up questions, so additional qualitative methods can add significant insights to survey results. As a simple rule, focus groups (or some variation of group feedback sessions) should be accompanied by surveys and vice versa. Focus group participants should be invited to fill out a survey as a way of collecting individual perspectives to compare against group perspectives.

Survey Analysis. Altschuld and White (2010) suggest the steps shown in Table 5.5 for analyzing quantitative needs assessment data.

Table 5.5

Steps for Analyzing Quantitative Data

Step	Notes
Data collection	Compile the data into a spreadsheet, database, or computer program.
Data quality	Visually inspect the data to ensure quality and integrity before analysis begins.
Data manipulation	Make backup copies of the data and then divide them into subsets. Restructure and transform them as needed for the analysis.
Data analysis	Analyze the data using descriptive statistics and inferential statistics to test hypotheses. Inspect the reliability and validity of the survey.
Data summary	Summarize the findings in a way that stakeholders and the needs assessment committee can understand and use.

Note. From Altschuld and White's (2010, p. 58) *Needs Assessment: Analysis and Prioritization*.

An initial step when inspecting survey data is to look for anomalies, outliers, and missing data and determine the cause—including whether survey design may have led to unexpected results. Out-of-range and invalid responses should be removed (Wulder, 2005; Altschuld & White, 2010; Dilalla & Dollinger, 2006).

Multi-scale questions should be analyzed for the following:

- **Discrepancy:** The desired-state value minus the current-state value, in the form of a number.
- **Direction:** Whether the discrepancy value is positive or negative. If positive, this is a possible opportunity. If negative, this is a possible need.
- **Position:** The order of discrepancy values relative to each other, i.e., -3, -2, -2, 0, 0, 1, 3.
- **Demographic Differences:** Nuances in the data that appear when filtering along demographic categories (Watkins et al., 2012).

Where possible, multi-scale questions can be organized into matrices using Altschuld's (2010) quadrant method, shown in Figure 5.2, with findings sorted accordingly. In Figure 5.2, we assume that a survey question asks respondents to rate, on two 5-point Likert scales, how well a certain goal is being met and how important it is perceived to be, with 5 being high attainment/high performance and 1 being low attainment/low performance. The two scales are placed in a matrix fashion along the horizontal and vertical axes, and then the mean response values for each question are plotted into each quadrant. Each quadrant suggests a certain meaning to be derived from the results. For example, the high importance/low attainment quadrant is the one where the largest needs will land. The high importance/high attainment quadrant is the one where the organization's most successful outputs ought to land.

Figure 5.2

Quadrant Matrix for Sorting Survey Responses

Mean Goal Attainment	5	Below-average importance and above average attainment = No need. "Candidate for further study or cut in resources"		Above-average importance and above average attainment = No Need "Keep up the good work"		
	4					
	3					
	2	Below-average importance and below-average attainment = No Need		Above-average importance and below-average attainment = **Need**		
	1					
		1	2	3	4	5
		Mean Goal Importance				

Note. From Altschuld and White's (2010, p. 44) *Needs Assessment: Analysis and Prioritization.*

In scoring survey results, the primary focus should be on trends and patterns in values, attitudes, and behaviors rather than exact numbers and percentages. Quantitative results should be reviewed in tandem with qualitative data to help interpret the results or identify potential problems with the data. As survey findings are considered, five considerations proposed by Patten (2009) are useful, as cited by Altschuld and White (2010):

1. What is the cost-effectiveness of the findings?

2. Do the implications of the findings make a crucial difference?

3. Are the implications acceptable to the stakeholders?

4. Are the implications acceptable publicly and politically?

5. Are there ethical and legal concerns with the findings?

Reviewing Open-Ended, Qualitative Survey Responses. Most surveys include some open-ended questions for collecting qualitative data. Altschuld and White (2010) provide an overview of steps for analyzing qualitative data, which applies to open-ended survey questions as well as other qualitative methods.

1. Review the general structure of the qualitative method.

2. Skim a sample of the qualitative data. Get a sense of how the data is structured and its nuances. Look for patterns.

3. Begin reviewing responses and list main ideas that seem to emerge as variables. Give these variables a preliminary name.

4. Narrow the variables list down to initial data categories (IDCs). These are the variables that seem to keep emerging. Start tagging each response with these categories and keep a tally per question. (Or use a qualitative analysis program to do the grunt work.)

5. Move to a higher-level analysis and identify themes per question. Think of a theme as the

underlying meaning or explanation for the IDCs.

6. Analyze at a higher level still and identify linking/over-arching themes across all questions.

7. Review the overarching themes. Do they help you understand needs? Do they fit other data? Do they suggest the need for more information?

8. Verify/confirm the quality of the data. Do data from other independent sources concur?

Integrate Quantitative and Qualitative Survey Data. The variables, categories, and themes that emerge while reviewing open-ended questions should be compared against the quantitative survey data, with consideration of how the qualitative findings influence the interpretation of the quantitative findings. Note, of course, that the data and themes collected from other data collection methods should be compared to the survey findings as well.

We will now briefly address some of the characteristics and techniques associated with other data collection methods.

Performance Assessments/Tests

Sometimes the desired level of performance expected of employees, mentors, or students is well defined, so a straightforward performance assessment can identify where results are falling short. By this we mean some sort of test, such as a written test that prompts a recall or synthesis of facts, or an observation of a task completion.

Testing can be challenging to get right. Good tests are *valid*, meaning they measure what they are intended to measure; *reliable*, meaning they measure the same thing consistently; *fair*, meaning they are not biased against particular subpopulations; and *secure*, meaning they are difficult to cheat (AERA et al., 2014). If available, a test that has already been created through a rigorous process will save time. If that is not available, the following concepts apply to assessment development (Dick et al., 2015).

- Identify or create performance objectives for the skills to be tested and determine a mastery level—sometimes referred to as a cut score—that represents acceptable performance.

- Determine the best way to observe the test taker's performance. Can a multiple-choice question do the trick? Is a free-form written response needed? Or does the test taker need to be observed doing something? Does it need to be in an authentic environment, or can it be in a more controlled environment?

- Write questions or rating rubrics that are easy to understand and unambiguous. Get feedback and try to test them out on multiple test takers or raters.

- Find a way to offer the test in a way that is monitored to avoid cheating.

When administering tests, needs assessors should gather qualitative feedback from test takers on what they thought or felt or might have needed as they completed the test.

Performance Observations

At first glance, a performance observation may look a lot like a performance assessment. However, there is one key difference. A performance assessment begins with a desired performance in mind and

simply assesses whether students or employees meet the criteria or how far they fall short. Performance observations do not begin with a desired level of performance in mind. They are more exploratory. They occur when the needs assessor needs to better understand how students, employees, or customers perform a task—particularly one that isn't well defined. Performance observations may be conducted with experts, novices, and those in-between as a means of defining what performance at varying skill levels looks like. They can be focused on defining both "what is" and "what should be."

Performance observations rely on watching an individual perform a task as unobtrusively as possible to avoid changing the performance of the person being observed. For example, experienced graduate student researchers may be observed in a lab setting to identify the best practices and efficiencies they use. Less experienced students may also be observed in the same setting to identify differences. Wherever possible, observations should be conducted with a checklist or protocol in hand to achieve consistent observations. They should always be concluded with a debrief between the observer and the observed to better understand what was going through the mind of the observed person while performing the task (Watkins et al. 2012).

Job/Task Analyses

A job or task analysis seeks to accomplish the same thing as a performance observation—defining how a task is done and how it ought to be done. It differs from a performance observation in that it is conducted like an interview. The needs assessor does not actually *watch* the job or task being performed. For this reason, it tends to focus more on ideal performance—defining what should be. The needs assessor usually diagrams a task from start to finish using flow-charting techniques to create a type of if/then decision tree representing the task (Dick et al., 2015).

A task analysis becomes useful in several situations. It creates a useful framework for developing training and assessment. It also works well when observation is difficult for safety or privacy reasons. For example, a needs assessor focusing on student mental health counseling might choose to interview counselors about their processes rather than observe the process due to confidentiality concerns. Helpfully, a task analysis produces a document that other experts can review and provide feedback on. However, task analysis usually takes more time to develop than observing the task itself (Watkins et al., 2012).

Individual Interviews, Critical Incident Reviews, and Expert Reviews

Conducting interviews with students, employees, and other stakeholders allows the needs assessor to have an in-depth and focused discussion on specific topics. Interviews are excellent for documenting stories and context. They also take a lot of time and can be difficult to analyze when there are contradictory views. Some tips for successful interviews include having a protocol, some predetermined (nonleading) questions, a release form, and a comfortable location (Watkins et al., 2012).

A method that can be used during an interview (or a focus group, for that matter) is a critical incident review. This involves the interviewer asking the interviewee to recall past events as examples and explore the conditions, context, activities, and results associated with the incident.

A needs assessor may also invite outside experts to be interviewed. This is a useful way to get informed perspectives on institutional needs from someone who is not so close to the problem to have a tainted perspective. Information from outside experts has a way of increasing buy-in from stakeholders. Conversely, outside experts' lack of internal knowledge may limit the credibility of their recommendations. If using this technique, assessors should try to follow a standard protocol and recruit experts who do not have personal agendas (Watkins et al., 2012).

Focus Group Interviews

One of the most common qualitative needs assessment techniques is the focus group interview, in which a small group is brought together in a facilitated format to discuss a series of questions. It has the advantage of interviewing multiple people simultaneously, thus saving time while allowing participants to build on each other's ideas and reactions and perhaps even reach a consensus. However, focus groups can present challenges. Strong-minded individuals can skew the apparent group outcomes in directions that deviate from what individuals may actually think and feel. Groupthink is always a risk. There may be unequal participation, and some people may not share sensitive information or views. Group tangents can frequently prevent all questions from being addressed. In short, a good focus group requires a skilled facilitator (Watkins et al., 2012).

Focus groups are more successful when they have an identified purpose, agenda, guide, and/or protocol. Information requirements should be prioritized, so the facilitator starts the discussion with the highest priority items. Likewise, the highest-priority participants should be identified, with the meeting scheduled to fit their availability.

Some general recommendations for facilitation are to select a decision-making technique for the group, enforce confidentiality, allow group members time to think, and regularly report back what is heard for clarification. If focus group members are not letting others participate, they can be asked to leave.

To aid in later focus group analysis, one of the researchers should write down observations of group dynamics in addition to the actual content of what is said. The session should also be recorded with permission in the form of a consent or release form.

A focus group should be paired with a survey so that participants can answer questions individually, away from group influence. A survey *before* the focus group can prime thought processes in advance, while a survey *after* can prompt discussion-informed reflection. Assessors may consider applying a pre- *and* post-focus group survey, if feasible (Watkins et al., 2012).

SWOT Analysis

The SWOT analysis is a popular focus-group method. SWOT is an acronym for strengths, weaknesses, opportunities, and threats. Each of these are categories for describing an organization's context, operations, and future. Focus group participants are asked to brainstorm together what the institution's strengths and weaknesses are and then identify potential opportunities for growth and success as well as existential threats. These can be mapped on a matrix to show their relationship one to another. A

SWOT analysis is not as directly related to needs identification as the other techniques discussed in this chapter, but it can provide a useful supplement to a needs analysis—particularly when it comes to prioritizing needs. When used as a technique, it should be coupled with other methods (Watkins et al., 2012).

Delphi Technique

The Delphi technique has advantages in achieving consensus among experts who are separated by time and distance. It is similar to the nominal group technique but can be done over email. The technique works as follows (Watkins et al., 2012; Altschuld & King, 2010). An expert panel of 30–50 participants is selected and invited (with clear expectations for time and commitment), and a short questionnaire is administered to all participants. It can ask just a single question. Responses are received and coded into a single list. The compiled list is sent out as a second questionnaire, in which participants are asked to rate each listed element in terms of importance or relevance. Results are tabulated again, and the mean, median, mode, and interquartile range are calculated to determine consensus. A third questionnaire is then put together with the items of most importance from the second questionnaire. Again, expert participants are asked to rate each element. This process is repeated until a consensus is reached. Most of the time, a consensus is reached after about four rounds. Of course, the final consensus is shared with the panelists, who will likely be curious.

Success with the Delphi technique involves providing incentives, ensuring commitment from expert panelists, getting an endorsement from an influential person, and staying closely involved with participants throughout the process.

Integrating Your Findings

By now, it is hopefully clear that good data collection and analysis includes information gathered from preexisting sources plus information gathered through multiple appropriate techniques—ideally combining quantitative and qualitative data. Major trends, themes, and needs should have emerged from the analysis of each of these data sources, all of which should be compared and combined to facilitate a unified understanding of major institutional needs.

Prioritizing, Deciding, and Recommending

It may be tempting to call the needs assessment done at this point. But there is one more important step to complete. It is now time to make decisions. These decisions include *prioritizing needs*, *identifying potential solutions*, and *determining recommendations*. This step should also be collaborative, involving key stakeholders. It is, in fact, the part of needs assessment in which the coordinator will most often exercise skills in negotiation, presentation, and agreement arbitration.

In the Altschuld three-phase model, the decision step entails much of Phase III. You may recall from our earlier overview of the three-phase model that membership on the needs assessment committee may change at this phase. Some researchers may leave, and some decision-makers may enter. However, replacing nearly *everybody* on the committee would fall short of being a good idea. The committee should keep a critical mass of people familiar with the process and decisions made to this point to avoid

a complete change of direction.

Altschuld (2010) notes that the needs assessment coordinator may need to put forth a concerted effort in Phase III to reach out to committee members and keep them engaged—especially if the needs assessment has taken some time or there have been organizational changes. The history of needs assessment is scattered with examples of efforts that failed due to lost energy, funding, or organizational support. Momentum is key. It is maintained through regular stakeholder contact, regular meetings, and processes that do not require any more time and effort than what is needed to make a decision.

Decision-Making Methods

Ultimately, the trick to prioritizing needs, identifying potential solutions, and making recommendations is to bring a group of decision-makers and experts together to discuss options and reach a consensus. Any number of methods can be used to achieve this goal, some of which I will discuss. The key is to find the methods that match the circumstance.

Nominal Group Technique

The nominal group technique can work with groups of about 3–30 people. It typically occurs in-person. The group facilitator gives everybody a single topic and asks individuals to write down their thoughts. Each group member shares a single response, which is written on a board or flip chart. Group members are not allowed to challenge or disagree with responses at this point. The second and third responses are then shared. Each contribution is assigned a letter. Finally, group members are asked to identify the top five or so examples that seem most important and rank them in order of priority. This is usually done using index cards. The facilitator reads through the list of ideas, and group members share the rank they gave each idea. The facilitator then adds up the rankings to identify the top priorities. Ranking and scoring can occur for two or three more rounds for long lists (Watkins et al., 2012; Altschuld & King, 2010).

Multi-Criteria Analysis

Higher-education professionals may recognize the multicriteria analysis approach as a common method for hiring or vendor selection committees. For this technique, group members are given a rubric that lists various selection criteria along the column headers. Each row lists an alternative need, solution, or idea. Group members are asked to score each item for each of the criteria. Scores are added up and sometimes averaged, first with individuals and then as a group to select the item of highest priority or interest. This technique allows the assessors to add extra weight to certain important variables such as cost. As a drawback, this technique can also be easily manipulated. A key to success is to make sure rating criteria are clear and to avoid getting carried away with too many criteria (Watkins et al., 2012).

Pairwise Comparison

A pairwise comparison is a simple way to narrow the options to be considered to a set of agreed-upon criteria. It involves, essentially, looking at two competing options and choosing the preferable

option, then repeating this process until every option has been compared with every other option and a winner has been selected in each case. The group facilitator then tallies up the number of times each option was selected and lists them in order of most selected to least selected. The group then discusses whether this is an acceptable prioritization (Watkins et al., 2012).

2×2 Matrix

The 2×2 matrix approach is a way of evaluating priorities across different populations. It involves labeling two columns as "High" and "Low" priorities for one audience and then labeling two rows as "High" and "Low" priorities for another audience, as shown in Figure 5.3 (Watkins et al., 2012).

Figure 5.3

2×2 Matrix Example (Hypothetically Crafted on Stereotypes)

	High priorities for students	Low priorities for students
High priorities for instructors	Good student grades	Reading the syllabus
Low priorities for instructors	Fast turnaround for grades	Reading emails

This method can be a useful way to check that a needs analysis has not lost its focus on an important audience.

Scenario Analysis

Scenario analysis involves discussing as a group the benefits and risks of alternative (ideally prewritten) scenarios. Facilitators can spend time with the group exploring both optimistic and pessimistic outlooks. Competing scenarios should assume the same time frame and should factor in existing information and trends as well as uncertainties and the possibility of unexpected events. Group members should be asked to rank scenarios and provide alternatives. Prewritten scenarios do not have to be selected as-is. Combinations and alternatives should be welcome (Watkins et al., 2012).

Fault Tree Analysis

A fault tree analysis is a group diagramming exercise meant to get at the root cause of results gaps. The facilitator sits with a group in front of a rather large writing space and writes down a problem or event at the top. The group then helps break down the causes of that problem or event. These are written on the chart. Then each contributing factor is broken down further until the root causes are identified. The shape of the chart will probably resemble something like a pine tree (Watkins et al., 2012).

Concept Mapping

Whereas fault tree analysis is a diagramming exercise for identifying root causes of problems, concept mapping is a diagramming exercise that can be used for defining processes or discussing potential solutions and their feasibility. The process usually begins with brainstorming. Ideas are then placed into clusters, which are labeled and related to each other. Each cluster is rated based on its

feasibility or importance. The group can then identify patterns and choose which clusters to prioritize (Watkins et al., 2012).

Mixing Methods

As with data collection and analysis methods, a combination of group decision-making methods will usually be beneficial for prioritizing needs, identifying solutions, and making recommendations. Groups can be expected to meet at least three times through this process. There will be an initial working session, one or more sessions for follow-up work, and a session for finalizing decisions and recommendations. Once the group decision-making process is complete, it is up to the core assessment team to produce the needs assessment report and presentation.

The Brave New World of Big Data

The pioneering work of Altschuld, Kaufman, Watkins, and others, which I have discussed to this point, has focused largely on the use of conventional data collection techniques such as surveys, focus groups, and interviews. However, higher-education institutions increasingly operate on large electronic databases and information systems. As a result, they have a growing amount of data at their disposal. A recent study of college students by the Educational Advisory Board (2021) concluded that students are increasingly expecting their institutions to leverage this data to create better educational experiences. Institutional data includes learning behavior data, financial data, campus engagement data, and disaggregated demographic data (EAB, 2021). The value of this and other big data is that it provides information never before collected, which, in fact, could not have been collected from a survey. It includes *actual* behavior data—such as LMS logins and page views, facilities usage, timeliness with assignments, time spent with course content, and more—rather than *reported* behavior data.

Institutional data isn't the only big data option. Researchers can also access a growing set of generalized demographic data about specific target audiences. This can include Google search data, data on social media patterns, consumer behavior, and much more. According to Stephens-Davidowitz (2017), big data presents the following four advantages:

1. It offers up new types of data, such as search terms and granular behavior patterns.

2. It provides more honest data—allowing us to better see what people actually do and want and not just what they say they do and want.

3. It allows us to zoom in on smaller subsets of people thanks to larger amounts of more granular data.

4. It allows us to perform many casual experiences, such as A/B testing on websites, where users are presented with one of two experiences, and researchers can examine which one gets more interaction.

Let us elaborate on the third advantage—that of narrowing a researcher's focus on smaller subsets of people. A particular advantage of big data is the ability to identify and compare data doppelgangers. These are individuals who are closely matched in terms of the datasets they produce. Computer algorithms are designed to identify data doppelgängers, categorize them, and find common outcomes

for each category. Algorithms can then, with a fair degree of accuracy, predict outcomes for individuals who fall into these doppelgänger categories (Stephens-Davidowitz, 2017). Many institutions now license software programs that compile university data and do this algorithmic work relative to student performance and persistence. The results are better lists of at-risk students, barrier courses, and activities that increase students' likelihood of persistence. Similar solutions for faculty and staff, in particular, are not as prevalent, although big data analytics platforms for human resources exist.

Big data is the stuff of science fiction and the cause of either terror or elation on the part of university personnel. Institutions must commit to transparency and ethics in their use of institutional data, and needs assessors should be aware of their institutions' data security and privacy policies and get to their institutional data analysts. The odds are good that big, aggregated, segmented, and maybe even predictive data sets are already available without too much overhead.

Wrapping Up: A Word on Evaluations and Standards

Describing a systematic process in detail, with its many options and caveats, can make the process look daunting. To conclude, then, we need to pull back from our 10x-magnification view of needs assessment and see it as a less-massive-looking part of a larger whole. To begin, remember that you will never use all the processes described in this chapter in a single needs assessment. You should only do what is necessary to make informed decisions. Next, please note that an effectively run needs assessment will likely *reduce* the amount of work that comes later in setting up a mentoring program. You should come away from needs assessment with a clear direction for program design and implementation and a reduced likelihood of experiencing missteps and backtracking. Lastly, needs assessment feeds directly into program evaluation (see Chapter 13). Once you have taken the time to define and prioritize needs and plan solutions accordingly, your evaluation becomes a matter of seeing whether the chosen solutions succeeded in closing the gaps you identified in the first place. Some of the same instruments used for needs assessment can even be repurposed for evaluation. Needs assessment fits the notion of building a mentoring program as a *systematic* rather than an *ad hoc* approach, and systematic approaches are nearly always more efficient, successful, and defensible.

As a final note, needs assessment fits into nearly every target of existing mentoring program standards. Chapter 13 refers to the European Mentoring and Coaching Council and its International Standards for Mentoring and Coaching Programmes (EMCC, 2022). These include clarity of purpose, stakeholder training and debriefing, a process for selecting and matching, and a process for measurement and review. The process of needs assessment clarifies purpose, involves stakeholders from the start, and helps with the selection of target audiences and effective processes. It sets the stage for effective program evaluation.

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THE MENTORING CONTEXT: SECURING INSTITUTIONAL SUPPORT AND ORGANIZATIONAL ALIGNMENT

James Y. Taylor and Greg Dart

Abstract

A university's mission and vision statements are the guiding documents that create a framework by which the institution can accomplish its goals. All university initiatives are tied back to that mission and vision, and alignment is essential for university support of bottom-up initiatives. No matter how mentoring is structured, one area that is essential is proper internal institutional support and alignment with the mission of the institution. Focusing on the context in which the formal mentoring program occurs, this chapter outlines the importance of executive support, mission and vision alignment, incentivizing participation for both mentors and mentees, and how mentoring can fit into larger retention efforts. This chapter discusses the resources necessary to create a program as well as the stakeholders necessary to create a successful, institutionally supported program. In addition, the chapter will focus on challenges, barriers, and pitfalls that administrators should consider as they undertake a mentoring program. This chapter stresses the importance of the organization to make explicit the goals, objectives, and outcomes. It also highlights the often-overlooked alignment between the individual and university outcomes.

When a university creates programming that aligns with the vision and mission of the university, aligns with the goals and initiatives of the university, and has clear support of leaders on both the faculty and administrative side, the chances for success of those initiatives goes up significantly. A formalized mentoring program is no different, and this chapter uses research, observation, and specific experiences to outline the framework, processes and barriers and pitfalls that institutions may encounter on the path to creating an intentional, mission aligned mentoring program.

While many aspects of this process are vital, this chapter will focus on the belief that proper administrative support, buy-in and alignment with university mission, vision, and goals are essential for this process. No amount of work in any other area can compensate for lack of institutional support.

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Introduction

Higher education institutions have many goals, including student support and success, staff or faculty recruitment and retention, and the cultural landscape in developing people and systems to meet long-term strategic goals. Colleges and universities are continuously increasing funding for programs to improve student retention and completion rates, developing or retaining high-quality and committed faculty and staff, and defining an engaging campus and institutional culture (Millea et al., 2018). Not only do those efforts lead to more success for students, but they better support the success of faculty and staff in an increasingly challenging and competitive professional landscape. In addition, within the larger funding model of most states, legislative and governing bodies are implementing performance funding measures tied to student access, success, and completion, tying student success to increasingly strained institutional budgets. With that in mind, the stakes have never been higher for colleges and universities to understand the value of a successful culture of mentorship and support for all associated with the institution. Mentoring programs are one key initiative that can help institutions support and meet long-term goals and increase engagement within the campus community.

Mentoring programs are growing in popularity to increase retention and completion at higher education institutions, improve faculty engagement with students and the institution, and provide clear cultural expectations for staff (Law et al., 2020). Presidents and administrative teams at institutions are consistently looking for ways to increase those important measures, and mentoring has proven to be an important arrow in the quiver of more and more campuses. Successful, data-informed mentoring practices can play an integral part in colleges and universities meeting their ultimate goals. However, understanding how mentoring plays into the larger institutional structure is vital for long-term, sustainable success in mentoring. The following story illustrates that point.

On a small community college campus in the Midwest, a provost was in the midst of a large student-success initiative. The initiative, which was well-researched and thought out, was aimed at connecting faculty and students outside the classroom and providing wrap-around mentoring services. The financial ask was small, and the initial design was modest. It seemed like a clear win for the campus, the provost, and its students. That is until it hit the desk of the president. Although deeply committed to student success and open to new ideas, the president did not feel that now was the right time for a new initiative, and mentoring died before it started.

While this is a story that happened on a specific campus in the early 2000s, there is no question that similar stories can be found on college and university campuses across the country. This chapter will explore how institutional support and organizational alignment play into the ability to implement faculty-led, formalized student mentoring on college and university campuses. Through examinations of the importance of mission alignment, faculty buy-in, and student buy-in; to barriers and pitfalls of mentoring; and developing a sustainable program, this chapter will focus on how mentoring programs can fit into the larger organizational structure and includes strategies to create sustainable buy-in and culture shift.

It is also important to understand that all the strategies and ideas discussed in this chapter may have to be adjusted or replaced based on the institution within which they are being implemented. Strategies that might work on a small campus—such as leaders serving in mentoring roles themselves—might not be possible at large, complex campuses and systems. It is also critical that the structure that makes

sense and works for your campus considers all the ramifications.

Higher education continues to address the need for increased student success and completion; research has shown that close to 50% of students do not complete their academic studies and graduate (Tinto, 1993; Shapiro et al., 2018). Additionally, the recruitment and successful retention and development of professional staff and faculty remain a challenge in higher education. As colleges and universities try to address many issues related to relevance, growth, and institutional sustainability, including the lack of student academic success as well as the retention of new faculty and staff, mentoring programs are often seen as a strategic approach. Mentoring can be formal or informal, housed in academics, operations, or student services but can even be initiated from a more grassroots peer-to-peer level. In addition, mentoring can be required or voluntary. Crisp and Cruz (2009) found that more than 50 formal definitions of mentoring could be found in the literature with little consistency from one academic institution to another. Therefore, defining the context in which a mentoring program will occur is a critical component of success and sustainability, and articulating that vision and context to all stakeholders remains an essential first and ongoing step (Crisp & Cruz, 2009).

Choosing a mentoring model (see Chapter 3 for more details on mentoring typologies) and the context for the model should be influenced and guided by organizational, cultural, and institutional elements and critical evaluation of resources to support and sustain the mentorship model. One particular consideration should be past models of mentorship within an institution and related success and outcomes, as well as support from key individuals and groups (administration, faculty, and staff). Further, defining the specific goals and desired outcomes (see Chapter 8 for more details on outcomes) of mentoring programs is also critical for the evaluation of success and reduction in ambiguity in continuation. Within the realm of student success, Anderson (1995) found that there is a positive academic relationship with faculty-to-student mentoring models, and Sharma and Writer (2015) found that this academic success from academic mentoring programs is found globally and within diverse populations. Kardash (2000) and Behar-Horenstein et al. (2010) show that similar gains could be found from mentoring programs rooted in student success where students were supported both in academic and in social and emotional gains. Therefore, it might seem that any mentoring program would essentially be an effective program at supporting mentee populations, but these gains may not be maximized and sustained without a clear vision and articulation of the context and setting of the mentoring program and appropriate buy-in from all stakeholders and an evaluation of past mentoring programs within the institution.

In this chapter we will examine two main topics, which are vital to a successful program: First, commitment by the institution and the population being served. This chapter will discuss the importance of strategies to gain institutional commitment to a mentoring culture. The second topic is creating successful sustainability of mentoring programs by removing barriers to success. Creating a mentoring culture and implementing strategies for sustaining mentoring on campus is tied to the long-term viability of a program. Although the application of successful mentoring programs can apply to many institutional and organizational settings, the goal of this chapter is to examine the commitment to and sustainability of successful mentoring programs—whether it be for undergraduate students, graduate students, faculty, or staff, while focusing on the essential people and resources necessary for long-term success and using higher education as a context for examination.

Institutional Commitment to Mentoring

Successfully implementing a mentoring program on a university campus or other similar organizations is a large undertaking. A successful program takes commitment from faculty, staff, and administration. Mentoring programs are destined to fail without clear buy-in from each of those groups. Full institutional commitment, and alignment with the strategic priorities of the campus, are essential to creating a successful and sustainable mentoring program. Within this first section of this chapter, the following four commitments will be covered: (a) commitment and alignment with institutional vision, (b) commitment to mentoring within the system, (c) commitment to mentoring aligning with other support systems, and (d) administrative commitment to mentoring.

Commitment to high-impact educational practices for faculty, staff, and student success initiatives is growing at colleges and universities throughout the country (White, 2018). Higher education institutions are implementing a wide array of practices with the goal of student success and recognizing that student success is tied to faculty and staff retention and success. One of the challenges of implementations is evaluating impact. Many times, institutions will introduce a number of initiatives at the same time, and evaluation of the impact of each initiative goes from difficult to nearly impossible. The difficulty of parallel intiatives is that it leaves less confidence in the dedication of resources based on evidence of success. With faculty mentoring of students, there has not been a large body of research that administrators can look to to have a level of confidence that it is the right practice to implement. Similarly, the ambiguity around what faculty and staff mentoring is, and how it can be formally designed, creates confusion and overlaps with professional behavior and expectations and formal mentoring programs. This scenario is one of many potential pitfalls that could stop a mentoring program before it starts. Full institutional commitment, while essential, may be difficult to attain. The following section will explore strategies for getting the necessary institutional commitment.

Commitment and Alignment with Institution Vision

Strategic planning in higher education institutions is a long-standing practice aimed at creating a system where colleges and universities can create an actionable vision and plan of action. The most successful strategic plans are those where planning and practice become so interweaved that your daily operations are fully aligned with your institutional mission and vision (Sullivan & Richardson, 2011). Understanding that, it is clear to see how alignment with institutional mission and vision is essential for the development of a mentoring program. The strategic planning process is interwoven with resource allocation and commitment for many institutions. Initiatives that are directly related to the institution's strategic goals are very well positioned for strong institutional support.

Commitment to Mentoring Within the System

As institutions evaluate mentoring programs, one area of potential complication is understanding how mentoring fits into larger existing support structures for professional development of faculty and staff as well as student support. For example, academic offices often focus on faculty assignments, teaching loads, and promotion but often forget the essential elements of retention and faculty fit. Similarly, as student affairs structures have matured and grown within higher education institutions, the many

responsibilities of student support have grown exponentially. The increasing stewardship and responsibilities in both academic affairs and student services often leave both sides of the institution forgetting the common goals and mission of the institution and creates a large gap that removes alignment of practices such as mentoring as the connection and purpose most needed for student success, professional fulfillment of staff and faculty, and institutional outcomes and expectations (Frost et al., 2010). This gap or separation is unhealthy for institutional and campus culture and potentially puts staff, faculty, and students in an unintended state of limbo that removes connections, purpose, and connections (engagement) with the institutional identity and individual growth. The connection of a mentoring program can, if designed within the context of the institution, benefit all stakeholders by providing purpose and structure for best professional behaviors and can then easily fit within other support structures for staff and faculty development and student support.

Depending on the institution, many offices, including advising, registrar, student success, retention, first-year experience, and a myriad more, may have their fingers within the campus student success initiatives. And nearly all, if not all, of those offices are on the student affairs side of the house. A faculty-led mentoring program, as described here, is a bit of an albatross in many institutions. That makes commitment from student affairs practitioners essential for integrating mentoring into a larger student success plan for the institution. It also makes it imperative that those who are tasked with other student success initiatives on campus understand how mentoring and other student success initiatives can be interweaved to have the most significant impact on student success.

Commitment to Mentoring Aligning With Other Support Systems

Research about academic advising and its impact on student success is plentiful, with academic advising tied to student outcomes, retention, and persistence (Young-Jones et al., 2013; Drake, 2011). In nearly every institution, every student is assigned an academic advisor, and in many cases, professional staff advisors fill that role. In other structures, advisors have faculty appointments or teaching/research faculty have an advising piece to their role. The advisor-student connection can be vital to student success work at an institution, and the concept behind a faculty-driven mentoring program is aimed at enhancing that connection, not replacing or minimizing it. A well-structured mentoring program should not supplant any core services offered by academic advisors, such as course selection, curricular planning, and graduation planning. However, when faculty mentors and academic advisors work together with common goals, with a student success focus, great things can happen. Advisors and mentors can and should work collaboratively to lift up and support students throughout their academic journey. While an academic advisor might meet with a student for course planning, a mentor could help the student in building a study plan or weekly schedule or connect the student with tutoring resources. As faculty and advisors work together to help students succeed while understanding their own unique roles in the process, students are the ones that benefit (Baker & Griffin, 2010).

As mentioned previously, the focus on student support may limit the purpose, view, and potential outcomes of a robust mentoring program where staff and faculty benefit from other forms of mentoring, even in a formal faculty-to-student mentoring program. Mentorship and fit within an institution are critical decisions, as is the need to clearly define the populations being served and the

outcomes desired. Further, it is important to define the value and expected outcomes from all sides of mentoring, and the potential measured benefits to both mentors and mentees, regardless of the formal title. Removing the mindset of mentoring as a single arrow pointing one way will help to see mentoring as a better fit in a larger support structure related to staff, faculty, and student outcomes, engagement, and retention.

Within the analysis of a faculty-to-student mentoring program, mentoring of students is potentially a traditionally student success initiative. A faculty-led mentoring initiative does not fit many of the general norms of other like initiatives related to advising, Title IX, clubs, student associations, or other forms of student support. First, it may be faculty-led (potentially not led by student affairs). This is one of the examples we use in this chapter to highlight the need to understand context, goals, and desired outcomes while also anticipating the connected benefits of a mentoring program with unintended positive results. While the outcome and goals of a mentoring program may be similar to the outcome and goals of other student success initiatives, the benefit may be broader and more impactful to the entire institutional and campus community. This is why the structure may be significantly different. With that in mind, the institutional fit of mentoring may look vastly different than other student institutional initiatives and may require broader commitment from the institution as a whole.

Administrative Commitment to Mentoring

Colleges and universities throughout the world have many of the same goals. These may include research, student persistence, diversity, and a litany of other success measures. In nearly every case, there is likely to be a goal that deals with individual success for students or professional success for staff and faculty. With the knowledge that, over time, those employed or served by higher education are becoming more disconnected and with the increased use of remote work and education, it becomes even more essential to identify if mentoring can be a tool used to connect students, staff, and faculty to the institution. However, the group with the stewardship and authority, the administration, must make the decision and sustain that commitment.

Leading administrative teams and presidents to support and provide resources for mentoring (or any other initiative) can be tricky. Administrative support is key to any initiative that requires new or reallocated resources. With that in mind, in this section on administrative commitment to mentoring we will discuss the need for (a) administrative support, (b) the importance of buy-in by the population being served and those mentoring, (c) the need for administrative support of resource commitment, and (d) structural support and leading by example in order to create and support a successful mentoring culture. Without buy-in from the right individuals, many institutional initiatives or changes are destined to fail (Kezar & Eckel, 2002).

Administrative Support

Administrative teams or presidents often hold the first key to a successful mentoring program. While both top-down and bottom-up initiatives have their place in higher education, without administrative support, new initiatives are destined to fail (Kezar, 2012). The need for administrative support is vital for faculty recruitment, initiative sustainability, and resource commitment. Getting administrative

buy-in early in the process (for top-down-led initiatives) can help develop every aspect of the initiative. In addition, for a truly successful mentoring initiative, administrators who give cursory approval might provide significantly less support than those who are truly committed to the idea behind mentoring. Helping administrators understand the value of mentoring and its connection to institutional mission, vision, and goals can be key to creating deeply seeded and sustainable institutional support.

For top-down initiatives, administrative buy-in might not be an issue. Presidents and other leaders might see the value of these types of initiatives, authoritative directives, and lead development themselves. Mentoring success requires a culture shift and change that all parties see as beneficial to the institution and outcomes that benefit the individual and system.

For presidents, provosts, and other administrators who want to create a mentoring program, the following story is a cautionary tale from one small, residential campus in the western United States. A fairly new academic administrator had recently returned from a national conference. One of the sessions at the conference was about a faculty-led student mentoring program that was showing significant success at other campuses. The administrator was very excited about the possibility and received a go-ahead from the school's president to implement a mentoring program. Instead of speaking to the others and garnering support for the program, the administrator simply began developing the structure. The administrator gathered data, gathered student and faculty lists, and with little help outside their office, developed a plan to assign every faculty member at the institution with a number of student mentees at the beginning of the next academic year. As part of annual training to faculty before the fall semester, faculty were introduced to the mentoring concept and were told the mentoring program would begin as students were set to arrive on campus in the coming weeks.

The response was mixed. Some faculty saw the potential benefit and had at least some level of buy-in. Others were unhappy with the process, the leadership of the project, or the way it was introduced. The initiative led to significant hard feelings among many faculty, and a number refused to be involved. By the time the program was discontinued two years later, few faculty were still committed to the concept or the campus leadership.

Fast forward about 5 years and mentoring was a topic of discussion on campus again. This time, however, it was a discussion that faculty were deeply involved in, and it was made clear from the beginning that it would be an opt-in initiative, where faculty could choose their level of involvement. The implementation of the program was smaller and significantly more deliberate. No faculty or student assignments were made without those individuals opting into the program. While the initial implementation was small, the program grew, and more faculty and students opted in when they saw the program's success. The program remains in existence now, and faculty and students remain committed to mentoring.

While unique to one specific campus, this example could likely be told at many campuses and illustrates the importance of buy-in by both the mentor population and mentees being served. Without both, mentoring will not be successful. If mentors do not see the benefits or take part in the development of the plan, they are unlikely to invest their time and expertise into an institutionally sanctioned program.

At the aforementioned institution, it is interesting to note that informal mentoring during the first implementation was still a significant undertaking among many faculty. While faculty were soured to the formal mentoring program, their commitment to students did not waiver. That commitment allowed faculty to reconsider and join another initiative years after the first failed program. It is also critical that administrators were able to understand the challenges of implementing mentoring again and let faculty lead the process, recruit other faculty, and create a program that garnered success.

Buy-In by Mentee/Mentor Population

For a mentoring program to be successful, there is another group that is essential: mentees (students in the previous example). Mentees hold the key to the effectiveness of mentoring activities because if they do not opt-in, the most perfectly designed plan is still destined to fail. In the case of the previously mentioned faculty-to-student mentoring program, students' commitment varied, and in the first example (administrative directive), student commitment was low. In the faculty-led example, student buy-in was higher. However, the most effective course of action would be the development of the program from an administrative, faculty, and student perspective to create a culture of mentorship and a paradigm that is supportive of the mentoring ideal. A culture of mentorship will develop buy- in from mentors and mentees alike. Success varies greatly and can be impacted by their perception of an institution's commitment to its success (Savage et al., 2017). With that in mind, institutions that can show that mentoring programs are aimed with support and outcomes for a particular population (faculty, staff, or students) are significantly more likely to have students who are committed to mentoring, rather than programs with vague ideas and an ambiguous or poorly defined idea of mentorship. The same can be said about mentors. Mentors will buy into the concept of mentoring if the outcomes are clear from the beginning.

Kay McClenney, the former director of the Center for Community College Student Engagement, has been oft-quoted as saying that "students don't do optional" (Coates & McCormick, 2014). This truth might also be said of faculty and people in general. The idea is quite simple; if an initiative is key to student success, institutions should not give the target population a choice on whether or not to participate in the initiative but should, however, give the population being served a voice and seat at the table in the development of the mentoring program. While the concept makes some sense, mentoring, as this book explains, works significantly better with engaged mentees who see the benefit of their involvement in mentoring. Students who can identify with the stated outcomes of a mentoring program (graduation, academic goals, or emotional support) are more likely to be engaged and remain engaged than those who join because of the concept but do not have a specific reason to remain. The same remains true for faculty and staff in mentoring programs as well. If faculty know that participation in a faculty-faculty mentoring program would most likely lead to successful promotion and/or tenure, they are more likely to support and persist in the program. Buy-in can be a tricky process, as many people balance work, family, academic stresses, relationships, and a significant number of other commitments. In this case, mentoring can be viewed as one more thing. It is essential for the mentee and mentoring population to buy into the initiative, that those being served see a clear benefit from for their involvement. Institutions can do this by using student stories and data, using faculty experiences, and incentivizing the involvement of students. The more committed mentees remain to the mentoring process, the higher the chances for program sustainability and the better the outcomes from participation (Savage et al., 2017).

Administrative Support of Resource Commitment

The next key ingredient for a successful mentoring program is institutional resource commitment. Many institutions have in the past implemented new initiatives without allocating the proper resources to be successful (Hazelkorn et al., 2018). Many higher education practitioners have found themselves under the pressure of a new unfunded mandate coming through their institution that asks the professional to do something additional without resources to do that thing. While mentoring programs might not be a heavy resource draw when it comes to funding, there is a funding need for a successful mentoring program. I will now discuss more fully other resources, such as (a) faculty and administrative time, (b) funding, and (c) commitment.

Time is Essential. The largest institutional and faculty commitment to a successful mentoring program is time. Providing the time for contacting mentees, holding activities, engaging in educational discussions, and training are just a few of the commitments that a mentor makes when signing on with a program. The mentees make a similar commitment when they sign up for mentoring. No other resource can replace the need for time, and time must be accounted for in professional responsibilities and documentation for promotion and individual professional satisfaction.

Funding is Often Required. The second resource is funding. The financial resources necessary to run a successful program will vary significantly based on the goals and outcomes of the mentoring program (see Chapter 15 for more details about funding mentoring programs). However, part of an institution's commitment to a mentoring program will be financial. This may include dollars to help pay someone to lead the program, money for mentors to access activities and initiatives, and potential incentives (financial or otherwise) for recruitment and retention of all involved. Developing a budget as part of the development of the program will help create expectations and guide future investment into the initiatives. While mentoring is an outcome-driven initiative and may benefit from institutional performance-based funding (Orr & Usher, 2018), initial investments will be necessary to get a program off the ground. If an institution is committed to a successful mentoring program, investment in that program, to some level, will be necessary from the beginning.

Commitment is a Resource. The last resource to discuss is organizational commitment. While this might not seem like a resource, higher education institutions have a finite capacity for organizational initiatives or change (Austin et al., 1997). Keeping mentoring programs within the capacity of the institution is essential for success. A successful mentoring program should not be a flash in the pan, another initiative adding to initiative overload, or a pet project for a certain faculty member or administrator. Resource commitment to mentoring means a college or university sees it as a key student, faculty, and staff success initiative that has the potential for a long-term positive impact on those who are a part of the initiative.

It is critical that faculty and administrative time, funding, and commitment be critically assessed to ensure that there are enough of these resources for a successful mentoring program. We now consider the fourth and fifth sub-sections under administrative commitment to mentoring, leaders setting an example by serving as mentors themselves, and organizational structural support.

Leaders by Example: Serving as Mentors

Another way that administrators and faculty leaders can show their commitment to a mentoring program is by serving as a mentor themselves. While not all administrators have faculty appointments, many do. Many administrators were once full-time faculty. A significant number of faculty members, by nature of their position, their longevity at their institution, or their leadership among the faculty, can play a key role in shaping faculty and institutional attitudes toward mentoring. While having every administrator or faculty leader serve as a mentor is not necessary, those who do serve can play a significant role in shaping attitudes toward and commitment to mentoring among faculty and students.

Earlier in this chapter, a story was shared about a failed implementation of student mentoring on a university campus. One of the issues with the failed implementation was the refusal of the person pushing the mentoring program to serve as a mentor themselves. It is essential that those who are most intimately involved in the development and implementation of a mentoring program participate as mentors themselves. That participation shows commitment to the undertaking and can help others understand that they are supported in the process.

In relationship to the ongoing example of a faculty-to-student mentoring program used in this chapter, it is important to identify and recruit support from key individuals. On every campus, there are certain faculty who are leaders based on a number of factors. This might be in positions that they hold (faculty senator, dean, or department chair, for example), their longevity within their department or institution, or, in many cases, the esteem their colleagues hold for them. Identifying and recruiting this last group, the faculty thought leaders, can be very helpful in getting commitment to a developing mentoring program. Those who are looking to start a sustainable mentoring program should identify and actively recruit these thought leaders to buy into the mentoring concept and serve as mentors. Having the right mentors from the beginning may be more essential than recruiting the right number of faculty members when it comes to the long-term sustainability of a mentoring program.

Organizational Structural Support

While this chapter is focused on institutional support and organizational alignment, it is clear that institutional support is not confined to administrative support. Faculty and students are key to an institutional environment that makes for a successful mentoring program. Institutions can create and sustain faculty and student commitments to mentoring through the development of incentive programs. Student and faculty incentives can take many forms. For the faculty member, a load incentive or overload payment may be beneficial and necessary. The faculty member who leads this initiative will likely take an active role in recruiting and assigning faculty mentors as well as recruiting and assigning faculty mentees. Their role will be significantly greater than other faculty, and a load incentive will be important to getting the right person and not burning them out too quickly.

In the case of faculty, mentors do not necessarily need a load or monetary incentive. However, other creative incentives might help increase commitment. Some examples include clearly articulating how faculty mentoring plays into the teaching and service components in faculty role statements. For example, a common element in faculty teaching role statements is to engage with students outside the classroom. Highlighting this element can be helpful in recruiting faculty members into the mentoring

program. In addition, there are opportunities for research within the mentoring structure that might be enticing to faculty, so articulating the benefits of research opportunities (and potentially associated funding) to faculty could significantly impact their desire to participate. In the same way that tying the mentoring program to institutional goals, mission, and vision can increase institutional buy-in, helping faculty see the potential tie-ins that participation in mentoring can have role statement roles and tenure and promotion processes can help faculty see their own benefit by involvement.

Other small incentives that may help recruit individual mentors or mentees include nonmonetary gifts such as apparel and swag items. These items may help show appreciation and commitment to those who participate in mentoring but are unlikely to create the buy-in and commitment needed from all. However, apparel and swag can be a means of recruitment and cultural symbols of a successful program in the campus culture. Small incentives or gifts are also a simple way to thank those participating.

For students, it could be a financial incentive or include other benefits related to campus life such as event tickets, T-shirts, other apparel, swag, special events, or meals.

Student incentives are a little different. While there are a wide variety of potential student incentives for participation in mentoring, most of them are nominal gifts to students. However, there is the potential for more meaningful incentives for students. These could include scholarships for those who have shown commitment to the program over time, student research opportunities, and paid student peer-mentoring opportunities as an add-on program to faculty mentoring. All of these larger incentives can help gain institutional and student buy-in, but the larger incentives are not necessary to create a successful program.

To this point, the chapter's focus has been on institutional commitment to mentoring and all the associated pieces. The remainder of this chapter addresses how to use this commitment across the institution to develop a mentoring culture.

Creating and Supporting a Mentoring Culture

While much of the discussion in this chapter has focused on how to secure institutional commitment for mentoring programs, sustaining that commitment is just as vital. Mentoring programs should be viewed as a long-term initiative as it can take time to both develop a sustained culture of mentoring and determine if desired and measured outcomes are being met. Understanding that administrators come and go and often take initiatives with them, a means to a long-term commitment to mentoring is to develop a mentoring culture on a campus. Developing that kind of culture shift (if the culture does not already exist or is not prevalent) can be a difficult, albeit fruitful, undertaking. If the institutional culture is one that nurtures and embraces mentoring activities, the long-term viability of specific mentoring initiatives becomes much more certain.

One strategy to develop such a culture is to provide and support professional development activities that focus on mentoring. This might mean developing workshops and other trainings on campus aimed at recruiting students or faculty workshops on how to be an effective mentor (discussed in depth in Chapter 10) or implementing mentoring tracks into existing professional development opportunities

for staff, faculty, or student leaders. It might also include seeking out and committing to outside professional development that will help keep strategies and ideas fresh and develop new approaches.

In addition, while this chapter has discussed the importance of alignment with any strategy—in this case mentoring—with the strategic mission of the higher education institution (Fleming, 2010), there may be a document that is just as important to the long-term sustainability of mentoring on a campus as the strategic plan: the faculty role statement. Faculty role statements guide the promotion, tenure, and evaluation of faculty. Including mentoring in role statements, or at least tying mentoring measures to existing faculty roles, can help solidify an embedded culture of mentoring within an institution.

Another way to more fully fuse mentoring into a culture is by providing research support and incentives for mentoring research. Many faculty spend a substantial amount of their time on research. There is a significant opportunity to research mentoring programs in both qualitative and quantitative ways. If faculty members engage in mentoring, research can impact both their and the institution's commitment to mentoring and taking it one step further; if administrators lend support to mentoring research or do research on mentoring themselves, mentoring starts to weave into the fabric of the campus culture. Similarly, student support of mentoring programs will slowly become part of the cultural interactions between students and faculty or staff and within the student population and mentoring programs. This is when a culture of sustained mentoring has deep roots and will remain an integral part of a successful campus community.

Barriers and Pitfalls for a Successful Mentoring Program

As individual student, staff, and faculty success and retention continue to drive decision-making and resource commitment at educational institutions in the United States and around the world, the need for measured outcomes to support funding and resource commitment has fueled research from many perspectives (Bergerson et al., 2014). The fact that nearly half of all students leave postsecondary institutions prior to completion of their studies is alarming (Tinto, 1993), and the persistence and retention of qualified professional staff and faculty is dropping due to pay, opportunities, and general engagement makes it critical for institutions to align commitment and resources toward initiatives and programs that support a mindset of student success and professional growth as part of the campus cultural-support fabric. One of the most alarming statistics is that attrition rates are higher for first-generation students than second- and third-generation students (McFarland et al., 2017), and this demographic is the fastest growing population at institutions around the world. This is why institutions seek solutions and answers for broader and wide-sweeping support programs for students, specifically those who need mentoring and guidance.

It might seem obvious that mentoring is best used to retain these first-generation students, but it is often overlooked that a mentoring program is equally tied to mentors and professional success and sustainability. In the example used in this chapter of a faculty-to-student mentoring program, the faculty may equally be positively impacted and will have more engagement and professional purpose with students and will be persistent and thrive in a mentoring environment (Tinto, 1993). One of the most obvious solutions that seems to meet the needs of both students and faculty is a mentoring program where faculty and students both benefit from discussions related to pathways and decision-making and where the mentor provides guidance and support as the mentee seeks to better understand and master the requirements of being a college or university student. The same applies to new staff and

faculty at universities who may also be first-generation graduates from higher education institutions and may also not have support at home about working in the complex setting of higher education. The concept of mentoring is simple, but the impact is profound, and the value seems obvious. However, the pitfalls and barriers to success must be acknowledged and identified for sustained success. In the last section of this chapter, we will discuss the barriers that exist around mentoring programs, including the ambiguity of programs, true understanding of institutional needs and goals, alignment of expectations from mentoring participants, relationships, and the potential for problems.

Mentoring Ambiguity

One of the largest barriers and pitfalls that becomes clear from the beginning is that the nature and definition of mentoring in an academic setting are varied and widely not understood (Crisp & Cruz, 2009). This ambiguity leads to one of the immediate pitfalls and barriers that must be addressed in the development and implementation of a mentoring program at a college or university. Defining institutional mentoring can be complex and requires alignment between stakeholder groups: Administration, faculty, and operations (Gershenfeld, 2014). However, it becomes most important to include input and representation from the group, new faculty, staff, or student population, being mentored as to the needs, understanding, and expectations of a mentoring program. Reducing ambiguity prior to implementing a mentoring program is critical for success and sustainability as well as adaptability (Jacobi, 1991). In the case of a mentoring program, ambiguity can be similar to our emerging shallow culture of titles and headlines but lack depth. For any population being mentored, it is potentially harmful to have immediate ambiguity and lack of clarity around what is being offered, how the program will be implemented, and what the outcomes will be. Even the term mentoring must be clearly defined for sustainable success in an institutional setting.

Institutional Needs and Goals

A second and opposite barrier to ambiguity is the assumption that all mentoring programs are the same and that any mentoring initiative will meet the institutional needs and align with institutional values or strategic plans. Understanding the institutional context and the desired outcomes is critical in developing a specific plan with defined and targeted populations being served with specific measures identified and outcomes measured to determine if the mentoring initiative is effective. One review of the literature (Gershenfeld, 2014) found that a number of mentoring programs had little or no progress that could be measured in relationship to the stated goals because of weak definitions and stated goals in relationship to institutional values and strategic goals.

Expectations, Roles, and Guidance

In the case of faculty, perhaps, the greatest barrier to a mentoring program is the fact that most successful faculty may feel that they are already mentoring students through their instruction and academic roles (Masehela & Mabika, 2017). This may also be true of professional staff, where professional development and transformational leadership may be present and already part of the performance of one's duties. This leads to further ambiguity and often frustration in relation to expectations and even promotion and tenure reviews. The idea that an additional element or expectation is added upon something they may already be doing can lead to resistance and emotional

barriers to support of a mentoring program. In order to assuage concerns and isolate expectations outside of current best practices, the value to the staff or faculty mentor must be clear, and the institution may need to modify faculty role statements related to service to students in order to create clear expectations. Where this becomes most clear and defined is when reviewing the adaption of a new mentoring program at an institution and the likelihood that new staff or faculty will be more supportive and excited to mentor than a seasoned faculty or staff member who may see it as an additional expectation without a clear purpose.

In the case of student support and mentoring, the evolution of our institutional student services teams has created more robust support but also increased specialization. The confusion between faculty and staff (academic advisors and other student services individuals) may create additional layers of ambiguity, role strain, and conflict. At the heart of the role of a traditional faculty member is the mentoring and guidance of students (Sharma & Writer, 2015). This is also clearly a part of a professional staff member within student services teams. Overlapping stewardship and the addition of a new mentoring initiative and culture can lead to conflict that does not help the mentee and can, in fact, create frustration and further barriers to finding answers and solutions related to performance.

The evolution of technology, rules, and regulations governing student, faculty, and staff interactions, and the need for further support, has fueled a need for professional student services leaders who play essential roles in student recruitment, retention, and graduation. When staff and faculty work together to support one another in their individual roles, it is a net of support for students. As mentioned, when conflict and roles are blurred, it can leave overlap and frustration or more alarming gaps of assumption between faculty and staff that end up discouraging targeted populations and may, in effect, lead to less support and more academic confusion for students and mentee populations. In addition to defining the definition, the roles of the faculty member and creating institutional expectations, and connecting success to faculty pathways, it is also important to define what is not expected and what the professional student services staff should do. Only by having clear expectations and defined boundaries between mentoring groups and student services will students be able to receive enhanced support. This same need would also exist if the mentoring program were designed and implemented within student services or even alumni from an institution in that the roles and expectations need to be defined, and the areas that are traditionally part of the life cycle of a student and supported by student services need to be maintained. In the end, a successful mentoring program creates clear expectations and pathways.

Relationships: Specific and Unique Concerns With Mentoring

Despite many definitions in the varied mentoring models, it is clear that a relationship is key and at the core of the model. A productive and meaningful engagement is critical to mentoring and is needed to have a mentoring program meet the identified institutional goals. One consideration that must be addressed is the need to create guidance and mentoring practices that protect both mentors and mentees from potential pitfalls and inappropriate relationships.

Clearly, the best mentors (faculty or staff) would most likely be engaging and warm professionals with personalities that invite mentee interest and connection. Professional engagement is key and critical to success. This, however, can also lead to confusion and emotional pitfalls that could end

up undermining the goals of the program and put a mentee or mentor at risk (personally or professionally). In order to provide protection to the assigned mentee, mentor, and the institution, it is critical to have input, guidelines and open discussions as to expectations for conduct (setting, forms of communication, and training) and have those expectations reviewed and approved by the administration, legal counsel and even student governing bodies in order to define appropriate and inappropriate behaviors. Rather than give those boundaries uniformly across institutional boundaries, it is important, again, to understand the institutional goals, culture, and norms. However, it would seem that it would be ineffective to state that mentors and mentees should not meet alone, but the setting and context of those meetings should be defined.

One safeguard for the students in a student mentoring program can be through ongoing reports and mentee or mentor follow-up. If the program has timely surveys completed by mentees and mentors, those surveys should include a confidential question reviewed by the mentoring administration related to concerns about the relationship developed so that steps to protect inappropriate relationships can be implemented in a timely manner.

Mentee Selection

Much like the need to define the mentoring goals and institutional expectations of mentors, it is also critical for the institution to define the persona of the mentee based on those desired outcomes. Not all staff and faculty members are equal, and each potential mentor may have strengths and weaknesses in relation to the institutional mentoring expectations. In advance of staff or faculty mentor selection, interested mentors should review the mentoring program guidelines and expectations and should not be mandated to participate. Having a mentor selection committee with identified steps and processes can also protect the institution from potential relationship issues and an unsuccessful mentoring program marred by the inactions of a poorly selected mentor.

Populations Served

It may seem obvious that all individuals could benefit from some sort of mentoring program and that, in the case of students, new staff, or faculty, all have unmet needs at every institution. However, it is essential that institutions identify the targeted populations and needs of specific groups in order to have clear expectations of success, measurable outcomes to review, and to keep the program targeted and aligned with institutional strategic goals. It is possible that early success within one population may push administrators or others to ask for program expansion, which can be considered if resources are available. However, mentoring takes time, and outcomes are not immediate (Crisp & Cruz, 2009). To be sustainable, a measured implementation and strategic roll-out to targeted populations allow for clear data to be gathered and reviewed to show success and areas of needed improvement. It would likewise be possible to identify targeted areas within an institution rather than targeted populations, such as career and technical campuses, certain colleges or departments, or even regional campuses away from the main campus for dispersed institutions. Whichever direction is chosen and whatever target is selected, it would be wise to measure and identify success and outcomes and needed adaptions of the mentoring program prior to expansion and rapid change in mentoring initiative scope.

Measures and Success

At the heart of all mentoring programs is the desire for better academic instruction, increased student support and success, and the development of a supportive institutional culture of support. Whatever the stated goal and institutional need, it is critical that measures and metrics are reviewed and understood. Without clearly understood outcomes and measured successes, a mentoring program may fail compared to new student support programs that are more traditional and require less human capital. Measured success can help to offset resistance by faculty and student services professionals who are resistant to another initiative and ideas to help students.

Sustainability of Mentorship

Any institutional support initiative requires sustainability and the ability to make a difference over time. As previously mentioned, mentoring takes time to see returns on the investment, and sometimes institutions are looking for quick fixes and immediate results. The program, organizational support, expertise, and perceived value of the program take time to develop and mature. In response to this evolution and program maturity is adaption and evolution of program details in response to dynamic feedback and stakeholder input. With this in mind, sustainability is not just a best practice but a necessary step to getting the mentoring to meet institutional goals and better meet changing student needs.

A few specific examples that can contribute to the sustainability of mentorship include setting up specific opportunities for regular communication from the program coordinator to leadership about how the program is going, successes, and areas of adaption moving forward. The more communication about mentorship, the more likely it will remain a part of the campus/university. Another example is the constant and consistent recruitment of both mentors and mentees. If there is constant input from both of those groups, the program is significantly more likely to have long-term sustainability.

Resistance to Recycled Ideas

Almost every academic institution deals with retention issues and works to offset barriers to success. This effort leads to innovation and change. It can, however, also lead to resistance to new ideas that appear to be recycled. Many see mentoring and initiatives similar to mentoring as returning to something that was tried before and possibly failed. Therefore, the messaging and articulation of the new goals and program design are critical to creating a sustainable mentoring program rather than recycling an old idea. With this in mind, the roll-out and the articulation of innovation, changing student needs, and administrative support are key to creating a sustainable program.

Resources Needed

Further, it is critical for the institution to find financial and human resources appropriate to the commitment to success. When mentoring is rolled out as a trial for one year, it is clear that it will not show the needed return on the investment to receive continued support. A multi-year commitment is needed to create adequate evidence of success or identify areas for improvement. A 3-year initial phase seems to give enough time for adequate feedback that is influenced not just by completion of graduation but by students across the student life cycle.

Sustainable Recruitment of Mentors

Sustainability is also enhanced when mentees are allowed and encouraged to share their stories and successes within the institution (social media, publications, seminars, etc.) and when they are part of the recruitment strategies for future mentors. A rollout with mentors recruiting students may be problematic in that the very issue of distance between faculty and students is what the program seeks to reduce. First-generation students and those unfamiliar with the role and purpose of faculty may be hesitant to join when recruited by faculty. However, when current students recruit and encourage participation it may be a peer-to-peer connection that helps the students in need overcome hesitancy and resistance. These efforts can bridge the gap and help encourage participation by students who might otherwise not see the program designed specifically for them.

Summary

A successful mentoring program identifies institutional needs and aligns those needs with the value, culture, and norms of the academic setting and is developed with input from the targeted mentees and mentors and should include a multi-year commitment from the institutional administration (Crisp et al., 2017). Further, it is important to define the scope of mentoring and identify those demographics in need that align with the institution's strategic goals. Finally, recruitment of faculty, staff, or student mentors and appropriate potential mentee populations is critical to sustained success and understanding of common barriers and pitfalls that may exist and a developed plan and guidelines that help offset these pitfalls and barriers in ways that open pathways to success and avoid deviations into dead ends and lack of support. Finally, it is critical for the original goals of a mentoring program to be connected to measured metrics of success and analysis and celebration of success for further support and sustained success.

As outlined in this chapter, mentoring can be helpful in institutional support of faculty, staff, and students and can naturally align with institutional values and support measured success toward the institutional or organizational vision. However, mentoring must be defined and measured and requires support. Therefore, the most successful mentoring programs require administrative support, institutional alignment, and appropriate resource commitment for sustained mentoring program support, overcoming barriers to success and misunderstandings related to mentoring while clearly defining measurable outcomes, sustainable support, and long-term commitment.

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THE CRUCIAL ROLE AND RESPONSIBILITIES OF THE MENTORING PROGRAM COORDINATOR

Michael A. Christiansen and Don Busenbark

Abstract

Mentoring is a crucial part of personal and professional development in practically any environment, including higher education, industry, and private institutions, though the nature and methods of such mentoring may vary as much as the organizations themselves. Because institutions differ so much in their structures and needs, it is important that a dedicated program coordinator be assigned to define mentoring and spearhead the construction, implementation, assessment, and evaluation of any institutional mentoring program. This program coordinator should have enthusiasm for mentoring, effectively communicate program goals, and provide the training and resources necessary to implement an efficient mentoring model. Coordinators should also direct the assessment and evaluation process and make changes, as needed, to promote quality results. This chapter will explain this process in detail, outlining the characteristics and duties of the ideal mentoring program coordinator and some ideas for evaluating and supporting that individual. We will also detail the six phases of designing, executing, evaluating, funding, and sustaining a successful program, followed by suggestions for future research and ultimate conclusions.

Introduction

Mentoring usually involves a mentor (a person who is providing direction) and a mentee (a protégé who is learning from the mentor). For the purposes of clarity, this chapter will focus on the mentoring of undergraduates, graduates, faculty, staff, employees, and other stakeholders across a wide spectrum of academic and nonacademic institutions or organizations. Thus, the term "mentoring program" may refer to any structure whose purpose is to guide and help such individuals along in their lives, responsibilities, or careers. As integral as the mentor/mentee relationship is to any mentoring program, a third component of mentoring will be specifically addressed in this chapter: the mentorship program's organizational structure (Lunsford, 2016). In particular, this chapter's narrative will focus on the central role of the mentoring program coordinator.

Foremost, it is important to address the characteristics and qualities of an ideal program coordinator. Enthusiasm, curiosity, effective listening, communication skills, and so on are some of the traits that adept program coordinators need. These attributes provide a catalyst for implementing a successful mentoring model. The main responsibility of the program coordinator, then, is to execute and maintain the mentoring program and resolve any issues that may arise while working with program stakeholders. For a detailed sample job description enumerating the ideal coordinator's skills and characteristics, please see the Appendix to this chapter.

In this chapter, we will explain the role of the program coordinator in creating and shepherding a mentoring program. In particular, the sections that follow detail two processes that are critical for creating and maintaining a successful mentoring program: The Program Coordinator and The Six Phases of the Mentoring Program. We then follow with Future Research Considerations and Conclusions.

The Program Coordinator

In this section, we provide an overview of the program coordinator's characteristics and duties and suggestions for the evaluation and support of the coordinator. (For a detailed sample job description enumerating the ideal coordinator's skills and traits, please see the Appendix to this chapter.) In particular, this section covers the following: (a) The Characteristics and Qualities of an Ideal Mentoring Program Coordinator, (b) An Overview of the Program Coordinator's Responsibilities, (c) Evaluating the Program Coordinator, and (d) Supporting the Program Coordinator.

The Characteristics and Qualities of an Ideal Mentoring Program Coordinator

In a paper on mentoring, Farah et al. (2020) listed various qualities of good mentors, such as energy and enthusiasm, scientific curiosity, effective listening, a mastery of one's field, and frequent electronic or in-person communication with mentees. Though somewhat older, a separate mentoring book by a US tri-academy committee on science, engineering and public policy complementarily and succinctly affirmed that "good mentors . . . are good listeners, good observers, and good problem- solvers," while also acknowledging that "there is no single formula for good mentoring" (Griffiths et al., 1997).

Mentoring may be difficult to perfectly define simply because it looks as infinitely varied and diverse as those who do it. We accordingly expect the sizes, makeups, needs, and goals of mentoring programs to be similarly varied, aligned to their settings and circumstances. Whatever the case, mentoring coordinators function primarily as the leaders of their programs. To the extent that good leaders should model the qualities and behaviors expected of those they lead, effective mentoring program coordinators should also be effective mentors themselves.

This does not necessarily mean that coordinators should actively mentor while supervising their programs. In fact, if coordinators' concomitant duties preclude it, they might choose to opt out of mentoring while serving as coordinators (Donovan, 2010). Nevertheless, good coordinators will have past experience in both mentoring and leadership, thereby enabling them to guide and shepherd the mentors they supervise, as well as their program and its participants as a whole. It should follow that any descriptors in the literature of effective mentors and mentorship administrators might aptly apply to good program coordinators.

Coordinators' education, training, and experience levels may be similarly varied but should equal or surpass those they supervise in their programs. Congruent with the aforementioned assertions of Farah et al. (2020), the personal and professional qualities of the ideal program coordinator would include energy and enthusiasm for mentoring, scientific curiosity, good listening abilities, strong written and oral communication skills, and a proficiency in using current electronic communication tools such as email, texting, and the direction of virtual meetings. Additionally, wherever one's mentoring program includes goals of self-assessment and evaluation, the coordinator would also need an understanding of statistical analysis.

An Overview of the Program Coordinator's Responsibilities

Mentoring program coordinators have several duties, the ultimate purpose of which is to guide their programs through six key phases, to be discussed later on in this chapter. At the broadest level, these duties include establishing or maintaining the mentoring program structure, training its participants, and working with them to refine, improve, and carry out program goals. Duties also include assessing and evaluating the program's effectiveness, making necessary adjustments, and then reassessing and reevaluating the program in a continual reiterative feedback loop to help refine and improve the program.

For organizations that lack a well-structured mentoring program, the coordinator creates and works with a mentoring committee to formalize mentoring definitions, parameters, rules, and procedures, including a process for matching or assigning mentors to mentees. In settings where a defined structure already exists, the program coordinator works with committee members to ensure that procedures are followed and, as needed, helps to update and adjust those procedures.

To accomplish this, program coordinators should meet regularly with their mentoring committee, whose team members may include mentoring supervisors, mentors, and possibly even some mentees. According to the company, organization, or institution's mentoring needs and size, the number and committee makeup understandably vary.

In academic settings where participant survey data (i.e., mentor and/or mentee feedback) are gathered in order to assess and evaluate a program's effectiveness—especially if there exists an intent to eventually publish their findings—coordinators take the lead in authoring and submitting an institutional review board (IRB) proposal, before implementing the program. (For more information on this, please see Chapter 14, "The Mentoring Program as a Research Project.") In nonacademic settings, this process might instead involve human resource specialists. In either case, the coordinator may choose to include committee members in this proposal-authoring process. Once approved, the coordinator then ensures that committee members and mentors are trained in following its authorized procedures.

Wherever an organization is large enough to require additional mentoring administrators, such as managers who oversee the activities of individual mentors, the program coordinator would supervise those managers and meet regularly with them to train mentors and assess and evaluate their performance, answer questions, and adapt program specifications to fit their particular needs. The program coordinator must work closely with institutional and organizational leaders to secure continual program support, to ensure that the program successfully meets its goals, and to recalibrate the program as determined through assessment and evaluation. (For greater detail on working with institutional leaders, please refer to Chapter 6, "The Mentoring Context: Securing Institutional Support and Organizational Alignment.")

As mentioned, depending on program size and specifications, the coordinator also helps to assess and evaluate the program as participants' surveys and other data are collected. If sufficient resources are available, a separate team or committee member may be hired or assigned to gather, collate, analyze, and track these data. The coordinator would then work with that individual or team in the assessment and evaluation process.

Program coordinators might also work as mentors themselves, thereby leading other mentors by example. However, if their duties are too numerous to make this workable, coordinators may opt out of serving as mentors (Donovan, 2010). Additionally, wherever an organization or institution has higher managers or administrators who supervise the program, the coordinators would also serve as a communication relay hub between upper administration and the program managers, committee members, and mentors.

Evaluating the Program Coordinator

That we are aware, there are no literature or research reports that specifically address the evaluation of mentoring program coordinators. However, because evaluation is a key component of any program's success, it is expected that the coordinator should also be evaluated. In fact, Zwikael and Meredith (2019) argue that merely evaluating the program is somewhat limiting, as it does not provide a complete picture of the program's actual success or failure. Thus, it is essential that the coordinator should also be evaluated, along with the program.

How will the coordinator's supervisor know if the coordinator is successful? Before the coordinator starts implementing the program, expectations should be clearly defined by the administration. These expectations should provide the coordinator with precise goals and directions, which in turn will clearly

define what will be evaluated. The program coordinator should accordingly understand these goals, the job requirements, the project timeline, and available funding prior to carrying out program duties.

Institutional administration or management should also indicate whom the coordinator will report to and how often. In addition, this report should include information regarding the status of the program's implementation, how many participants are involved, the trainings administered, which issues have been identified and resolved, which data have been collected, and funding needs. These data and reports will allow the program coordinator to adjust the program as needed and enable stakeholders to better understand the impact of mentoring on organizational culture.

Understandably, the success or failure of the mentoring program depends greatly on the program coordinator. The metrics by which this success is determined should accordingly be defined by the stakeholders and upper management. Questions to be considered in determining program success should mirror the institution's objectives for the program. Such questions might include: Has the program met its designated goals? Has the coordinator met the established timeline? How many students, faculty, or employees are involved in the program? Are there concrete goals for program growth? Has the program coordinator met these goals? Has the coordinator stayed within budget? How has the program been perceived?

Zwikael and Meredith (2019) suggest that any evaluation of a program should be multidimensional, with many facets being used to determine its level of success. They further state that "project success can be different from the successful performance of its leaders" (p. 1747). Thus, a program's inability to reach its objectives does not always indicate that a coordinator has failed. However, ultimately, the coordinator is the one who bears the responsibility of collecting enough data to provide administrators with the information needed to fairly and accurately assess the coordinator's performance.

As the literature is limited in its scope with respect to mentoring programs, we recommend that more research into mentoring programs be conducted, with specific consideration of the role, responsibilities, and evaluation of the mentoring program coordinator.

Supporting the Program Coordinator

Ultimately, the program must have support from top administration. As one source explains, "It is difficult for a midlevel administrator to drive a program if the staff members are aware that he or she is not supported at the most senior levels (Ehrich et al., 2004, p. 535). Ideally, a successful mentoring program will be spearheaded or supported by top administrators, who hire or assign coordinators and committee members under their purview. If the program itself germinates from the organization's midlevel management or staff, then it will have to be successfully pitched to upper administrators to obtain sufficient buy-in. Otherwise, the program may fail before or shortly after launch.

Support structures are not limited solely to buy-in from top managers and may vary according to institutional resources, program objectives, and the extent of administrative backing. Such structures may include the number of support personnel (i.e., staff or assistants), the degree to which the program is marketed, the amount of equipment available (office space, computers, and other materials), training and public recognition, and budget. Of note, depending on program specifics, the budget may need to

cover things like financial compensation of mentors, travel costs, and reimbursement for conference attendance and presentations. As necessary, program coordinators may seek out additional funding, such as grants or institutional and foundation backing.

One separate piece of mentoring success that often gets overlooked is the institutional recognition of mentors and other program participants. Such recognition can range from something as simple as listing a "mentor of the month" on a company newsletter or bulletin to creating mentoring awards or certificates, badge programs, or even financial incentives for outstanding mentors. Whatever the case, this area should be considered. In fact, one source on mentoring programs for KL2 scholars affirms that "creating a culture that publicly expresses gratitude for mentoring is also seen as a means of providing mentor support" (Silet et al., 2010). The fact is, most people love being recognized for their hard work and dedicated contributions.

As one more consideration, Putsche et al. (2008) affirm that the program coordinator should contemplate *institutionalizing* the program in order to ensure its long-term success, which we will discuss in detail later on. As with any structure, the stronger the program's foundation, the better its results will be, and positive results can contribute significantly toward enhancing program support. It is imperative, then, that from the program's inception, the coordinator and mentoring team properly design the program, along with its objectives, means of assessment and evaluation, and marketing strategies. These aspects will be addressed later under Phase 3: Designing the Program.

The Six Phases of the Mentoring Program

Koczka (2017) and Lunsford (2016) separately but complementarily affirm that the program coordinator's role is to organize and manage different phases in the mentoring program's development and execution. We have based Figure 7.1 below on Lunsford's work but have also adapted it in several ways, including the addition of a sixth phase (Funding and Sustaining the Program) beyond Lunsford's original five. These phases, boxed from left to right in Figure 7.1 and explored hereafter in detail, are as follows:

- Phase 1: Define the Program
- Phase 2: Preparation for Mentoring
- Phase 3: Design the Program
- Phase 4: Implementation
- Phase 5: Evaluation
- Phase 6: Funding and Sustaining the Program

Phases 5 and 6 (upper-right boxes in Figure 7.1)—the Evaluation and Funding and Sustaining the Program phases—should be considered and integrated throughout the development and execution process for every previous phase, from start to finish and everywhere in-between. This explains why Phases 5 and 6 are connected by arrows flowing back into each of the preceding phases in Figure 7.1. In other words, the implementation of Phases 5 and 6 is not a linear process because evaluation, funding, and sustainability impact each of the prior phases.

Figure 7.1

The Six Phases of Mentoring Program Design, Execution, Evaluation, Funding, and Sustainment
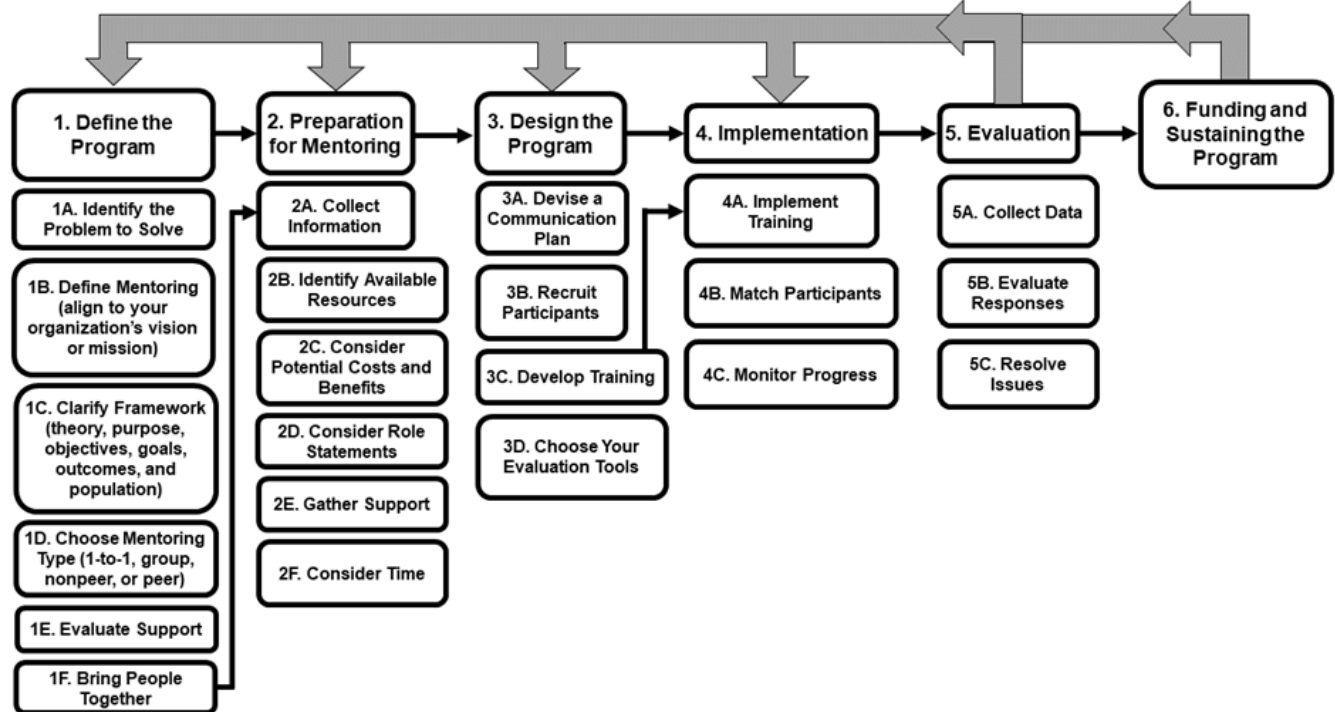
For example, if the type of mentoring chosen during Phase 1 were one-on-one mentoring, how would this impact the type of data needed during the formative and summative evaluations obliged by Phase 5? Another example may be, how might the type of data collected vary if the program focused on second-year staff members? Junior management? Midcareer faculty? Again, Phases 5 and 6 should be considered throughout the entire program design and implementation process, from beginning to end.

Continuing to Phase 6, the life length, sustainability, and longevity of any mentoring program depend greatly upon the resources supporting it, which in addition to funding, also include any available infrastructure, personnel, physical space, equipment, and invested time required for implementation. Thus, in order for a program to last, its design must consider each of these variables from its outset by scrutinizing the funding, infrastructure, and personnel availabilities that actually exist. A coordinator might otherwise design a program that looks perfect on paper but fails in practice due to a lack of resources needed to carry it out. It is hopefully apparent, then, why the ubiquity and feedback loop of Phases 5 and 6 are essential in the evolution of each preceding phase. We now examine these phases in detail.

Phase 1: Define the Program

Before starting Phase 1, coordinators should become familiar with peer-reviewed research on mentoring and with their specific institutional needs and resources (Benabou & Benabou, 2000). They can then begin assembling a group of people who will constitute the previously mentioned mentoring committee. This committee will help to prepare, design, implement, and evaluate the mentoring program. Allen et al. (2006) indicate that commitment is a key factor in the effectiveness of any

mentoring program. Thus, this team should include people who are sufficiently experienced and invested in the program's success because they will be instrumental in supporting the coordinator and in helping to maintain the program's fidelity. Naturally, this group's roster will vary over time as needs and personnel availabilities change.

Once chosen, this group moves on to Phase 1 together, working to define the program itself (Figure 7.1, upper-leftmost box). This process begins by identifying the problem or problems (Figure 7.1, Box 1A) that the program will address. The problems chosen may vary considerably, depending on the institution or organization's circumstance. For example, in academic settings, program goals might include increasing student retention or graduation rates, improving morale among graduate students, augmenting the number of peer-reviewed papers written by faculty, or expanding the rate of junior faculty who obtain tenure. In other settings, goals might include decreasing staff turnover, increasing employee promotion rates, or enhancing staff or employee proficiency. Whatever the case, the specifics of the problem to be addressed by the program must be identified during Phase 1. In other words, the committee should begin by answering the question, "What problem are we trying to solve, or what needs are we trying to address with this program?"

During Phase 1, the term "mentoring" (Box 1B) must also be defined in a way that is actionable and aligns with the vision, mission, and values of the institution or organization. This is sometimes harder than one might presume. For instance, in one review by Jacobi (1991), 19 different definitions of mentoring were found. Some years later, Crisp and Cruz (2009) increased that number to more than 50 definitions. Whatever ambiguity may exist, for the sake of program functionality, an operational definition should be researched and chosen by the coordinator and committee members in a way that corresponds to the institution or organization's goals and needs. As Koczka explains, "In this initial phase, the program coordinator will define the mentoring within the context of the organization and identify how it is different from any other types of personal development" (Koczka, 2017, p. 249). For more information on creating an operational definition, please see Chapter 1, "Mentoring Origins and Evolution."

The coordinator and committee now move forward with clarifying the program's framework (Box1C). This begins by choosing a mentoring theory that will help frame thinking about the program (Lunsford, 2016). Dawson (2014) proposes that doing so can "clarify communications about mentoring" for those involved in the program and can "reveal implicit assumptions or omissions in the design of mentoring models" (p. 138). All who work as coordinators or mentors should understand how this theory will impact them and what it will look like in the context of their organization. Naturally, the theory chosen to underpin the program should complement the institution or organization's vision, mission, culture, and values. For more on this, please see Chapter 2, "Articulating a Theoretical Framework of Mentoring."

The establishment of a mentoring theory constitutes *one* part of the "Clarify Framework" step seen in Box 1C of Figure 7.1. However, this step also includes defining the program's purpose, objectives, goals, and outcomes. Of this, Crockett and Smink (1991) explain, "Every program must have an overall purpose or a set of predetermined goals in order to achieve desired results" (p. 23). According to Sanchez (2018), these goals should be clearly articulated because clear outlines and objectives contribute to an effective program and provide opportunities for later assessments and adjustments.

Thus, program goals and objectives should be determined early in development to help drive decisions that will impact the eventual outcome. For further details, please see Chapter 8, "Outlining the Goals, Objectives, and Outcomes of the Mentoring Program."

In addition to setting purpose, objectives, goals, and outcomes, the framework clarification stage (Box 1C) also includes identifying the program's target population, this population's needs, and how to structure the program to best address those needs (Crocket & Smink, 1991). This "needs assessment" step should help identify the mentee population of focus for the problem and should include information to be used to identify faculty, staff, employees, or others to potentially recruit as mentors. This process feeds synergistically backward to further refine and develop the program's purpose, objectives, and goals. In practice, for instance, one might ask, "Based on the problem chosen in Box 1A, what population is this program designed to help?" This question's answer can reshape program goals and objectives, which ultimately direct each subsequent stage of its design and execution. In effect, then, Phase 1 helps cement the foundation upon which the entire program will rest, so it must be done with painstaking care. For more on this subject, please see Chapter 5, "Needs Assessment and Data Analytics: Understanding your Constituencies."

Now in Box 1D, the coordinator and mentoring committee choose the type (or types) of mentoring their program requires (Koczka, 2017). For instance, are the problems addressed by the program (Box 1A), its mentoring definition (Box 1B), and its framework (Box 1C) best solved through one-on-one mentoring or mentoring in a group? Do the program's needs call for peer-to-peer mentoring (i.e., a more experienced coworker mentoring a less experienced one at a similar level)? Or does it call for nonpeer mentoring, such as a professor mentoring a student? As one might imagine, the steps shown in Boxes 1A through 1D are quite interconnected and might be developed cyclically together, despite being depicted linearly in Figure 7.1. For more information on mentoring types, please consult Chapter 3, "Mentoring Relationships Typology," and Chapter 27, "Developmental Networks."

According to Ehrich et al. (2004), adequate support and appropriate alignment to goals are needed to ensure the success of any mentoring program. This advances our journey to the next stage of Phase 1, which is to evaluate support (Box 1E) by listing and quantifying the organizational resources available. These include tangibles such as funding, infrastructure, personnel, physical space, and equipment, as well as more abstract (but still crucial) things like administrative support and enthusiasm, time requirements for participants (mentors, mentees, committee members, and administrators), and community interest, both within and outside the organization (that is, of both internal and external stakeholders). This appeal to available support and resources is a recurring theme throughout Figure 7.1, reappearing in various forms within Boxes 2B and 2D and Phase 6, feeding back into each preceding phase and step. Thus, while carrying out this "evaluating support" process or implementing the program later on, the mentoring committee might determine that its program design and goals need readjusting in order to fit within the real-world limits of its available resources.

Phase 1 nears completion as the coordinator and committee move to Box 1F: bringing people together. This step involves gathering additional stakeholders who are not on the mentoring committee, such as other administrators, faculty, staff, employees, and student representatives. This gathering, which may occur in-person or virtually and over one or possibly multiple meetings, dovetails naturally into Phase 2, as indicated by the arrow connecting Box 1F to Box 2A in Figure 7.1.

Phase 2: Preparation for Mentoring

The assembly of stakeholders from outside the mentoring committee initiates Phase 2: Preparation for Mentoring (Figure 7.1, upper-left box). According to Koczka (2017), to begin preparing any mentoring program, the coordinator needs to collect information (Figure 7.1, Box 2A) on the readiness of the institution, company, or organization, the benefits of mentoring, and any barriers to implementation. Although much of this is done during Phase 1 by the coordinator and mentoring committee, Phase 2 begins the collection of information from people who are *outside* the committee, who then give feedback that might include identifying additional resources (Box 2B) that were previously unknown by the committee and its members. Other discussion questions may be asked, such as: Who are the participants? Where will we find mentors? Who are our mentees? Feedback obtained during Phase 2, which may occur over multiple meetings and additional communications, will almost invariably prompt a need to readjust the developing program design from Phase 1.

Broadly speaking, in assessing the resources needed for the implementation of any mentoring program, the coordinator needs to include a cost/benefit analysis (Box 2C), which might be more accurately done based on information gathered during this larger meeting of people from inside and outside the mentoring committee. Koczka (2017) suggests that both "costs and returns" should be determined. For instance, how much will the program cost on the front end? What will be the potential returns on the back end? In performing this assessment, the cost of materials and activities for recruiting mentees, and possibly mentors, should be weighed against the potential benefits of achieving the program's goals.

As Box 2D indicates, in academic settings, interested faculty might worry about how to balance their potential work as mentors with other responsibilities in their role statements or professional contracts. In fact, potential mentors at any organization might have similar or analogous concerns. Above all, mentoring should not be compulsory (Allen et al., 2006). Instead, role statements and employment agreements for the program coordinator, mentors, mentees, and anyone else involved, should be clearly defined (Dawson, 2014; Sanchez, 2018), which requires effective communication of the organizational values and culture that are being cultivated within the program (Benabou & Benabou, 2000). These concerns should be discussed during this key meeting with stakeholders from inside and outside the mentoring committee, using genuine empathy and consideration for role statement responsibilities and time limitations.

The meeting, meetings, or other communications carried out during Phase 2 also provide a great opportunity to gather support (Box 2E) from the administration, faculty, resource staff, or other personnel because doing so is essential for program longevity and success (Sanchez, 2018). The program coordinator should accordingly use this time to communicate the benefits of mentoring to stakeholders, recruit additional mentors, and advocate for administrative and personnel support. Additionally, the discussions should also convey why the target population was chosen for help and how the mentoring program will achieve that goal. For greater detail on working with institutional leaders, please refer to Chapter 6, "The Mentoring Context: Securing Institutional Support and Organizational Alignment."

Lastly, program coordinators need to consider the time required (Box 2F) to implement mentoring

so that the program will progress and encounter fewer problems (Crockett & Smink, 1991). Time is needed for training faculty in the mentoring program, for effectively managing it, for evaluating the program, and addressing issues or concerns. In academic settings, program coordinators manage time and should be "cognizant of the need to strike a balance among teaching, research, and service responsibilities for each faculty colleague" (Hackmann & Wanat, 2008). Program coordinators should be realistic in their goals and understand that implementation usually takes more time than initially allotted (Crockett & Smink, 1991; Sanchez, 2018).

In summary, Phases 1 and 2 are a cyclical process of designing the mentoring program, gathering information and feedback, and then recalibrating the original design. Phase 1 focuses primarily on input from the mentoring committee, while Phase 2 focuses on input from stakeholders outside that committee. Understandably, Phases 1 and 2 have more written steps than the later phases because they form the foundation upon which the rest of the program is built.

Phase 3: Design the Program

In Phase 3, the committee operates under the coordinator's direction to design their mentoring program, built on the results obtained through the refining process of Phases 1 and 2. For those at colleges and universities utilizing faculty or staff, it is recommended that the coordinator select a formal or semiformal mentoring program that is decentralized. Such programs allow for matching and monitoring while also providing a means for record-keeping and evaluation. A decentralized program provides for decision-making by the various stakeholders and enables individual variations based on institutional resources and needs (Benabou & Benabou, 2000). In one paper, Allen et al. (2006) suggest that formal mentoring programs that mimic a more informal mentoring relationship might help to improve the program's effectiveness.

For Phase 3, the first recommended step in program design is to develop a communication plan (Figure 7.1, Box 3A): a strategy for how to effectively market and convey information about the program to the community and population being recruited. If that group is properly identified during Phase 1 (Box 1C) and Phase 2 (Box 2E), then constructing an effective communication plan becomes much easier. Specifics will vary according to organization and need. For example, if the entire program were intraorganizational, then its target population would be completely in-house. Thus, the communication plan might be something as simple as setting up a workgroup email, online discussion board, recurring meeting (either in-person or virtual), regular newsletter, company blog, institutional website, bulletin board with flyers, or other electronic or hardcopy means of spreading news about the program.

Contrastingly, if the target population and community lie beyond the physical or virtual walls of the institution or organization, then farther-reaching communication methods are likely necessary. Such methods might include social media marketing, the dissemination of electronic or hardcopy flyers, individualized texts or phone calls, booths at community events, or other advertisements in key geographic areas. If the institution has a marketing specialist (identified as a resource in steps 1E and 2E), then it might be appropriate to ask that specialist for assistance. Whatever the case, the purpose of devising a communication plan is ultimately twofold: first, to effectively market the program, and second, to devise a seamless way for all participants (managers, mentors, and mentees)

to communicate with each other once the program is implemented.

This dovetails seamlessly into the next step of Phase 3: recruiting participants (Box 3B). This recruitment extends to two groups: potential mentees (the target beneficiaries of the program) and potential mentors. At this stage, *mentee recruitment* involves simply enacting the now-established marketing component of the communication plan. For *recruiting mentors*—who will all be employees, faculty, staff, or volunteers from within the organization itself—groundwork laid during steps 1E and 2E should have helped identify supportive individuals who are both willing and qualified. Thus, at this stage, the program coordinator reaches out to those potential mentors, either in a group setting (such as a staff, faculty, or team meeting) or one-on-one, according to appropriateness and need.

During this process, the coordinator should actively seek accomplished faculty, senior staff, administrators, or other employees who have the appropriate characteristics and qualities needed to contribute to an effective mentoring program (McCann et al., 2010). Thus, program coordinators should look for and recruit individuals to the program in order to establish a pool of mentors in advance prior to implementation (Ganser, 1995). It is not enough to just recruit mentors to participate. In academic settings, for instance, program coordinators, supervisors, and administrators "must understand all faculty members' strengths and weaknesses, working with them to 'maximize their contributions to the department'" (Hackmann & Wanat, 2008). For programs that are carried out across multiple locations, this may involve having a different supervisor at each site in order to help the program coordinator and upper administration better understand the individual mentors, as well as how to most effectively utilize those mentors within the program.

Although recruiting qualified mentors is indispensable, Allen et al. (2006) suggest that programs allowing for *voluntary* participation had greater success than those that *mandated* participation. Thus, mentoring should not be compulsory. Instead, the program coordinator might consider working with upper administrators to devise awards, recognitions, or other forms of positive incentives to honor participants. If possible (see Box 2D), the addition of a mentoring component to role statements, employee agreements, or staff contracts might also be considered. As mentioned earlier, "Creating a culture that publicly expresses gratitude for mentoring is also seen as a means of providing mentor support" (Silet et al., 2010).

Once mentors are recruited, program development shifts to the next step: developing training (Box 3C). Training development is imperative and gets spearheaded by the program coordinator during dedicated mentoring committee meetings. In these sessions, the committee designs a repository of step-by-step protocols to guide mentors and mentees so they can succeed in their respective roles and duties. For example, the committee might consider writing an individual mentor guidebook and mentee guidebook, which program participants could readily access and use. These guidebooks would provide clear expectations and answers to common questions, such as: How often should mentors and mentees meet? What is the expected duration of these meetings? What help should the mentor provide? What should the mentor avoid? What questions or subjects should the mentors and mentees discuss during their meetings?

Training materials or sessions should also contain a guide or list of available resources for the mentor to share with mentees. These would include explanations or lists of accessible human resources,

counseling, or other supportive materials that might be useful or pertinent to mentees.

Creating such lists or guides before implementing the program will help mentors to better understand their role. Allen et al. (2006) contend that program understanding is a key variable for its effectiveness. Additionally, if web design expertise is available, a dedicated company or institutional website on mentoring can be made, serving as a readily accessible repository for these training materials. The training program might also include the creation of an oral training presentation (discussed later on) to be carried out by the program coordinator or another committee member during the training process. For additional information, please consult Chapter 10, "Preparing the Effective Mentor," and Chapter 11, "Preparing the Effective Mentee."

With a training program and materials developed, the coordinator and committee should recognize the need to evaluate the program's effectiveness and address any issues that may arise during its implementation. This naturally requires finding or designing evaluation tools (Box 3D), which should be based on the ease of collecting the type of information needed, all built on the framework established during Box 1C of Phase 1.

Of note, without a system of assessment and evaluation, one can never know if the mentoring program is achieving its goals. This process, therefore, requires obtaining data (i.e., mentor and/or mentee feedback) to gauge the perceptions of mentors and mentees. According to Allen et al. (2006), "Perceptions of program effectiveness likely play a large role in determining whether or not individuals will continue in the program, if others will sign up for the program, and ultimately whether or not the program will continue" (p. 126). For any concerned about the process, Chapter 13 of this book ("Monitoring and Supporting the Mentoring Program and Mentoring Relationship Through Formative and Summative Evaluation") encouragingly explains that the evaluation process does not have to be complicated but does require obtaining information about program participants and their sense of the mentoring procedure and results. Additionally, assessments and evaluations should include both formative and summative tools and may require comparing participants with nonparticipant control groups.

Of note, there is a technical difference between assessment and evaluation. In a mentoring context, Chapter 13 explains *assessment* as involving direct, self-reported feedback from mentoring participants about their experiences, while *evaluation* requires a judgment about whether or not the program is accomplishing its goals. Thus, the obtaining of data is assessment, while *analyzing and judging* those data to determine the program's effectiveness is evaluation.

The specific assessment tools used would naturally depend on program goals. For more easily measured outcomes, such as increasing the number of peer-reviewed papers written by faculty, the assessment could simply involve comparing the publication numbers of those who were mentored with those who were not; or comparing the publication numbers before and after being mentored.

Separately, obtaining data about participants' *perception* of the mentoring process, outcomes, and their self-reported experiences would invariably require some type of survey instrument, which could be administered electronically online or on paper. Anonymity might be necessary to ensure unbiased feedback, but the choice of tools, metrics, and questions ultimately hinges on program goals and

objectives. It is understandably crucial to collaboratively establish and design the program goals and assessment tools during Phase 1, prior to implementation.

Congruently, the program coordinator should monitor the mentoring program feedback and relationships to ensure faithful implementation, as well as to intervene when needed (Sanchez, 2018). For example, in one mentoring program with which the authors are quite familiar, each mentor and mentee is asked to fill out a short monthly survey online and report experiences with the program from the past month. The program coordinator and one other committee member then read the survey results and look for any concerning feedback, such as reports of mentors and mentees not meeting, feelings of dissatisfaction with the program, or potentially questionable behavior. If any issues arise, the coordinator reaches out individually to those involved or affected to help resolve these problems. If more significant issues occur, such as unethical conduct, then the coordinator reaches out to higher administration. The evaluation process will be discussed more deeply in our later coverage of Phase 5.

Phase 4: Implementation

As Box 4A indicates, Phase 4 launches by the implementation of the training developed during Phase 3. This training includes at least two components: the guidebooks or other written materials discussed earlier and an oral presentation for mentors given by the program coordinator or designated committee member. This presentation can be done in a group setting (such as a faculty, staff, or team meeting) or through dedicated sessions with specific participants. Ideally, it should be video-recorded and made accessible online for all mentors.

The next step is for the coordinator and committee to create a list of mentor-mentee assignments; in effect, to match and assign mentors with mentees (Box 4B). Ganser (1995) indicates that various factors—such as mentor and mentee needs, degree or vocational interests, physical locations, personalities, aptitudes, and dispositions—should all be considered when matching mentors with mentees to reduce problems that might occur later. Once the committee has made their matching list, the coordinator should reach out individually to the mentors to inform them of their mentee assignments and ask if any changes need to be made. If mentors object to any of their assigned mentees, then the coordinator and committee can discuss (perhaps through a quick group email) changing the assignment. Once the mentor-mentee matching list is finalized, the coordinator reaches out to give the mentors a list of each of their mentees, pertinent information such as mentees' full names and contact info, and basic instructions on what the mentors are supposed to do next. This communication might best be done with a boilerplate email template, whose details can be adjusted to fit each mentor's assignments. Specifics on what the mentors are supposed to do next, which should most especially include setting up their first meetings with mentees, should complement the knowledge presented during the earlier training presentation (Box 4A).

At last, the mentoring program begins its implementation, as mentors meet with mentees and carry out the types of activities covered in their training. As this implementation unfolds, the program coordinator and possibly other committee members monitor the program's progress (Box 4C) by regularly reading feedback obtained through the evaluation tools (monthly surveys or other reporting instruments) that were developed and discussed under Box 3D above. Logically, the mentoring program is not static but is instead a dynamic, evolving entity that gets readjusted by the analysis of these

evaluations. In this sense, every participant helps to shape the program's current and future mentoring practices (Crockett & Smink, 1991; Bell & Treleaven, 2011).

Phase 5: Evaluation

Evaluation—both formative and summative—of any program is critical, not just to determine its effectiveness but also to identify areas that need improvement (McCann et al., 2010, p. 95). As suggested earlier, evaluations should be provided in the form of surveys, reflections, and interviews. Surveys conducted monthly will help to ensure the fidelity of the program and allow for solving issues in a timely manner. Reflections and interviews can provide information on anecdotal experiences to inform change. Clear outlines and objectives foster an effective program and give opportunities for assessments and adjustments (Sanchez, 2018).

Although mentoring should ideally be a positive experience, it does involve people working with people. Thus, negative issues sometimes arise and should be addressed by the program coordinator (Bell & Treleaven, 2011). Concerns such as personality clashes, unresponsive students, inadequate mentors, and loss of interest are issues that the program coordinator must work out. A successful program deals with these issues through cooperation and collaboration between all participants involved in mentoring (Klinge, 2015). Mentoring can be difficult for some participants, so a procedure for ending a mentoring relationship should be included in the program design (Dawson, 2014). In fact, McCann et al. (2010) recommend that a process be in place to alert the program coordinator when a mentoring relationship is not functioning effectively.

Phase 6: Funding and Sustaining the Program

As mentioned earlier, Putsche et al. (2008) affirm that the program coordinator should consider institutionalizing the program in order to facilitate and ensure its long-term success. In other words, funding and sustainability (Phase 6, shown in the upper-rightmost box of Figure 7.1) are critical for the ongoing existence of all prior phases—and hence, for the mentoring program itself. This is why Phase 6 feeds back into all the other phases in Figure 7.1. Hence, in order to ensure the program's continued existence, coordinators and committee members should consider the program's longevity from the outset of Phase 1. This will likely involve the coordinator and committee preparing a budget, securing organizational buy-in, and obtaining other financial support, such as grants or institutional or foundational backing.

Future Research Considerations

Although program coordinators are integral to implementing an effective mentoring program, there exists very little research on program coordinators specifically. Instead, most research literature focuses on the experiences of the mentee and, to some extent, of the mentor, but little on the coordinator, program director, or comparable administrators. Koczka (2017) recommends that more research is needed on the reflections and observations of program coordinators. Such research would provide insight into how to develop and improve a mentoring program from the perspective of program coordinators/directors, as well as how to identify best practices in operating a successful mentoring program. Investigations on the role, responsibilities, and metrics for evaluating the coordinator are

also warranted. Additional research into details of each of the six phases of the program is needed. Other particulars of carrying out and sustaining a successful mentoring program, as outlined in other chapters of this book, could also be considered for research.

Conclusions

Mentoring is crucial to individuals' personal and professional development in nearly any work setting. Understandably, the specifics of any formalized mentoring program will vary according to organizational vision, mission, culture, and values. Regardless of these differences, in order to be functional, a mentoring program must have a dedicated program director/coordinator to spearhead the development of the program's characterization, framework, design, implementation, assessment, evaluation, and refinement.

In this chapter, we accordingly list the characteristics and duties of high-quality mentoring program coordinators and give suggestions for how to evaluate and support them. We also detail six phases of mentoring program creation, execution, evaluation, and sustainability. These are: defining the program, preparing for mentorship, designing the program, implementation, program evaluation, and funding and sustaining the program. These key phases are indispensable to the success of both the program and its coordinator.

Optimally, coordinators are supported by a mentoring committee and should have enthusiasm for mentoring, as well as strong communication, listening, and leadership skills. Because mentoring programs are dynamic, complex systems (Koczka, 2017, p. 259), a program coordinator who is both knowledgeable and passionate can help stakeholders navigate the mentoring process.

Coordinators and their committees are tasked with spearheading the research, design, implementation, evaluation, and improvement of the mentoring model used; this process requires them to evaluate the type of program that best fits their institution and to clearly define the roles of the stakeholders in that program. They then gauge the program's effectiveness through coordinator-led assessments and evaluations, which allow for the continued, iterative improvement and possible expansion or contraction of the program. Additionally, coordinators and their committees should also develop and provide the administrator, mentor, and mentee with the training and resource materials needed to implement an effective mentoring model. This dynamic process understandably requires that individuals be adaptable to the needs of the organization and of those involved.

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<center>**Appendix**</center>

<center>**Mentoring Program Coordinator Position**</center>

Overview

State/University located at the central campus invites applications for a position as Mentoring Program Coordinator. This position is 12 months, full-time, and benefited. The anticipated start date is the beginning of the fall semester. The Mentoring Program Coordinator plans and oversees the design, implementation, and evaluation of the mentoring program as well as coordinates the operational activities pertaining to resources, support, recruiting, education, and events that promote and provide a welcoming campus for all students. The position will also provide leadership, guidance, continuity, and direction for the Mentoring Program.

Responsibilities

Reporting and Supervisory Responsibilities:

The Program Coordinator reports to the Office of the Provost. This position will supervise the design and implementation of the Mentoring Program and train faculty and staff.

Duties and Responsibilities:

1. Works with key stakeholders to conduct a needs assessment to determine if and whom the mentoring program will help.
2. Works with key stakeholders to determine the program's organizational structure.
3. Works with key stakeholders to determine the model for how programmatic decisions are made and by whom. For example, are programmatic decisions made solely by the program coordinator, executive team, or steering committee? Regardless, the program coordinator oversees this process.
4. Works closely with their supervisor regarding funding.
5. Oversees the development of an operational definition of mentoring to guide the program.
6. Oversees the development of a theoretical framework to guide the development of the program.
7. Oversees the development of the program's goals, objectives, and outcomes.
8. Oversees the type of mentoring to be employed (e.g., peer or hierarchical).
9. Oversees the program's scope; who will and will not be included? How many mentees can the program support? How many mentors are needed to support the program?
10. Develops a proposal of the program to be shared with stakeholders.
    a. If the proposal has a research component, the mentoring program coordinator must have the skillset to receive Institutional Review Board approval.
    b. The communication plan is made explicit within this proposal, which describes how the

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program coordinator will keep all stakeholders informed of the program, including evaluation of the program.

c. This proposal includes the details of what data will be collected, how this data will be collected, and how it will be analyzed for the summative evaluation.

11. Oversees the program's procedures and policies and how these are communicated and executed.

12. Clarifies the roles and responsibilities of mentors, mentees, executive or steering committee, and support staff.

13. Develops and implements a marketing plan.

14. Recruits, selects, and trains mentors and mentees. Collects evaluation data on training.

15. Oversees the matching of mentors and mentees based on mentoring typology.

16. Creates a plan to monitor and encourage the development of mentoring relationships.

17. Creates a quality-assurance plan to address dissatisfied mentoring relationships.

18. Provides formative evaluation throughout the program.

19. Provides summative evaluation of the program.

20. Performs miscellaneous job-related duties as assigned.

Qualifications

Minimum Qualifications:

1. Master's degree in a related field or higher

2. A high degree of self-motivation

3. Demonstrated strong written and oral communication skills

4. Proficient ability to use current electronic communication tools, such as virtual meetings, email, texting, etc.

5. Education or comparable experience level that equals or surpasses those the coordinator supervises

6. Demonstrated energy and enthusiasm for mentoring

7. Strong interpersonal skills and ability to interact with a wide variety of individuals

8. Ability to teach, manage, and engage people

Preferred Qualifications:

1. Experience in mentoring

2. Experience in management

3. Experience working with Institutional Review Boards

4. Experience in proposal development

5. Experience in conducting a needs assessment

6. Experience in data management

7. Experience in statistical analysis

8. Experience with formative and summative program evaluation

Evaluation

The Mentoring Program Coordinator will be expected to be evaluated annually by the Office of the Provost. The Program Coordinator will be expected to present on the design, implementation, and results of the previous year, as well as recommendations for the program moving forward.

Support

The Office of the Provost will provide resources, budget, and training for the Program Coordinator to assist them in the implementation of the Mentoring Program. An office, computer and peripheral equipment, office phone, and other required resources will be provided. An assistant to help with data collection and analysis will be provided. A budget will be provided for the Program Coordinator in discussion with the Office of the Provost. It is expected that the Program Coordinator will attend at least one Mentoring Conference each year, and a budget will be provided to facilitate attendance. The Program Coordinator is encouraged to present the design and results of the mentoring program. Funds needed for presenting at conferences will need to be discussed with the Office of the Provost.

Required Documents

Along with the online application, please attach:

1. Resume

2. Cover letter

3. Letters of recommendation

Salary

Commensurate with experience

ADA

Employees work indoors and are protected from weather and/or contaminants, but not necessarily occasional temperature changes. The employee is regularly required to sit and often uses repetitive hand motions.

University Highlights

To be determined by the University or College

Notice of Nondiscrimination

In its programs and activities, including in admissions and employment, the University does not discriminate or tolerate discrimination, including harassment, based on race, color, religion, sex, national origin, age, genetic information, sexual orientation, gender identity or expression, disability, status as a protected veteran, or any other status protected by University policy, Title IX, or any other federal, state, or local law.

8.

OUTLINING THE GOALS, OBJECTIVES, AND OUTCOMES OF THE MENTORING PROGRAM

Lisa Z. Fain and Jamie Crites

Abstract

Even when institutions already have a mentoring culture, a mentoring program is not an end in itself. Rather, mentoring is a tool to achieve a broader outcome, be it at the institutional, department, or individual level. While these outcomes may vary, it is critical that a mentoring program is carefully crafted in service of the outcomes. It must meet the needs and objectives of not only the mentees and mentors but also the institutions and the field. In this chapter, authors Lisa Fain and Jamie Crites will use a case study to discuss how to craft goals, and objectives that are aligned to meet desired outcomes. We will explain how consideration of seven design elements will determine and reach the goals, objectives, and outcomes of programs. Lastly, utilizing a logic model we will guide you through how to employ this framework to appeal to multiple key stakeholders at your institutions.

Introduction

Tayshia has been a program coordinator for the business school at her university for 5 years. The majority of the students who enter the graduate program are first-generation graduate students. Over the years, she has noticed a lack of meaningful connections between the advisors and graduate students. Also, the students complain that they receive no guidance for navigating the processes and procedures at the school. For example, graduate students frequently ask how to write grant proposals, what it takes to become a professor, what other schools do, and why they should stay in their current program. While Tayshia has a list of resources she can pass along, she suspects that students would benefit more from the connection and learning that a mentor could provide. She reaches out to her supervisor and asks if they would consider implementing some sort of initiative to better support the graduate students. Her supervisor says, "Yes, that sounds great! Present your proposal to us at our next budget meeting."

Tayshia begins her task by conducting a needs assessment—discussed in Chapter 5—to determine if the issues she is noticing are truly problematic to the success of the graduate program. Upon completing the needs assessment, she notices that the business school is struggling to retain graduate students, and students perceive that the program lacks a commitment to teaching them about education systems like the internal review board process, grant writing, and effective student teaching. To address this problem, Tayshia has decided to propose a mentoring initiative.

As practitioners in the mentoring space, we often see organizations launch a mentoring initiative without taking the time to think through outcomes, goals, and objectives. When this happens, even if the mentoring pairs are highly satisfied and the program is well regarded by participants, the programs have limited longevity because there is no integration beyond its participants and coordinators, and no institutional (see Chapter 6) investment in its success. Therefore, to design an effective program, it is critical at the outset to identify desired outcomes, articulate goals that align with the outcome, and objectives that align with the goals.

Tayshia's success rests foremost on her ability to achieve her desired outcome of supporting graduate students and on her ability to achieve her goal of creating a mentoring initiative. Using Tayshia's story, we explore how to determine and align the goals, objectives, and outcomes of a mentoring program. Next, we will demonstrate how to align goals, objectives, and outcomes through the utilization of a logic model. We will then provide seven key design elements to consider while designing a mentoring initiative. We conclude this chapter by demonstrating how these design elements can fit into a logic model that you can use to inform your stakeholders of the goals, objectives, and outcomes of your program.

What are Outcomes, Activities, Objectives, and Goals?

Traditionally, when this content is in a textbook, the sequence is: goals, objectives, and outcomes. However, this process is not necessarily linear. Thus, we present you with an alternative order of thinking about program design for the sake of developing a mentoring initiative. All of these components are interdependent and exist as a metaphorical set of nesting dolls—one inside of another (see Figure 8.1). Ultimately, goals, objectives, and activities all act in service of the outcomes, so we will

begin with mentoring outcomes and work toward the tasks and activities. Or perhaps you are already aware of the mentoring literature and know what tasks you wish to include in the program, so you start at activities and work toward outcomes. Wherever one chooses to start, it is imperative that there is a clear connection between all four components.

Figure 8.1

Model of Outcomes, Goals, Objectives, and Activities

Outcomes An outcome is an overall change you seek to achieve as a result of your efforts. It answers the question, "Why are we doing this?" and likely will derive from a needs assessment. The outcomes of the program or initiative are also used in the development of a logic model to illustrate the flow from resources to outcomes and will discuss in future sections. The outcome should be something that advances a core mission, vision, or value of the organization. While the positive impacts of mentoring are well-established (see Chapter 4), mentoring itself is not an outcome. The outcome is what you hope to achieve by implementing a mentoring program. Some examples of demonstrated outcomes from mentoring programs are more program satisfaction, greater networking skills, enhanced connection to the institution, and greater job satisfaction (Allen et al., 2004). An outcome may be short-term, intermediate, or long-term and is demonstrated by changes in knowledge, beliefs, or behavior (Israel, 2001). A short-term outcome is likely the easiest outcome to develop. These outcomes should be noticeable at the completion of the first cohort of mentees and mentors and should be demonstrable by changes in knowledge, skills, abilities, or attitudes. For example, Tayshia may choose to make a short-term goal like, "By the end of the mentoring period, mentees will have an increase in self-efficacy regarding education systems." Short- term outcomes can also be relatively simple: number of participants, program satisfaction, and number of meetings. Having short-term outcomes like these can aid in the evaluation and revision of the program (Hatry, 1999).

An intermediate outcome should center around adoption of the mentoring program. This may take months or years, depending on the length of the program. For Tayshia's program, the department or

graduate program has recognized the value of the initiative and is energized about the contribution it adds for the students. Thus, she may have an intermediate outcome such as, "The mentoring program is a point of attraction for incoming students, as measured by the incoming students survey item, 'what attracted you to the program?"

Long-term outcomes are also referred to as impacts. These may be measurable well into the future and should represent a significant social or cultural change in the program or institution as a result of the mentoring program. For instance, the long-term outcome for Tayshia's program could be, "The university's administration will adopt the mentoring program to be implemented across all graduate programs at the university" or "The business school has embraced a mentoring culture."

Goals Unlike the individual goals we often ask our mentoring partners to establish, program goals are broad, overarching statements that propose a program, project, or initiative. The goals are a necessary step that connects to the mission and vision of the broader program or institution. More than one goal may emerge. These goals need not be identical; they merely need to be congruent and should answer the question, "how will we achieve the outcome?" The goal statement you craft for the program must align with that vision to ensure that the program is a sustainable initiative that will survive beyond the creation of the program. The goal should be specific and measurable and will likely have several objectives within the goal statement. For example, Tayshia's goal could be, "Create a mentoring initiative for graduate students in their second year," "Utilize peer mentoring circles for first-year students," or it could be a goal unrelated to mentoring altogether, such as, "Provide counseling for graduate students in the program."

Objectives and Activities Next, we add another level of detail and establish the program objectives. The objective answers the question, "What needs to happen to achieve the goal?" At this stage, we begin to determine the metrics by which we will judge a program's success. A program objective is a concrete, performance-based statement that you will use to measure the success of the program. When developing the objectives, decide upon a timeframe and list any available resources that are available for the mentoring initiative (e.g., learning platforms, video conferencing, literature, matching tools, etc.). After establishing the timeframe and resources, map out specific mentoring program results that fit within the goal. When considering the specificity of the objectives, be mindful of how they will be measured. Measuring an objective can take many different forms, ranging from a quantitative survey to several conversations with participants. For example, if our goal was to provide our graduate students with a competitive advantage over their peers at other institutions, our program objectives could be measured by GPA, class attendance, an objective prementoring and postmentoring assessment, or retention rates.

For each objective, there will be one or more activities. These are tasks you will need to accomplish to reach your objective. Together, these activities will populate a project list or to-do list. Tracking activities can be useful for accountability and momentum. Assuredly, incorporate activities and tasks that will ultimately align with the program goals and objectives.

Crafting the Mentoring Initiative Outcomes Let us consider the story of Tayshia at the beginning of the chapter. Tayshia started developing her proposal by considering the goals and desired outcomes of the program. She starts by checking in with the literature.

Articulating Outcomes and Goals

Mentoring can serve many purposes, and there is ample research to support a myriad of benefits. While most mentoring research has evaluated outcomes of mentoring for mentees, there is also evidence to support that both mentors and mentees benefit from mentoring (Allen, 2003). For both mentees and mentors, there are subjective and objective outcomes that positively correlate with mentoring (Underhill, 2006). The following sections are examples of benefits for mentees, mentors, and organizations. These benefits are not exhaustive and the relevance of each will vary depending on the intended outcomes of your specific mentoring program.

Benefits for Mentees

Generally, mentees have experienced outcomes like an increase in income, the number of promotions, and career advancement opportunities (Underhill, 2006; Allen et al., 2004). More specifically, in a study from Harvard Business Review, 84% of CEOs reported that as a result of mentoring, they were better able to avoid costly mistakes and become proficient in their roles at a quicker pace, and 68% of CEOs made better decisions (De Janasz & Peiperl, 2015). Moreover, a 5-year study of 1,000 employees revealed that 25% of employees who participated in a formal mentoring program gained a salary-grade change and were promoted five times more often than those without a mentor (Gartner Research, 2006).

Mentees experience an increase in job and career satisfaction, career commitment, as well as a stronger intention to stay, career commitment, and more perceived promotion opportunities (Allen et al., 2004; Underhill, 2006). We can tie these outcomes to the development of a mentor program. For example, if the purpose of the mentoring program is to retain students or first-year professors, then consider constructs like employee satisfaction, employee engagement, or retention. In one study, 9 in 10 people who have a mentor said that they are satisfied in their current job (Wronski & Cohen, 2019). Of those people, 57% indicated that they were "very satisfied" with their job. Specifically related to new hires, mentees reported that they were more successfully socializing with other employees in the organization after being involved in a formal peer mentoring program (Allen et al., 1999).

Benefits for Mentors

Mentees are not alone in benefitting from mentoring programs. Mentoring is an important developmental component that is heavily emphasized in career and life developmental stages (Kram, 1985; Erickson, 1962). Acting as a mentor allows for reevaluating one's career and life accomplishments (Levinson et al., 1978). Mentoring also offers the opportunity to celebrate one's accomplishments and may provide intrinsic satisfaction (Levinson et al., 1978). What is more, mentors tend to have an increase in salary and promotions (Allen et al., 2006), and may experience a boost in subjective career success (Allen et al., 2006).

Organizational Benefits

The institutional benefits of mentoring are also noteworthy. Mentoring programs combat turnover and boost retention. Four in ten employees without a mentor have considered quitting within the past 3 months (Wronski & Cohen, 2019). Moreover, 40% of new managers fail within the first 18 months

(Douglas, 2017). However, retention rates for mentees and mentors are about 20% more than for non-mentored employees (Gartner Research, 2006). According to the Association for Talent Development (2012), managers involved in mentoring experience a 64% boost in productivity compared to those who simply train without mentoring.

Diversity, equity, and inclusion are common catalysts for a mentoring program. When comparing mentoring to standard corporate diversity practices (like mandatory diversity training or formal grievance systems), minority representation among managers in the workplace increased between 9% and 24% (Kalev et al., 2006). The same study found that mentoring programs also dramatically improved promotion and retention rates for minorities and women—15% to 38% as compared to non-mentored employees. Regarding generational diversity, millennials who stay in an organization longer than 5 years are twice as likely to have a mentor (Knowledge at Wharton, 2007). Importantly, 60% of college and graduate students list mentoring as a necessity when selecting an employer after graduation (Weiss, 2014). For more on diversity, equity, and inclusion, please see Chapter 12.

Let us return to Tayshia as she seeks to identify her desired outcome. She knows that she wants to see an increase in graduation rates for students from underrepresented populations. Tayshia also considers the research above, and she thinks that given that mentoring programs increase retention rates for new hires and millennials at other organizations, a mentoring program could indeed improve graduation rates for first-generation students at her school as well.

Tayshia considers the desired outcomes as well as the empirical mentoring research. She has narrowed her focus to outcomes for a specific population (*first-generation students*) to address the long-term outcomes of the larger program (*increase graduation rates for students with a minority identity*). By operating with this outcome in mind, she can develop a mentoring initiative that is aligned with the desired outcomes of other key stakeholders. Considering outcomes first helps her craft goals and objectives that are relevant, aligned, and effective. If she were to determine the desired outcome after looking at the goals and objectives, she may find herself creating a solution to a problem that does not exist.

Since many of the students who attend the business school are first-generation graduate students, Tayshia has already decided that the long-term outcome she hopes to address is to increase the number of first-generation graduates. Now she must develop an appropriate goal. She considers various initiatives that could lead to more students graduating. Again, Tayshia returns to the research. She investigates what other institutions are doing to support first-generation students, consults the literature, and meets with advisors. She decides to go with a formal traditional mentoring program that will be provided to students during their second year of instruction. At this point, Tayshia has identified outcomes and goals—two of the four components in Figure 8.1. She has added another layer of specificity to her goals by targeting the specific population and initiative that she will use to address her outcome of "increasing the number of first-generation graduate students."

Extracting Objectives From the Program Goals Next, Tayshia has to identify her program's objectives. Table 8.1 helps this concept come to life by showing some specific examples of outcomes, goals, objectives, and activities. You can see that the same outcome could have different goals, and the same goals might have different objectives. Tayshia has decided that her desired outcome is to increase

graduation rates of first-generation students. After looking at the research and the results of the needs assessment she conducted, she has identified the goal of creating a mentoring initiative for second-year graduate students. Now she examines what objectives she will need to meet to achieve that goal, and she recognizes that she will need to assure alignment and garner support from key stakeholders. She names this as one objective. First, she will need to identify the key stakeholders and meet with them. To measure this objective, she could measure her progress by meeting with a specific number of stakeholders. Once Tayshia has garnered support and her mentoring initiative has been approved, it is time for her to finalize the design of the program and implement the initiative.

Table 8.1

Differentiating and Articulating Outcomes, Goals, Objectives, and Activities

	Outcomes	Goals	Objectives	Activities
Associated question	*Why are we doing this?*	*How do we achieve the outcome?*	*What needs to happen to achieve the goal?*	*How do we achieve the objective?*
Characteristics	Broad statement about what you hope to achieve	Observable and measurable end result, broad in scope, has one or more objective	Steps to achieving the goal-specific results within timeframe and available resources. More specific, easier to measure	Tasks necessary to achieve the objective
Example 1	Increase graduation rate of first-generation students	Create a mentoring initiative for graduate students in their second year.	Garner support from key stakeholders	Identify the key stakeholders Meet with stakeholders to discuss the proposed mentoring initiative Secure approval
Example 2	Increase graduation rate of first-generation students	Create a mentoring initiative for graduate students in their second year	Recruit mentors	Determine criteria for a good mentor, send out communication to prospective mentors
Example 3	Increase graduation rate of first-generation students	Create a mentoring initiative for graduate students in their second year	Provide mentoring pairs with tools for maintaining a developmental mentoring relationship	Provide a framework for mentoring pairs to use while in their pairing
Example 4	Increase graduation rate of first-generation students	Utilize peer mentoring circles for first-year students	Develop facilitation skills for mentors	Create facilitation skills curriculum
Example 5	Increase graduation rate of first-generation students	Provide counseling (unrelated to mentoring, for example only)	Ensure qualified counselors	Develop and adhere to a list of required qualifications for potential counselors

Note that when you move from the design phase to implementation, you go from having the mentoring program be the independent variable to the mentee or mentor being the independent variable. For example, remember that Tayshia's desired outcome is to increase first-generation graduation rates through the mentoring program. To monitor the effectiveness of the program, an objective may be "to increase mentees' GPA by the end of the year" or "by the end of the mentoring initiative (e.g., 12 months), there will be 100% retention of the students that had a mentor."

Aligning Outcomes and Goals

A successful mentoring program will align the desired outcomes and goals with the interests of multiple stakeholders in an organization. In launching any initiative, it is helpful to identify who else in the organization might benefit from your desired outcomes; this is likely information you will have garnered from your needs assessment (see Chapter 5). For more on alignment with stakeholders, please refer to Chapter 6.

Once you have learned about the long-term interests of various stakeholders, you can identify outcomes of shared interest and craft a mentoring initiative (the goal) that might help achieve those outcomes. Before you launch the mentoring program, and while still in the design phase, it is critical to meet with other stakeholders to gain alignment, address any objections, and enlist support.[1]

Tools to Align Outcomes and Goals

One of the primary purposes of doing so much work up front is to clarify the line between the goals you have set and the outcomes you seek to achieve. A well-intentioned goal without a connection to the broader strategy of the institution can lead to a program failing or addressing the wrong problem. Using a logic model will help prevent these mistakes. By considering seven key design elements, you will have a holistic approach with adequate variables to map into your model.

Logic Models A logic model can be helpful to ensure that your plans for the mentoring program produce the desired impact. Using logic models can connect resources to both short-term and long-term results while offering a clear visualization of the path or expectations that can be made about a program (Rush & Ogborne, 1996). The development of a logic model creates a roadmap for how the program will be evaluated. It also aids the communication of your plan, goals, and evaluation of the program to the stakeholders who are less interested in theory (Kekahio et al., 2014). Logic models will vary depending on the contextual factors, institutions, program, available resources, staffing, and other factors. Forming a logic model is also an iterative process, where the flow and content of the logic model will shift as more information is revealed throughout the development phase. As such, there is not one specific archetype for a mentoring program logic model. As programs become more complex, so does the model; however, generally, there are four main components to a logic model: inputs, activities, outputs, and outcomes. These must be delineated sequentially as they are interdependent.

Figure 8.2
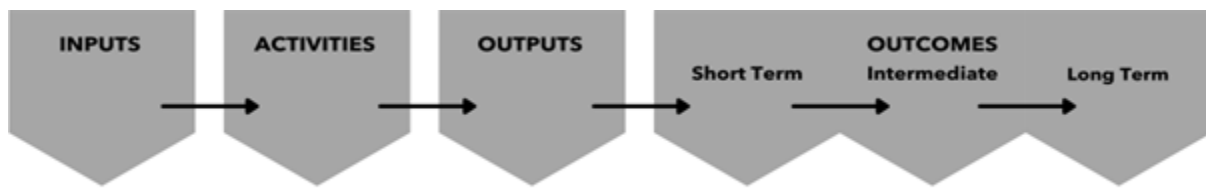
Inputs. The first components of a logic model are the inputs for the program. Inputs are the materials or resources that are available to implement the activities for the mentoring program. Inputs can be tangible resources like budget, learning platforms, or tools, and also include nonmaterial resources like program support, coaching skills, time, or mentoring knowledge. Understanding the scope of inputs will be invaluable when developing the program or communicating the program to stakeholders or new staff members.

Activities. Activities are actions, processes, or events that aid in the achievement of the planned program outcomes. Activities may also be thought of as steps necessary to implement the mentoring program. For instance, mentoring activities could include the matching process, implementation of formal training, utilization of roundtables, e-mail communication, and support or conducting mid-point interviews. Training, matching, and support are three elements of program design that fall into this category.

Outputs. As noted above, activities must be designed to achieve the desired outcomes. To create this link, a logic model utilizes outputs, which are specific measurements that will support the theory of change. Outputs are typically expressed numerically, which may be collected through surveys, research, or aggregated qualitative results. For example, outputs for a mentoring program could be the average number of times mentoring pairs meet, a self-efficacy assessment, or a program satisfaction measure. Outputs align with the measurement consideration above.

Outcomes. The last component of a logic model is the outcomes of the mentoring initiative. Outcomes are discussed at length above. Note that outcomes can be divided into three categories: short-term, intermediate, and impacts (e.g., long-term outcomes). See Figure 8.1 for examples of outcomes in a mentoring initiative.

For a mentoring program, there is an added complexity that should be considered when developing outcomes. For example, there may be disparate sets of outcomes for mentors, mentees, and the program itself. Using logic models can best demonstrate these intricacies because impact will be seen at the individual, programmatic, and institutional levels, requiring program administrators to align and track three distinctly different outcomes.

Theory of Change. As Tayshia develops the logic model, she needs to create a pathway for it to come to life. She does this by creating a theory of change. A successful mentoring program requires holistic planning and strategic thinking. In this regard, it is useful to articulate a theory of change. A theory of change is an explanation of how and why an initiative should work (Weiss, 1995).To do this, Tayshia

should consider her outcomes with respect to seven considerations and integrate these factors into the logic model. These elements are (see Table 8.2):

1. **Audience.** Identifying the population of mentors, mentees, and key stakeholders.
2. **Mode.** Setting the framework for mentoring.
3. **Measurement**. Determining the variables you will use to measure effectiveness.
4. **Matching.** Creating mentor and mentee connections that lead to sustainable and effective relationships.
5. **Training.** Building capacity in mentors, mentees, and program administrators.
6. **Support.** Sustaining momentum among mentors and mentees and providing resources.
7. **Communication.** Providing transparency, broadcasting success, managing expectations.

See Table 8.2 for an explanation of the interrelationship between the logic model and the seven design elements, the significance of each element, and some questions to answer to decide how to apply this framework.

Table 8.2

Seven Design Elements of a Mentoring Initiative

Element	Logic Model	Purpose	Question(s) to answer	If this is missing or done poorly, then…	Considerations
Audience	Input	To ensure you are addressing the right population and understand who key stakeholders are.	What is the population for mentors? What is the population of mentees? Who are our other stakeholders?	You are not serving the population you intended, don't garner the support of all who are interested, don't properly address objections, or identify where you might have resistance.	What level of experience, tenure, etc., should your mentors have? At what stage do you provide mentoring to mentees? (pre-admittance, after beginning semester, etc.) Who else has an interest in mentoring (advisors, dept. heads, admissions dept, etc.)?
Mode	Input	To ensure that the mentoring initiative achieves desired goal and outcome. To accommodate imbalances in size of mentor/mentee populations.	What framework is most appropriate?	If you have the wrong mode, you may not achieve the desired outcome. You may have a mentoring initiative that limits ability to provide mentoring to all who meet the criteria.	One-on-one, group, peer, "complementary" (reverse), mentoring triads, mentoring mosaic.

Element	Logic Model	Purpose	Question(s) to answer	If this is missing or done poorly, then . . .	Considerations
Measurement	Output *Note that while this is an output, it should be considered at the beginning of the program.	Provide quantitative or qualitative indicators of progress or success. To understand effectiveness. To choose where and how to adjust the program to meet the desired outcomes.	How will we measure success?	You won't know when/how/whether you have been successful You won't be able to report outcomes to your stakeholders You won't be able to course correct.	What will we measure? In your institution, will stakeholders respond better to quantitative data, qualitative data, or anecdotal information? When, how, and how often will we collect data? How will we use the data we collect? How will we ensure responsiveness of the mentors and mentees to our requests for data?

Element	Logic Model	Purpose	Question(s) to answer	If this is missing or done poorly, then . . .	Considerations
Matching	Activity	Create pairs or groups that are most likely to achieve learning goals and programmatic desired outcomes.	How will we match/pair for optimal learning?	Attrition of mentoring pairs/groups. Lack of growth. Lack of satisfaction or engagement with the program. Inability or unwillingness of one or more participants in a pair/group to establish trust.	To achieve our desired outcome(s), what criteria should we use for matching? What level of experience will we require as a qualification to become a mentor? Do we match within or across demographics?

Training	Activity	To ensure mentors and mentees have a shared understanding of expectations of the mentoring process and an opportunity to practice and develop necessary skills.	How do we build capability for effective mentoring?	Mentors and mentees may have misaligned expectations and may not understand the characteristics of effective mentoring. There may be a lack of agency among mentoring pairs for cocreating or repairing relationships.	For training content:
					Do mentors and mentees understand the expectations for participation?
					Do mentors and mentees understand the hallmarks of effective mentoring?
					Do mentors and mentees understand their respective roles in mentoring success?
					Training implementation: Is there a budget for training?
					Will training be mandatory?
					Will we conduct training in a live, live-virtual, or asynchronous format?
					How will we measure if training is successful?

Element	Logic Model	Purpose	Question(s) to answer	If this is missing or done poorly, then . . .	Considerations
Support	Activity	To provide resources to mentoring pairs for learning and for mentoring effectiveness. To ensure continuity and sustained engagement. To help mentors and mentees navigate unanticipated roadblocks in their relationships. To create a mentoring community and culture within your organization.	How do we ensure momentum, effectiveness, and sustainability?	Mentoring pairs do not have the tools they need to support their learning. Mentoring pairs are unable to leverage the best practices and experiences of colleagues in the mentoring cohorts. Mentor or mentees will abandon relationships that may otherwise have been salvageable.	Link to existing leadership development resources. Coaching capacity within the institution. How can/will we convene mentors/mentees in a way that they can learn from each other and share best practices.
Communication	Activity	Recruit mentors and mentees. To gain support for the program. To understand the goals and objectives of various stakeholders. To create champions. To sustain momentum.	How do we communicate with all stakeholders?	Mentors and mentees may miss key milestones and may not stay on track with learning goals. Mentoring program will be misaligned with or siloed from other initiatives. Key stakeholders may lose interest in or lack awareness of achievements within the mentoring program.	How often will we communicate about mentoring milestones, achievements, and best practices, and to whom? What is the preferred method and mode of communication? How will we seek feedback on the effectiveness of our communication and our mentoring efforts? Do our mentors and mentees know whom they go to for questions and concerns about the program? How will we use technology? How will we gather and share testimonials about the program and mentoring stories to provide motivation and inspiration?

Audience. Audience refers both to participants in the mentoring program and to key stakeholders. Creating intentionality around the audience helps ensure that you are including the right population for mentors and mentors. It also helps you identify your key stakeholders so that you can communicate with all interested parties.

Determining the Right Participants. Often, when recruiting participants, program coordinators begin with a broad announcement of an upcoming mentoring initiative with an invitation to apply and select participants from the pool of applicants. While this may garner ample participants, it can also be helpful to intentionally seek out mentors and mentees who will provide feedback and help you generate buzz about your program as it evolves. When you do not take the time to choose the participants carefully, you may end up not serving the population you intended. For Tayshia, whose desired outcome is to increase the graduation rate of first-generation students, the first criteria are obvious—she will want to identify and recruit first-generation students. Similarly, she may want to ensure that she has some mentors in the program with cultural competency and a commitment to that stated outcome. She may also want to seek out some bilingual mentors or mentors in the departments with particularly high numbers of first-generation students.

Questions to consider:

- What level of experience, tenure, etc., should your mentors have?

- Where will find mentees?

- At what stage do you provide mentoring (pre-admittance to develop pipeline), before beginning the program, after the beginning of the semester, etc.)?

Identifying Key Stakeholders. In a mentoring program, the audience is not limited to mentors and mentees. It is important to look at your institution and determine who else has a stake in the success of your initiative; this includes the supervisor, advisor, or dean who directed you to start the program. It also includes anyone else who, by role or interest, could benefit from successfully achieving your desired outcomes. For Tayshia, this includes the Office of Admissions and the Office of Alumni Relations, which could use the success of a mentoring initiative to attract prospective students or donors respectively. You will use this information to guide your communications, determine appropriate objectives and support, and help broadcast successes. If you need assistance with recruiting participants, these key stakeholders could be instrumental.

Questions to consider:

- Who else has an interest in mentoring (advisors, department heads, admissions department, etc.)?

- Who else has an interest in the achievement of our desired outcomes?

- How can we enlist the help and support of these key stakeholders at the beginning and throughout the program?

Mode. There are many different structures for effective mentoring, many of which are discussed in greater detail in Chapter 3. Most institutions default to traditional one-on-one mentoring, in which a

more senior person mentors someone more junior. Other modes include:

- Group mentoring: A more senior mentor to more than one mentee in a group setting. This could include mentoring triads or larger groups.

- Peer mentoring: Mutual mentoring or one-way mentoring where there is a common level of experience between mentor and mentee. This could be one-on-one or in a group format.

- Mentoring Mosaic: A diverse group of individuals of different ranks, ages, genders, races, skills, and experiences form a nonhierarchical community (Jackson & Arnold, 2010).

- Complementary Mentoring: Coined by coauthor Lisa Fain and Dr. Lois J. Zachary to refer to what has been known as "reverse" mentoring and renamed to reflect the mutuality of the relationship (see Chapter 3), refers to a structure where a more junior mentor mentors a more senior mentee, usually to provide exposure for the mentor and special knowledge (such as technology, diversity, etc.) for the mentee (Zachary & Fain, 2022).

The mode, too, should be chosen to align with the desired outcome. For example, if Tayshia were to learn that first-generation students perceive a higher degree of psychological safety and community when in groups with other first-generation students, she may want to recommend a group or mosaic model. Likewise, if the goal is to reach as many first-generation students as possible in the first year of the program, but there is a dearth of mentors, a group mode may be preferable. If, however, there is data showing that accountability for outcomes is higher with individual matching, then a traditional or complementary approach may be preferable.

The mode should be selected with intention and purpose and should be consistent with the cultural, psychological, and organizational needs of the participants. If organizations blindly choose the traditional model, or if a mode incompatible with desired outcomes is chosen, results may fall flat.
Questions to consider:

- What mode will best meet the goals of the program?

- What mode will best meet the needs of our participants?

- What mode will best suit the size of our mentoring population?

Tayshia considered a group mentoring model, which she initially thought would make sense because she had a limited pool of qualified mentors and wanted to create community among the students. Ultimately, she chose to implement traditional one-on-one mentoring. She knew the accountability that mentors and mentees would have to one another would help ensure engagement and accountability and thought that this might also serve to boost the connection and involvement of alumni.

Measurement. In the end, an outcome, goal, or objective is only meaningful if you know when you achieve it. Finding qualitative and quantitative indicators of progress or success will help you understand the effectiveness of your efforts and determine where and how to adjust the program to meet desired outcomes. If you do not carefully choose measurements that are linked to outcomes, and you do not periodically check in on progress, you will not know whether you have been successful. You will not be able to course-correct, and you will not be able to report outcomes to your stakeholders.

Consider measurements that address impact at various levels—impact on the mentee and the mentor, effectiveness of program management, impact of mentoring on the department/division, and impact on the institution.

Questions to consider:

- What will we measure?

- In our institution, will stakeholders respond better to quantitative data, qualitative data, or anecdotal information?

- When, how, and how often will we collect data?

- How will we use the data we collect?

- How will we ensure responsiveness of mentors and mentees to our request for data?

As Tayshia looked to decide which measurements would be meaningful, she reviewed her notes from her conversations with key stakeholders. One of the administrators was interested in the overall engagement of the mentors by examining their annual performance reviews before and after being a mentor. Some of the advisors that had a hand in the development of the program wanted to measure academic knowledge by comparing mentored versus nonmentored student performances on final exams. After much consideration, she rejected both of these as measurements because they did not tie closely enough with the overall retention outcome of first-generation students. She knew a fundamentally important measurement would be the graduation rates of first-year students but understood that this would be a lagging indicator that could take several years to measure. She considered measurements at various levels and settled on these factors as measurements in the first 3 years:

- Increased mentee satisfaction with graduate program

- Mentor/mentee satisfaction with program

- Mentee goal achievement

- Willing to recommend/repeat participation in next cohort

Matching. There is both an art and a science to making effective matches. As with each element, matching should be approached with the desired goals and outcomes in mind. Because matching is one of the very first things participants experience about the program, matching effectively is an important way to build trust in and generate commitment to the mentoring program. An ineffective match can forestall trust-building between mentoring partners or undermine participants' willingness to invest time and energy. As mentoring is a learning relationship, consider how to match mentors and mentees for optimal learning. If matching is done without intention, you risk attrition of mentoring participants, suboptimal results from pairs, and a lack of satisfaction or engagement with the program. There is more on matching in Chapter 9. To match effectively, you need not match for similarity. Indeed, there is beneficial learning, growth, and exposure when matching occurs across differences as well (Fain & Zachary, 2020).

Questions to consider:

- To achieve our desired outcome(s), what criteria should we use for matching?

- What level of experience and what skills will we require as a qualification to become a mentor?

- Do we match within or across demographics?

- What assistance/structure should we set up for mentoring? Will we need a committee to assist?

- If we are implementing a group or peer mentoring model, how do we match across or within groups?

Tayshia decided to create and enlist a committee made up of people from across the business school to help her with matching. She knew she could incorporate different perspectives in the matching and thought it would be an added bonus to help create alignment in various departments if there were other stakeholders who had an investment of time in creating effective pairings.

Training. Too often, mentoring programs fail to achieve their goals because they do not build capability in the mentors and mentees and do not provide adequate resources for their program administrators to prepare participants. To avoid the phenomenon of "pair and pray" (in which mentors and mentees are matched and left on their own to discover what mentoring is and how to do it), it is critical to ensure participants are committed to creating your desired outcomes, have a shared understanding of expectations and an opportunity to practice and develop necessary skills. Training also helps create a sense of agency among all members of a pair or group for cocreating and repairing their relationships. Without training, you will find that mentors and mentees have misaligned expectations about their roles and inaccurate conceptions of effective mentoring. It is nearly impossible to harness the power of mentoring without educating mentors and mentees about the role of a mentor and the best practices of a mentoring relationship.

Questions to consider about training content:

- Do mentors and mentees understand the expectations for participation? Do mentors and mentees understand the hallmarks of effective mentoring?

- Do mentors and mentees understand their respective roles in mentoring success?

Questions to consider about training implementation:

- Is there a budget for training?

- Will training be mandatory?

- Will we conduct training in a live, live virtual, or asynchronous format?

- How will we measure that training is successful?

Tayshia did have a budget for training the mentors and mentees, so she decided to bring in an outside facilitator who could also train her on how to conduct the training for future cohorts. At that training, she wanted to make sure to set the expectation for biweekly check-ins, make sure that mentors understood how their role was different from an advisor, and equip mentees to drive the relationship. She also wanted to share resources that participants may need for achieving their goals and answering their questions. She began to lay out the next steps for making this happen using the template in Figure 8.4.

Support. Providing ongoing support throughout the mentoring period will help ensure continuity and sustained engagement. It will allow your mentoring participants to navigate unanticipated roadblocks and repair their relationship more easily. It will ensure that your participants can access resources that will help them achieve their goals, and it will help create a mentoring community and culture within your institution. Adequate support can help mentoring participants to understand and meet mentoring milestones, ensure they have the resources necessary to further their learning, and assist them in repairing or strengthening their relationships.

Without adequate support, mentoring pairs will not have the tools they need to learn and develop. They will not have a sense of community or the ability to share best practices, and they will not have access to guidance on how to repair or strengthen a relationship that may be faltering. Furthermore, without adequate support, mentors and mentees will be less likely to trust the efficacy of the program, and when the relationship loses momentum, they will be more likely to abandon their relationships.

Support can take many forms, including:

- Providing or linking to resources that will assist with common learning goals
- Creating roundtable discussions among mentors and mentees to create community, share challenges and best practices
- Coaching for mentees and mentors whose relationships stall or fizzle

Questions to consider:

- What resources might assist mentees in common or frequent learning goals?
- Do we have coaching capacity within the institution to assist mentors and mentees? If not, how can we find or develop that capacity?
- How can/will we convene mentors/mentees in a way that they can learn from each other and share best practices?

Tayshia got to work trying to figure out how to provide adequate support on a limited budget. She would create a bank of resources that participants could easily access, which would include answers to frequently asked questions, links to developmental resources, and some information about mentoring best practices. She knew it was important for there to be at least one person that participants could call with questions or concerns, so she asked her supervisor if she could designate herself as that person and receive some training on how to help mentoring pairs get on track. She wanted to build community, too, so she calendared two dates for roundtables—sessions for mentors only or mentees only, where they would meet with each other to discuss the tools and strategies that were working best for them.

Communication. Effective and purposeful communication with stakeholders is also essential to a successful mentoring initiative. It serves to help create awareness, build support, and recruit mentors, mentees, and program champions. Communication is a form of connection. It keeps interested parties aware and engaged, helping you to build trust, better understand stakeholders' goals and objectives, and integrate these into your own planning when possible. Most significantly, consistent communication will help sustain momentum for your program.

Communication is essential at all stages of the mentoring process—from the announcement of the program to recruitment to training and closure. Mentors and mentees should receive periodic communication offering mentoring tips, sharing resources, and reminding them of mentoring milestones. Gathering testimonials and feedback will help you make program improvements and showcase mentoring achievements. Without effective communication, mentors and mentees may be unaware of key milestones and get derailed from learning goals. If you communicate with others outside of the mentoring program about the initiative, you will avoid misalignment or create distance from other initiatives. Moreover, key stakeholders may lose interest in or lack awareness of achievements within the program, causing an unnecessary loss of program champions and mentoring advocates. It can be helpful to provide a platform for mentoring participants to communicate with you and each other throughout the process.

Questions to consider:

- How often will we communicate about mentoring milestones, achievements, and best practices, and to whom?

- What is the preferred method and mode of communication?

- Will we create a mentoring platform? What technology will we use and how will we make others aware of it?

- How will we seek feedback on the effectiveness of our communication and our mentoring efforts?

- Do our mentors and mentees know whom they go to for questions or concerns about the program?

- How will we gather testimonials and mentoring stories to provide motivation and inspiration?

Tayshia wanted to create a principal place for communication and engagement, so she set up an internal web page with links to resources and information. She also created a regular e-mail cadence to check in on participants, remind them to meet, and sustain engagement by sharing a tip, quote, or resource. She built in two checkpoints during the year where mentors and mentees would share their "wins or testimonials." When she looked at this plan, she realized that she had not built in communication with other stakeholders, so she set up four dates where she would create a synopsis for other stakeholders that would include the testimonials, a summary of findings from her surveys, and other insights and resources.

Linking Theory of Change Elements and Outcomes

The best advice in mentoring is "the main thing is to keep the main thing the main thing." It is critical to keep desired outcomes front and center. So, to best use the design element framework above, Tayshia must not lose sight of her outcomes. It is helpful to explicitly link each of these elements to your desired outcomes and goals. Figure 8.4 provides a template in which to do this. By way of example, Table 8.4 shows how Tayshia completed the template.

Also, notice that Table 8.2 has a column for the logic model. The seven design elements are integrated in Tayshia's logic model below (see Figure 8.3). Notice that the design elements fall into the first three steps: the inputs, activities, and outputs. Outcomes are a product of the design elements and activities that you choose to utilize in the mentoring program. Audience and mode are foundational elements that are categorized in the input portion of the logic model. To move forward with activities, coordinators should identify the who (audience) and how (mode). After identifying the audience and mode, the coordinator can move forward with the bulk of the design elements, including matching, training, supporting, and communication plans and implementations.

The last design element to incorporate is located in the outputs portion of the logic model. The measurement should measure specific outcomes. For instance, Tayshia wants to include a self-efficacy measure surrounding navigating educational systems. She chooses this as a way to measure increased confidence regarding education systems. Tayshia could also have chosen other methods of measurement like the number of IRB proposals submitted or student-teacher evaluation scores, but she is specifically interested in learning how the students feel about their knowledge about educational systems. She also includes a program satisfaction measure as a way to evaluate the mentoring program. She can use this information to inform improvements to the program and as an indicator of student retention.

Figure 8.3
Example Logic Model for Tayshia's Mentoring Initiative
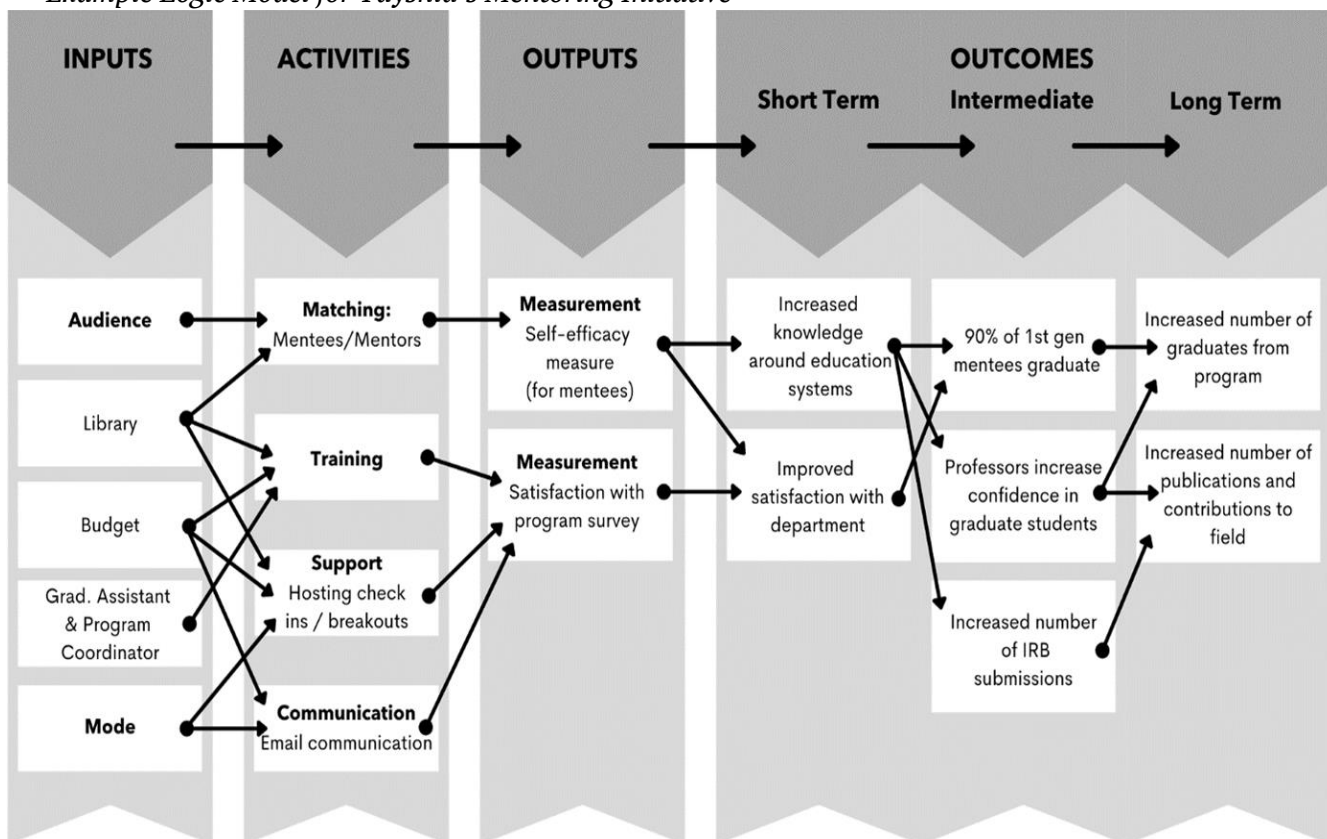
Figure 8.4

Template for Linking Design Elements to Desired Outcomes

Element	Notes	Link to desired outcome/goal	Task(s) needed
Audience			
Mode			
Matching			
Training			
Measurement			
Support			
Communication			

Table 8.4

Linking Design Elements to Desired Outcomes: Tayshia's Mentoring Program

Element	Logic model	Notes	Link to desired outcome/goal	Task(s) needed
Audience	Input	Mentees: second-year graduate students Mentors: alumni, PhD students, and advisors Admissions office Academic advisors and faculty	Mentees are the target population Mentors can create accountability and have a vested interest in success Admissions office can help in recruiting and championing because they can use stats for recruiting Advisors can help with accountability.	Socialize plans with admission and academic advising Find mentor champions in each group who can help recruit mentors
Mode	Input	Traditional one-on-one mentoring	Helps with engagement and accountability	n/a
Matching	Activity	Create mentoring advisory group to help with matching—have some representation from current/former first-generation students Create pilot of 18 pairs	Will help with alignment	Create advisory group
Training	Activity	Have a kickoff with mentors and mentees at the outset of the program Set expectations for biweekly check-in Share resources that participants may need for achieving their goals and answering their questions Make sure mentors understand their role Equip mentees to drive the relationship	If everyone understands expectations and knows resources available, relationships more likely to stay on track	Determine budget Design training or hire facilitator

Measurement	Output	Increased mentee satisfaction with graduate program Mentor/mentee satisfaction with program Mentee goal achievement Willing to recommend/repeat participation in next cohort Graduation rates	Satisfaction will indicate meeting needs Goal achievement indicates progress Repeat participation indicating successful design Graduation rates—desired high-level outcome	Create surveys for beginning, middle, and end of mentoring period Gather testimonials at end of mentoring period
Support	Activity	Create a bank of resources and answers to frequently asked questions Give participants one person to go to for all concerns Conduct periodic roundtables to build community and share best practices	This will build trust in the mentoring program and help sustain momentum It will link the measurements of "satisfaction with program" and will help create champions	Design and schedule roundtables Identify resources, create list, and post on internal webpage Designate and train person who is the go-to for participant concerns
Communication	Activity	Provide internal webpage with links to resources, information Send e-mails to check-in and remind participants to meet Share "wins" and testimonials with key stakeholders Summarize data collected and socialize among key stakeholders	This will help build trust and maintain momentum Hopefully, it will increase engagement and decrease the likelihood of attrition	Design, launch, and inform stakeholders of internal webpage Schedule e-mails Choose how to collect "wins" and "testimonials" Create a template for data collection and reporting

Conclusion

Tayshia was tasked with developing a strategy to address the lack of knowledge sharing regarding education systems for the graduate students in the business school. She started by conducting a needs assessment, which led her to realize that a mentoring initiative could be valuable for the program. However, she needed to persuade the stakeholders that would be in charge of approval of the initiative proposal. Utilizing empirical research and the goals of the broader program and university, she started by generating lists of outcomes, goals, objectives, and tasks that could be valuable for the mentoring initiative at the business school. After generating these lists, she begins to map out the design elements of the program—audience, mode, matching, training, supporting, and communicating—using a logic model as her guide. In the program logic model, she used boxes and arrows to illustrate the relationships between the inputs, activities, outputs, and outcomes to illustrate the flow from resources to outcomes. By creating a logic model that integrates the outcomes, tasks, and seven design elements, she was able to better inform stakeholders, new staff, administration, and other departments about how she connected resources (inputs) to long-term outcomes (impacts).

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[1] It can be beneficial to create a mentoring advisory committee whose members understand and represent the interests of various stakeholders. This will help you socialize and recruit for the program upon launch.

9.

DEFINING RECRUITMENT, SELECTION, AND MATCHING STRATEGIES

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Abstract

Chapter 9, "Defining Recruitment, Selection, and Matching Strategies" guides the program coordinator in recruiting mentors and mentees, selecting who will be in the mentoring program, and matching participants. The section on recruitment begins by emphasizing how the needs assessment, university vision, and program goals and objectives should align to create a clear vision and purpose for the mentoring program. It also describes how communication practices in various university ecosystems, rewards and incentives, and activities enhance enrollment. The section on selection delineates mentors' positive and negative characteristics, exploring in-depth critical mentor communication skills and the characteristics of successful mentees. Finally, the last section helps the program coordinator consider the multiple alternatives in the matching process.

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Introduction

This chapter is practical and directly impacts how the program coordinator will engage with mentors and mentees and how mentors and mentees will engage as dyads or groups, depending on the typology used for the mentoring program (Chapters 3 and 27). There are three main sections in this chapter. The first section focuses on recruitment and begins by emphasizing that, when aligned, the needs assessment, university vision, and goals and objectives create a clear purpose for the program. The second section, focusing on participant selection, describes the desired characteristics of mentors and mentees, emphasizing the need for mentors to be skilled communicators. The third and final section describes the processes needed for effective matching and how mentor and mentee characteristics may factor into the matching process.

Recruiting Mentors and Mentees in Academia

Academic recruiting practices have received less attention than selection and matching strategies. Past writings on recruiting encourage mentees to choose mentors carefully based on desirable characteristics (Campbell, 2007). We begin this section by highlighting practices and processes contributing to effective academic recruitment. First, we examine the need to clarify the rationale for participant recruitment and its ties to institutional alignment. Second, we describe communication practices that impact mentoring. Third, we explain how rewards and incentives can bolster recruitment. Lastly, we offer specific recruitment activities for program coordinators to consider. Implementing the suggested activities positively impacts the recruitment of mentors and mentees into mentoring programs.

Institutional Alignment: Clarify the Purpose and Audience of the Mentoring Program

The program coordinator must clearly articulate *why* a mentoring program is being designed and implemented. To do this effectively, the program coordinator must tie together the needs assessment (Chapter 3), the university's mission and vision (Chapter 6), and the mentoring program's goals and objectives (Chapter 8). Tying these elements together explains why the program is crucial and who it is for. When there is institutional alignment, the reasons for mentoring are evident to university leadership, faculty, staff, and students. This alignment creates buy-in from potential recruits because the program's purpose is clear and relevant to their current and future personal and professional goals. For example, as described in Chapter 28, Babson College's Undergraduate Professional Mentoring Program's purpose is developmentally relevant to junior and senior female business undergraduate students transitioning from life as university students to life after graduation as working professionals. Clarifying why the program is crucial and who it is for will influence the characteristics sought in both mentors and mentees. For example, the recruitment plan for selecting mentees in Chapter 23, designed to address concerns by faculty of color regarding feelings of isolation and lack of representation, will differ from the recruitment plan in Chapter 24, designed to help all new faculty navigate the tenure process. Likewise, the recruitment plan for selecting faculty to mentor undeclared undergraduate students will differ from a program designed to mentor junior science, technology, engineering, and mathematics (STEM) students with ambitions to attend graduate school. For the first program, the ideal mentor to recruit is empathic, nurturing, an effective listener, and readily available.

For the second program, the mentor may also need to be a STEM scholar willing to mentor students in research and dissemination activities.

We now give specific recommendations for program coordinators to consider as they develop their recruitment plans unique to their institution and the program's purpose.

Recruitment Communication Practices

When considering the communication practices surrounding recruitment, a multifaceted approach is best. Communication should be continuous and reciprocal; program coordinators should employ multiple strategies that reach participants or potential participants at all contribution levels. Hiring practices, onboarding, orientations, and staff/faculty professional development training present occasions to share the benefits and opportunities of participating in a mentoring program. University leadership can prioritize a mentoring culture by facilitating mentoring-specific activities, and program administration can show support by including information about the program in leadership communication chains. Keller (2007) discusses the influence of knowing the benefits and costs on an individual's decision to participate in mentoring. Using this information, program coordinators should take every opportunity to communicate about their program.

Systematically Immersing University Newcomers in Mentoring

Boyle and Boice (1998) assert that effective mentoring begins with university-wide systemic efforts to immerse newcomers (students, faculty, and staff) in support programs that give them a sense of connectedness. University leaders can enhance the overall mentoring culture and recruitment into mentoring programs by deliberately and intentionally communicating about mentoring. As explained by the National Academies of Sciences, Engineering, and Medicine (NASEM), department heads and academic deans can structure job recruitment, application procedures, interviews, and selection procedures to make it evident that new faculty and staff are expected to be committed to mentorship, both as possible mentees and mentors (NASEM, 2019). For example, in addition to the standard vita and cover letter for academic positions, department heads could also require a mentorship philosophy statement as part of the required application materials. Similarly, faculty can assess graduate students' openness to a mentoring culture throughout the interview process. Supervisors or faculty should present options for mentoring during new-hire or new-student onboarding processes and graduate-student orientations.

It is common for universities to have plans for recruiting new undergraduate students, orienting them to university life, and optimizing their first-year experiences. Discussing the positive aspects of receiving and giving mentoring in orientation and first-year experience programs is the beginning of these students engaging in a culture of belonging. Chapter 19 describes how one undergraduate first-year experience program recently expanded its intensity by integrating a yearlong mentoring experience with a faculty member.

Continuous Discussion of Mentorship From University Leadership

University leadership, including department and college leaders, can prioritize mentorship by

supporting tested curricula and tools for mentoring and discussing these frequently in sponsored meetings. In addition, department heads and deans should regularly share program metrics provided by the program coordinator regarding data on the mentorship process and outcomes (NASEM, 2019). They can also encourage time for professional development by engaging in such activities as attending professional conferences and reporting back to the sponsoring unit what the attendee has learned.

Program Coordinators Communication Plan

As described in Chapter 7, developing a communication plan occurs in Phase 3, Designing the Program. The communication plan developed by the program coordinator provides dissemination details of the mentoring program throughout the university. University ecosystems are complex, and program coordinators should be thoughtful about how often and what content should be disseminated to the various stakeholders, including mentees, mentors, university leaders, and other sponsors such as advisory or governing boards. The communication plan might be as simple as setting up a workgroup email, online discussion board, recurring meetings (in-person or virtual), a regular newsletter, an institutional website, a bulletin board with flyers, or other electronic or hardcopy means of spreading the news about the program. Communication plans must share data on mentorship processes and outcomes with all stakeholders. This communication plan should detail how department heads, deans, and other university leaders disseminate program data to their constituencies. One group of stakeholders is critical to keep informed—mentors. Keeping good mentors in the mentoring program is crucial to the program's long-term sustainability. One way to maintain good mentors vested in the program is to share with them the success stories of mentees and progress toward the program's goals. When mentors feel like their involvement positively impacts mentees' lives, they are more likely to remain committed participants. One common goal of mentoring programs is to increase feelings of belonging. Chapter 12 and recommendation 2.3 in this book's conclusion section note that it is highly encouraging when program coordinators share positive data about increased feelings of belonging; this may motivate both mentees and mentors who are not yet participating.

Rewards and Incentives

Further research is needed to verify whether providing external benefits or incentives improves the quality of mentoring or the desired outcomes for mentees (Campbell, 2007). While research on incentives is lacking, what we can state with confidence is that, according to Wolfe (1992), "the incentives and rewards associated with mentoring send a powerful message about the value accorded to the role" (p. 107). Institutional leadership can reward and visibly acknowledge faculty mentors for documented, effective, and inclusive mentorship (NASEM, 2019). Beginning with the provost's office, academic leaders may revise the faculty code and job descriptions to grant similar value to mentorship as assigned to research and teaching. Provost's offices and centers for faculty development may provide training on effectively documenting mentorship through reflective statements about how they have worked to improve their mentorship over time, similar to reflective statements regarding research and teaching. Department chairs and academic deans can use annual reviews of performance, promotion, and tenure practices to reward effective mentorship. Faculty can include student testimonials and measurements regarding the quality of the mentoring relationship in their promotion dossier. Department chairs can also consider reducing research and teaching responsibilities as an incentive to participate in the mentoring program's leadership role. While more

formalized than faculty evaluations, university staff also have evaluative processes in which staff supervisors can apply similar rewards and incentives.

Similar to incentives for mentors, offering funded activities or other rewards for participating in a mentoring program is a tangible way for university leadership to demonstrate the value of the program and the mentor role. Funding mentor-mentee activities can include providing snacks or meals during finals week and hosting mentor-mentee dinners, tastings, or gatherings. Program coordinators can seek funding from the administration, grants, or donations. Additionally, indirectly funded activities are also options that can significantly incentivize mentoring. For instance, Purdue University's College of Science partnered with university residences to host "Feasting with Faculty," a program designed to facilitate faculty joining students for meals in the campus dining halls. According to Dennis Minchella, associate dean of the College of Science, this program is "a way to allow students to be more comfortable in a student-faculty setting" (Piotrowicz, 2011).

Recruiting Activities

Depending on the mentoring program's purpose, mentors and mentees could be undergraduate students, graduate students, staff, or faculty. For example, an upper-division undergraduate student may be a mentor to a first-year undergraduate student. A more experienced faculty administrator may mentor a senior-level staff member seeking administrative leadership opportunities. The recruitment activities we describe may apply to both mentee and mentor or just one of them, depending on the typology and purpose of the mentoring relationship. For example, advertising a mentoring program in course syllabi to recruit mentees and mentors for a peer-to-peer mentoring program would be more practical for recruiting students rather than recruiting staff. We will leave it to the discretion of the program coordinator to determine which activities would be appropriate for their program. Our recommended timeline is to work with key partners to assess recruiting activities and a timeline in the last spring before the end of the calendar school year. Because the best time to reach the target audience is the beginning of the school year, planning before participants are off contract for the summer months is vital. We recommend working with the administration to utilize summer staff for developing mailing lists and preparing other recruiting materials or activities. If your program is at multiple campus locations, coordinating in the springtime increases the efficiency of the overall recruiting model to be implemented in the upcoming academic year.

Following the recommended recruitment timeline at the beginning of the school year will work well for recruiting faculty and staff. In addition, encouraging participation in the mentoring program early helps new employees to understand that there is a mentoring culture in the organization. It will reduce the number of missed new employees in the recruiting process.

Marketing Materials

Marketing materials are an essential part of any mentoring recruitment program. Your materials may include information about program requirements such as who is eligible to participate, activities, frequency of meetings, mentoring experiences, benefits of being involved in mentoring, and reports on mentoring. "Advertising and recruitment should emphasize the reciprocal benefits of participation to enhance the image of the mentor relationship as a partnership rather than a missionary one" (Redmond, 1990, p. 195). Highlighting the reciprocal benefits of mentoring is essential for recruiting

mentors and mentees to your program. Personal mentoring stories are another vital factor in the mentor's and mentee's decision to participate in the mentoring program (Putsche et al., 2008). The "tone of the recruitment materials is likely important for attracting dedicated and reliable mentors" (Garringer et al., 2015, p. 15).

Marketing materials can come in various formats: email, flyers, posters, rack cards, mailers, testimonials, videos, and websites. In addition to being consistent on all materials, the information in each format should explain why mentees should participate in mentoring and how and where to sign up for the program. When considering marketing materials, it is essential to consider your organization and desired participants and the best ways to contact them. If your organization has a social media account, that would be a place that could help promote the mentoring program. Social networks effectively communicate ideas and programs (Powell & Ralls, 2009). Know your audience. For example, if you are recruiting student mentees and students receive multiple emails from your organization, emailing them may not be the best method of contact since they may tend to ignore emails from the organization. Program coordinators should send faculty, staff, and students' emails individually rather than using bulk email lists; personal messages are much more apt to get the attention of busy mentor recruits.

If you use marketing materials to recruit mentors and mentees, "it is important for mentoring programs to realistically describe the requirements, rewards, and challenges of mentoring during this recruitment phase" (Garringer et al., 2015, p. 12). Mentors may be more motivated to participate in the program if they understand its benefits to themselves and others (Lunsford, 2016).

Chapter 7 outlines the program coordinator's role in the mentor and mentee recruiting process. Coordinators should be involved in the process of creating or approving marketing materials. They can also help with providing posters or informational media, posting messages to social media, sending email messages to faculty and staff, speaking to undergraduate students, speaking with student leaders, speaking with faculty and staff concerning the mentoring program, and so on. (Putsche et al., 2008; also see Chapter 7 in this volume). The program coordinator must meet with potential mentors and mentees to recruit participants, help explain the program, and answer any questions or concerns. Whether you are recruiting mentors or mentees to the program, "recruitment materials need to be designed to attract and engage appropriate target audiences whose skills and motivations best match the goals and structure of the mentoring program" (Garringer et al., 2015, p. 15). "Providing the right content will help you recruit the right people who will be active participants" (Lunsford, 2016, p. 216).

Course Related (Syllabi)

Besides using marketing materials to recruit students to the mentoring program, faculty can encourage participation in the mentoring program through their syllabi. For example, adding an extra paragraph in a faculty syllabus about the mentoring program with the benefits of the program and how to join would be another impactful method for recruiting students. In addition, for organizations utilizing faculty syllabi, it would be good to provide a template recruiting statement for inclusion in the syllabi. Appendix A shows an example of such a statement.

If the university uses a learning management system (LMS), faculty could include information on the

LMS for students to see as part of the regular course. This LMS can give students knowledge and links to the websites where students can register for the program and find more information. In addition, having faculty recruit students to the mentoring program provides another point of contact for students and allows the faculty to find students they can mentor.

Events

While marketing materials and faculty syllabi can effectively recruit students, there are other options as well. Events such as open houses, carnivals, student orientations, and faculty and staff meetings are just a few of the events that program coordinators can incorporate into a mentor and mentee recruiting plan. In addition, program coordinators could help facilitate the events, allowing potential mentors and mentees to interact and determine matches for the mentoring program.

Personal Contact

During recruiting, the program coordinator should seek accomplished faculty, senior staff, administrators, other employees, and students with the appropriate characteristics and qualities to contribute to an effective mentoring program (McCann et al., 2010). In addition, coordinators and university administrators should contact faculty, staff, and students through personal invitations to join the mentoring program (Redmond, 1990). Personal contact for recruiting mentors into the program is the most impactful method for generating interest (Putsche et al., 2008).

Not every potential mentor or mentee understands the advantages of the mentoring program. Not all potential mentors or mentees will attend all the activities or even learn about the program. Another option to consider for recruitment would be a calling campaign. Using the university resources and working with a mentoring committee, the students, faculty, and staff could be called individually and invited to participate in the program. A calling campaign effectively targets students, faculty, and staff identified as potentially benefiting from a mentoring experience about the program. We recommend that the program coordinator provide a guiding script to ensure a cohesive message (See Appendix B as an example of a guiding script to recruit student mentees).

Whether the prospective person decides to participate in the program or not, it is an opportunity to create connections with a student, faculty, or staff members. Personal contact lets them know you care and want what is best for them. Potential mentors or mentees may join the mentoring program later as they continue to hear more about the benefits and opportunities of involvement. Working with academic advisors can be another point of contact for recruiting students into mentoring programs. Redmond (1990) found that personal connection with students from the admissions office or other educational programs can help with recruiting.

Communicating the organization's mentoring culture should be precise and targeted to all potential participants in the program. Communication is vital to everyone involved in mentoring programs. For example, Crocket and Smink (1991) found that communication of success and positive outcomes in a mentoring program stimulated enthusiasm for the program and helped to maintain the momentum.

Selection: The Role of Characteristics in the Selection Process

For any mentoring program to succeed, it is vital to select mentors and mentees carefully (Matthews, 2003). As described earlier in this chapter, the first step in the recruitment, selection, and matching process begins by clearly articulating the purpose of the mentoring program and who it is for. The program's purpose and the number of mentees seeking the program will help decide the program typology, such as hierarchical, peer, group, reverse, or developmental network (see Chapter 3). The typology of the program will affect the recruitment plan and the desired characteristics sought in mentors and mentees (Mathews, 2003). For example, if the program's goal is to promote resiliency among vulnerable undergraduate students (Kupermine et al., 2020) and there is limited access to faculty as mentors, a group model may be best. Program coordinators could design this group model to provide exposure to a wide array of mentoring forms (e.g., hierarchical, peer-to-peer, reverse) by giving vulnerable students access to peers at their same level, more advanced students within the institution, and a faculty mentor.

Selection of Mentors

The attributes of the mentor will vary, depending on the program's purpose and desired outcomes (see Chapter 8) and whether the outcomes will be best achieved using a hierarchical, peer, group, reverse, or networked typology (see Chapter 3). Recognizing that it is an iterative process, coordinators will need to know at some point how many mentors will be available as they implement their program. Hierarchical or reverse typologies will likely have fewer available mentors than peer or group typologies will. The characteristics we describe generally apply to all mentors, regardless of typology. Coordinators should select mentors carefully for the characteristics they possess and traits they do not have (Johnson & Huwe, 2002). In the selection process, mentors must possess the desired characteristics to help the program achieve its outcomes. Both the positive and negative characteristics program coordinators should consider when selecting mentors are described in the following sections. Communication skills are often grouped within the positive characteristics category; we have parceled communication skills from other positive attributes to distinguish the importance of these skills.

Positive Characteristics

In the book *The Psychology of Interpersonal Relationships*, authors Berscheid and Regan (2016) characterize a dyadic relationship as having frequent, emotionally pleasant interactions combined with consistent and stable caring. While this definition is simple, it highlights many of the needed characteristics for mentors to possess to have effective relationships with mentees. Chapter 10 of this book describes how personality characteristics like empathy and a sense of humor can help the mentor bond with the mentee. Humor creates an environment where the mentee feels more open to express themselves, thus building rapport and creating emotionally pleasant interactions. Campbell (2007) describes other personality characteristics that lead to emotionally satisfying interactions, such as warmth, self-awareness, integrity, and honesty. By displaying empathy, mentors can support and reassure the mentee in a judgment-free zone—this ability to be empathetic forms the bedrock of psychosocial support.

The characteristics mentioned thus far are personality related. Other behavioral characteristics

include productivity, respect for colleagues, availability, and a strong mentoring history (Campbell, 2007). Because these characteristics are behavioral, they are observable to the mentee. Powerful learning occurs when mentees observe these positive characteristics in action. Through this process of observational learning, the mentor becomes a role model, and the mentee will tend to take on these positive characteristics through imitation, identification, and introjection (Bandura, 1977).

Negative Characteristics

As described in Chapter 10, marginal or poor mentoring can be an Achilles' heel in formal mentoring programs in academia. Poor mentoring may result from mentors agreeing to participate who lack the necessary positive skills and possess negative characteristics. A critical negative factor is a poor history of mentoring. For example, a person with a poor record of mentoring may be narcissistic. Mentors who are narcissistic may have feelings of grandiosity, which limits their ability to be empathetic and offer compassion and comfort to distressed mentees. Narcissistic mentors may be self-serving and promote personal interests over those of mentees (Chopra et al., 2016). In addition, ineffective mentors often view themselves as too busy, making it challenging to access mentoring meetings. Chopra and colleagues (2016) found that the more successful mentors become, the more they risk having too little time for day-to-day interactions with their mentee. Rather than seeing the altruistic and generative nature of mentoring, ineffective mentors perceive it as an onerous add-on duty that detracts from their research or teaching work. Other negative personality characteristics for program coordinators to avoid include low self-awareness, academic and intellectual insecurity, feelings of inadequacy, and a conflict-avoidant personality (Campbell, 2007; Chopra et al., 2016). Low self-awareness can be especially harmful, as it may correlate to sexist or racist attitudes, unethical behaviors, and, according to Johnson and Huwe (2002), even boundary violations.

Because marginally competent mentors often interact with mentees in a manner that sabotages mentees' development, it can lead to dissatisfaction and hinder the program's ability to fulfill its purpose.

Communication Skills

In the literature describing the positive characteristics of a mentor, effective communication skills are included among the desired characteristics. For Chapter 9, we have parceled communication skills from other desirable skills to emphasize the critical nature of these skills in effective mentorship. While all typologies require great mentors to communicate effectively, some offer more opportunities. For example, because of the complexity of various forms of group mentoring, mentors have increased opportunities to develop communication skills such as knowledge sharing, collaboration, and negotiation (Huizing, 2012).

In developing the Ideal Mentor Scale, Rose (2003) found that doctoral students seeking faculty mentors identified that the two top characteristics of an ideal mentor are a mentor who (a) communicates openly, clearly, and effectively and (b) provides honest feedback (both good and bad) about the mentees' work. We anticipate that other university subsystems, such as undergraduate students, staff, and faculty, would also place a premium on effective communication skills in a mentor. Therefore, this chapter organizes communication skills into listening, questioning, and feedback skills.

Organizing these communication skills also provides a simple and effective framework for program managers to frame mentor training.

Listening Skills. Active listening skills from mentors invite mentees to self-disclose. Mentee self-disclosures may center on the mentee's history, strengths, goals, and opportunities. When mentors actively listen to mentees' strengths, it creates the desired warm emotional climate, forming a dyadic bond. As this process continues, trust develops, which invites the mentee to share their strengths, challenges, and hardships, which may promote feelings of vulnerability within the mentee. When the mentor receives the mentee's feelings of vulnerability with compassion, understanding, and support, a deeper bond develops, and the mentee experiences the mentor as a valued, dependable ally. While all typologies require mentors to be effective listeners, peer mentoring stimulates many opportunities for listening as the individuals have similar power status, thus fostering a safe environment for listening, sharing, and developing trust (Buck, 2020). Chapter 10 provides specific tips to improve active listening skills.

Questioning Skills. Questioning skills help clarify mentees' ambiguity. Examples of obscurity for a faculty mentee might center around fears they have about readiness regarding being promoted from associate to full professor. Senior undergraduate students' ambiguity might center around life after graduation and whether they should enter the workforce or choose graduate school. Open-ended, clarifying, and probing questions invite the mentee to self-reflect and problem-solve. In addition, probing questions from the mentor will encourage the mentee to delve deeper into their thoughts, feelings, and wants regarding a concern, which will deepen their vulnerability, thus providing the mentor more opportunities to connect and create a warm, positive emotional mentorship climate.

Feedback Skills. As mentioned in the opening of this section, mentees value open and honest feedback, even when honest feedback may be challenging to hear. When mentees feel like their mentor cares about and supports them, they will be able to receive feedback constructively because they know that the mentor is providing feedback to help them achieve their goals and purpose. Influential mentors will provide feedback in a manner that is direct and facilitates guidance about what actions are appropriate for the mentee to take. As noted in Chapter 10, the mentee can easily modify tasks or assignments by keeping the feedback simple, thus helping them build confidence and self-efficacy. It is important to note that mentors should not duplicate services already offered by other entities, such as advising, counseling, or human resources. Mentors should avoid being overly proscriptive; instead, mentors should provide constructive feedback that supports mentees' psychosocial needs (Lunsford, 2016), connects mentees to resources (such as counseling or advising services), and assists mentees with their goals as they continue in their program. Wolfe et al. (2008) suggested that mentors should help mentees with goals, develop strategies for improvement, and, if applicable, provide resources for potential career opportunities.

Selection of Mentees

Selection of mentees to a mentoring program is an integral part of the program's success for both mentors and mentees. Unfortunately, most of the mentoring research focuses on the mentor's characteristics and dispositions and does not look at the characteristics and dispositions of mentees.

More research is needed to determine what characteristics or dispositions are essential for mentees in a successful mentoring program.

Lunsford (2016) determined that the program goals should help determine the "right people" for the program. "Identifying the population to be served should be based on the needs of the university" (Redmond, 1990, p. 195). Research suggests identifying a target population and initiating a targeted effort to ensure eligible candidates are selected for the program (Campbell-Whatley et al., 1997; Garringer et al., 2015).

One consideration in mentee selection is targeting those most likely to benefit from a mentoring experience; honor students, student-athletes, junior faculty, and even adjunct instructors all face unique challenges that mentoring can address. For example, suppose the purpose of the mentoring program is to help undergraduate students achieve their educational goals. Engle and Tinto (2008) found that low-income, first-generation students struggle most and need additional support to improve retention and graduation rates. "Being a first-generation student confers its greatest liability in [the] initial adjustment to, and survival in, postsecondary education" (Pascarella et al., 2003, p. 429). Campbell and Campbell (1997) used a targeted population of underrepresented ethnic groups and students with undeclared majors as criteria to select for their mentoring program research. "Selection criteria can [also] include the number of suspensions, academic failures, and absentees." (Campbell-Whatley et al., 1997, p. 364). Whether the mentee is a student, staff, or faculty, the mentoring program should focus on those who can most benefit or with the greatest need for the program's support.

Besides targeting specific groups for the mentoring program, we suggest that mentees' characteristics include "willingness to learn, curiosity, work involvement, and some level of communication competency" (Ragins & Kram, 2007, p. 261). The *Guidelines for Coordinators* manual for the Future Harvest Centers mentoring program (CGIAR, 2006) recommends screening mentees based on enthusiasm, professional interests, availability, and career goals. Menges (2016) found that in selecting mentees, they will be more successful if they have traits of "openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism" (p. 102).

Chapter 11 recommends that mentees should be ready and willing to participate in the program and that being self-directed will help them to succeed. There are five dispositions that mentees should have that program coordinators should consider when making selections: being ready, willing, and able to engage and connect; being willing to try new skills and strategies; being willing to co-construct new knowledge; being able to develop efficacy for learning; and being able to set and work toward goals.

Mentees should also be motivated. Huwe and Johnson (2003) recommend that mentees have emotional stability, have an internal locus of control, are coachable, are emotionally intelligent, and have a high need for achievement. They also recommend that mentees have strong communication skills and clear future goals. "The right people are those who see the program as meeting their needs or who are interested in achieving the program's stated goals" (Lunsford, 2016, p. 74).

Lastly, when selecting participants as mentees, they must have "skin in the game." Meaning students are willing to be involved in the program and take ownership of aspects directly related to their experience. Hudson (2013) found that the enthusiasm of mentees was a desirable attribute for a

successful mentoring experience. Crockett and Smink (1991) suggest that mentees "must demonstrate an interest in the program, the opportunities it offers, and a chance of success" (p. 28). They also should "sign a contract outlining commitments and expectations" (p. 28). Some universities require students and mentors to complete a formal application that provides information for the selection and matching of students based on the profiles of the participants (Redmond, 1990).

Matching

Of the three main sections in Chapter 9, recruitment, selection, and matching, this third section on matching has received the most evaluation and research. This section highlights who does the matching and when the matching will occur. How much input participants have in the matching process is described next. Lastly, we consider the research on how similarities and differences may impact mentorship and the implications for program coordinators to consider in the matching process.

Who Does the Matching? When Should Matching Be Done?

In Figure 7.1 of Chapter 7, participant matching occurs in Phase 4 of implementation. While matching occurs in Phase 4, the matching plan is influenced by what happens in the first three phases. For example, determining the typology of the program in Phase 1 will inform how many mentors are needed, with more required for a hierarchical program than a group program. In Phase 2, determining what data to collect on participant characteristics will inform the matching processes, described fully in the following section on similarities and differences. Finally, in Phase 3, recruiting participants determines how many mentors and mentees will need matching. As the program coordinator and others involved in the program design work through these first four phases, they must settle on who does the matching. If program designers do not give participants input into the matching process, then the designers must determine who will do the matching. The matching may be done entirely by the program coordinator in smaller programs. In larger programs, a matching committee may match participants. The matching process is enhanced when the various relevant university stakeholders participate on the matching committee. For example, the matching committee for an undergraduate mentoring program may benefit from including an academic advisor who knows many students. Matching committees may also benefit by utilizing mentoring software that can help identify characteristics of ideal matches with mentors and mentees.

In addition to identifying who does the matching, program designers also determine when the matching will occur. Because universities have a natural rhythm, dates for completing the matching are often determined by the academic calendar, with most mentoring programs starting at the beginning of the academic year. The following section describes the process of matching when participants give input.

Input From Mentors and Mentees Into the Matching Process

As program coordinators and others that help design the mentoring program plan their matching strategies, they should consider whether they want the mentee and mentor to have input into the matching process. When an informal mentoring relationship develops, both mentor and mentee engage voluntarily. Mentor and mentee choose to form a dyad because of mutual liking and identification

(Ragins & Cotton, 1999). Therefore, as program coordinators consider their matching process, informal mentoring can teach how mentoring relationships develop. Informal mentoring relationships develop voluntarily and with input from both dyad members. Allen et al. (2006) studied these two constructs, voluntary participation, and input into the matching process. They found that voluntary participation was unrelated to the dependent variables of interest. However, input into the matching process was associated with greater mentorship quality, career mentoring, and role modeling. These authors, along with Lumpkin (2011) and Bell and Treleaven (2011), stress that when mentors and mentees have input into the matching process, they may start to invest in the relationship early and feel greater motivation to maximize the mentorship. This feeling of ownership not only empowers the mentee but may also motivate the mentor to engage early with the mentee enthusiastically. Lumpkin also notes that this process of the mentee choosing their mentor will expose them to a broader possible network.

Many researchers have noted the importance of input from both dyad groups during the matching process. Allen et al. (2006) discovered that mentors show more substantial commitment to their role when giving input during the matching process. We acknowledge that this area of matching needs further research, as some studies, such as that of Ragins et al. (2000), found that input into the matching process did not produce more positive results than matching without input from participants. However, because the match "is a critical step in the mentoring program, (and) introductory experiences set the tone for the whole relationship" (Chao 2009, p. 315), program coordinators empower mentees and mentors with better chances of success when they seek input from participants. This empowerment creates buy-in by reducing the "awkwardness, anticipation, and anxiety" of meeting an administrative match with whom they may have less in common than a match in which they participated in determining (Blake-Beard et al., 2011).

Factoring Similarities and Differences Into the Matching Process

Of all the topics discussed thus far in Chapter 9, none has received more attention or research than how mentee and mentor characteristics impact the mentoring relationship and how these characteristics should be factored into the matching process to create a good mentee-mentor fit.

In discussing how similarities and differences should factor into the matching process, it is helpful to distinguish between so-called surface-level similarities and deep-level similarities (Eby et al., 2013; NASEM, 2019). Surface-level similarities are readily detectable and include demographic characteristics such as age, gender, and racial/ethnic similarities between the mentor and mentee. Because universities collect these attributes for application and reporting purposes, they are easily accessible. Therefore, the first similarities/differences studied in the matching process were mentor-mentee surface-level similarities. By contrast, deep-level similarities are less easily detectable and include psychological characteristics such as attitudinal, value, and interest similarities between the mentor and mentee. Unfortunately, universities rarely systematically collect these psychological attributes, but the research community has filled the knowledge gap with abundant studies on deep-level similarity.

Over the past decades, the research community has attempted to answer two related questions about mentor-mentee similarities and differences: (a) Do mentees want a demographically similar mentor? and (b) Does having a demographically and/or psychologically similar mentor matter? Research

indicates that the answer to the first question is clear. For example, in their study of diverse undergraduate and graduate students in STEM, Blake-Beard and colleagues (2011) found that women and members of underrepresented minority groups had a *slight* preference for mentors of the same gender, race, or life experiences compared to their male and racial-majority peers (Blake-Beard et al., 2011). Intuitively this makes sense, as it is human nature to be more comfortable and trust people we identify with. Moreover, women and racial/ethnic minorities in college STEM contexts may actively seek demographically similar mentors. Research indicates that identifying similar and counter-stereotypical role models can be particularly important for members of minority or stigmatized groups (Gladstone & Cimpian, 2021).

The answers to the second question are equally clear, if somewhat surprising. First, the weight of evidence shows that surface-level mentor-mentee similarities have almost no impact on the quality of support mentees report receiving from their mentor. For example, in their meta-analysis of 173 studies of mentoring programs in youth, college, and workplace settings, Eby and colleagues (2013) found that surface similarities (i.e., gender or racial/ethnic mentor-mentee similarity) were uncorrelated with the mentee's perceptions of the quality of support received or their overall satisfaction with the mentoring relationship. Similarly, more recent studies in diverse samples of undergraduate and graduate students in STEM contexts have found mainly no or only minimal positive relationships between surface-level similarities and the quality of mentorship support (Blake-Beard et al., 2011; Hernandez et al., 2017; Pedersen et al., 2022). The only caveat to this trend is that mentees with a same-gender mentor report experiencing slightly more mentorship support than their peers. Since the quality of mentorship support is the critical link between access to a mentor and the benefits of mentorship, it is unsurprising that most studies find no impact of surface-level similarity on outcomes such as self-efficacy, grade point average, or intention to persist in a scientific career (Blake-Beard et al., 2011; Hernandez et al., 2017; Pedersen et al., 2022). Second, in contrast to the findings above, mentor-mentee deep-level similarity has a consistent, positive, and substantial impact on promoting the quality of support mentees report receiving from their mentor across contexts and particularly for students from underrepresented groups in STEM (Eby et al., 2013; Hernandez et al., 2017; Pedersen et al., 2022). When taken together, this research supports that matching deep-level similarities is more important than surface-level similarities.

In summary, we can draw two conclusions. First, mentees, especially underrepresented or minority groups, frequently desire to be matched with a mentor based on surface-level attributes such as gender or race/ethnicity. Second, deep-level similarities are more predictive of forming a strong mentoring relationship and the resultant beneficial outcomes than surface-level similarities. So, what are the implications for program coordinators to consider in the matching process?

Program coordinators should identify factors within their control to enhance the development of high-quality mentoring relationships. For example, where possible, allow mentees to have input into the selection of their mentor—surface similarities with a mentor may inform their choice. Further, program coordinators should consider surface similarities in matching, where possible. However, program coordinators should also be cognizant that matching by gender and/or race may overburden mentors from these underrepresented groups.

In addition, program coordinators should actively foster mentor and mentee perceptions of deep-

level similarity. The good news is that perceptions of deep-level similarities are malleable! Research indicates that activities that highlight similarities on various topics (e.g., leisure activities, musical preferences, essential qualities in friends) can engender perceptions of deep-level similarity (Gehlbach et al., 2016, Robinson et al., 2019). Activities can include setting aside time early in the mentoring relationship to participate in a "getting to know you" meeting, which can help mentoring pairs find and affirm commonalities. For example, the "mentor biography interview" in Branchaw et al.'s (2020) Entering Research curriculum module can provide a brief and structured opportunity for mentoring pairs to identify everyday life experiences, attitudes, and values (Hernandez et al., 2023). In another example, research indicates that using a "creating birds of a feather" approach to highlight mentor-mentee similarities upon their introduction can boost perceptions of deep-level similarity (Gehlbach et al., 2016, Robinson et al., 2019). This approach involves having both mentors and mentees complete a brief "getting to know you" survey during the application stage (e.g., Which of the following is most important to you? (a) establishing a work-life balance, (b) finding a career connected to my passion, (c) exploring who I am [Robinson et al., 2019]). The program coordinators reveal multiple similar responses to the survey questions to the mentor and mentee upon their introduction (e.g., through the survey platform or via email).

How participants will be matched in a mentoring program requires thoughtful consideration throughout the first four phases of designing the mentoring program (see Chapter 7). Of the three sections in the chapter—recruitment, selection, and matching—processes related to matching have received the most scrutiny and research. When program coordinators develop their matching plan, they need to consider who will do the matching and when it will be done. These specific matching processes will evolve from the natural time cycle of university life as most programs begin at the beginning of an academic year or semester. When appropriate and when possible, we recommend that program coordinators allow for input from mentees and mentors, with particular emphasis placed on input from the mentee. The final part of this matching section describes what program coordinators should factor into their matching processes related to surface-level and deep-level similarities and differences.

Conclusion

This chapter outlines considerations for effective mentoring recruitment, selection, and matching processes. When program coordinators recruit into the mentoring program, it is critical to clearly express the program's purpose and who it is for. This clarity of purpose occurs when there is alignment between the needs assessment, the university mission and vision, and the program's goals and objectives. Program coordinators and university leaders can foster effective recruitment into the mentoring program by developing communication practices that promote mentoring throughout the university's complex ecosystem. In addition, when judiciously used, rewards and incentives can foster recruitment. This section on recruitment ends by giving practical suggestions for recruiting activities for program coordinators to consider.

The program's purpose impacts the type of mentee and mentor desired for the program. The second section of this chapter describes the positive characteristics that program coordinators should seek in mentors and mentees and the negative characteristics that coordinators should avoid in participants. In addition, the critical role of communications skills is explored in depth, highlighting the need for

mentors to have effective listening, questioning, and feedback skills. Parceling communication skills into these three areas gives program coordinators an easy-to-understand framework for explaining the characteristics they are looking for in mentors. This framework could also provide structure for training purposes.

The last section on matching helps the coordinator think through processes, such as who will do the matching and when the matching will occur. These processes need to be in the program's early design so that the required human capital is available. We encourage program coordinators to create strategies allowing mentees to have input into whom they select as mentors. This early input helps create buy-in and enthusiasm from participants and jump-starts mentorship. This chapter ends by summarizing decades of research regarding how similarities and differences factor into the matching process. From decades of research, we can draw two conclusions. First, mentees—especially underrepresented or minority groups—desire a mentor matched on surface-level attributes such as race/ethnicity or gender. Second, deep-level similarities, such as shared values, goals, interests, and attitudes, are more predictive than surface-level characteristics for forming a quality mentoring relationship and achieving the program's desired outcomes. These two conclusions will impact how program coordinators use differences and similarities to best match mentors and mentees.

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<div align="center">**Appendix A**</div>

   Faculty-to-Student Mentoring Program: Undergraduate students in the [Insert University Name here] system are being invited to participate in a new program called the [Insert University Name here] Faculty-to-Student Mentoring Program. The goals of this program are to help students:

1. Successfully adjust to university life

2. Realize they are valued members of the university

3. Have a clear sense of purpose

4. Achieve their educational goals

Faculty will provide students with the following benefits:

- **Academic Expertise**. Faculty will help you by 1) giving practical suggestions for improving your academic performance; 2) supporting your commitment to learning; 3) encouraging you to discuss and share your academic problems and brainstorm solutions; 4) helping you set realistic goals and map out strategies for achieving them; and 5) helping you think critically about your long-term aspirations and goals.

- **Career Guidance**. Faculty will assist you with your careers goals by 1) examining career options related to your field of study; 2) helping you reflect on competencies needed to achieve your goals; 3) finding the quickest route to career success; 4) helping you network with professionals in your career field; and 5) helping you set realistic career goals and map out strategies to achieve these goals.

- **Psychosocial Support**. Faculty will support you psychosocially by 1) listening to your concerns; 2) providing moral support; 3) identifying and addressing problems; 4) connecting you with support services; and 5) providing encouragement.

The total time commitment to participate in this mentoring program is between 2 and 5 hours each semester for the duration of time the student is enrolled in the program.

   Website for more information: [Insert URL here]

Appendix B

Script for Mentoring Calling Campaign

*You don't need to follow this script word for word. Try to make it a comfortable, natural conversation. This script provides ideas to help with the conversation. I think there are three main points to cover:

1. Tell them a little about the program

2. Encourage them to participate

3. Direct them to the webpage

Hi, I'm (name) from [Input University name here]. Is this (student name)?

How are you doing? (Make comfortable small talk).

This semester we are continuing to offer a program called the [Input University Name here] Faculty Mentoring Program. In this program, a faculty mentor will be matched to you personally to help you achieve your academic goals and graduation. Benefits include:

- Asking questions of faculty, such as how to succeed in your academic program, what internship or research opportunities they may have, and how to connect with support services (who to see for unique situations!)

- Getting personalized advice on finding your quickest route to career success

- Getting to know our local instructors and possibly finding connections with peer groups

I want to encourage you to participate in this program, as I think it will help our students feel more connected to our faculty and campus.

Recently you were sent an email about this program, but I wanted to follow up with a personal phone call to encourage you to participate if you thought it might be helpful to you. To learn more about the program and to participate, please go to: [insert website information here]

Do you have any questions about this program that I might be able to address?

Thank you for taking the time to visit with me and thank you for attending [Input University Name here].

<div align="right">

10.

</div>

PREPARING THE EFFECTIVE MENTOR

Natasha Mickel

Abstract

Mentoring is a central component of teaching and learning in academia that involves mentors ranging from novice to advanced mentoring experience. Mentoring has been found to play a crucial role in successful career development at every professional level in academia. Consequently, it's imperative that institutions design and implement mentoring programs that prepare mentors, regardless of background, to establish, build, and maintain positive mentoring relationships.

This chapter begins by discussing mentoring and its role in academia. As institutions strive to retain faculty, staff, and students, it serves institutions well to understand how the successful implementation of effective mentoring programs can close the gap in supporting different stages of professional and educational careers. Individuals that do not have a mentor or have an ineffective mentor may miss out on the support needed to obtain personal and professional growth and balance. Absent or noneffective mentoring tends to result in less productive and less satisfied individuals that are less prepared to face internal and external challenges, which can negatively impact a professional's career and the institutional strength.

This chapter explores specific characteristics of effective mentors. One of the focus areas is on successful communication between the mentor and mentee. Effective communication considers personality characteristics, mentor-mentee expectations, trust, motivation and an expected career pathway. Modeling the characteristics of effective communication will enrich the mentoring relationship for both mentors and mentees.

Mentors also utilize different styles of communication and connect differently based on individual needs and circumstances. Often as mentors, the communication style depends upon the situation itself and possible solutions to support the mentee. Additionally, understanding different communication styles (and when to use them) will also make for a more effective and gratifying

relationship. The chapter will further provide insight of ineffective communication that mentors may exhibit in an effort to avoid difficulty in the mentoring relationship.

Being a mentor can have a great effect on a person's confidence. Motivation is utilized to help set goals and create a solid foundation that will strengthen the mentoring relationship during difficult times. Motivation techniques can be key factors for mentors to engage with mentees, especially to understand their goals, expectations, and driving factors for participating in the mentoring relationship. In addition, its essential for mentors to understand and develop a mentoring plan during the beginning of the mentoring relationship. A description and detailed example of tools to develop a mentoring plan is presented in this chapter.

This chapter also demonstrates a step-by-step process to design a curriculum for academic institutions. The needs analysis is one of the keys to effectively design a campus-wide mentoring program that allows various stakeholders to provide input to align mentoring needs. Additionally, continuous evaluation of the mentoring programs and training feedback can help to shape and improve the mentoring programs to your institution's specific needs. From start to finish, this chapter on mentors will unlock a host of benefits that will impact everything from individual mentor development to institutional mentorship growth.

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Introduction

When implementing a mentoring program, it is imperative to understand the intricacies of those who individually encompass the roles in the mentor-mentee relationship. This introduction provides an inclusive framework for reviewing aspects of an effective mentor in a mentoring relationship and provides the reader with a guided outline of mentor qualities. More specifically, the chapter explores the characteristics of the mentor, which include the dynamics of a mentor's role, responsibility, and expectations in the mentoring relationship. Although the mentor in the mentoring relationship lends its role as the primary lead, it is also valuable for the mentor to explore the characteristics of an effective mentee in the mentor-mentee relationship (see Chapter 11). To produce a successful mentor- mentee relationship, each individual—both the mentor and the mentee involved—should understand their role in the mentoring relationship. As a result, the mentoring relationship becomes a reciprocal relationship in which the mentors and mentees will likely learn from each other and acquire knowledge about their specific roles that can benefit future partnerships. These mentoring characteristics exist in all mentoring typologies, such as the traditional hierarchical relationship, reverse, peer, group, and developmental networks (see Chapter 3).

A large component of any relationship is the communication between the parties. Communication is just as imperative and critically vital in a mentor-mentee relationship. The relationship can be most effective when both the mentor and mentee communicate their needs and expectations. Additionally, the trust that sustains an effective mentoring relationship requires clear and continuous communication through exchanging personality traits, goals, and learning opportunities.

In addition to the skills necessary to engage as an effective mentor, there are also benefits to recognizing characteristics of ineffective mentors. Mentoring is a committed relationship that takes a sustained amount of time and dedication, unlike coaching and advising, which tends to be more informal in nature (see Chapter 1). Receiving ineffective support from a mentor can result in a lack of motivation, efficacy, and time loss. Additionally, ineffective mentoring habits could be passed on or masked as beneficial, resulting in unproductive mentoring in the future. Ineffective mentoring could be combated by developing the emotional intelligence of the mentor in the mentoring process. Regarding the role of mentors and their engagement with mentees, there is a positive relationship between emotional intelligence and the degree of confidence that a mentee has in them (Chun et al., 2010). Emotional intelligence is also valuable for mentees, in fact, and is positively related to the extent to which a mentee learns.

While communication and emotional intelligence are important contributing factors to positive mentor-mentee relationships, so are the structure and design of a formalized mentoring program. To design curriculum for a mentoring program, the first step is to assess the mentoring culture of your environment. A mentoring culture defines how institutions have implemented elements of mentoring by showing visible support through leadership, strategic plans, and internal stakeholders. Determining how the culture views mentoring can lead to a robust analysis of the needs of a mentoring program. There are formal and informal ways to support your institution's mentoring culture. Once mentoring training is supported, choosing which mentoring components to promote in your mentoring program will assist in determining the most appropriate facilitation. In addition, evaluating the mentoring program will be just as important for the program in an effort to support the participant's feedback and

recommendations. As institutional changes occur, the mentoring program should adapt to support the current mentoring culture.

As gaps begin to emerge in your mentoring culture, consider those for future research. There may even be some novel decisions or innovations created within your mentoring program that could contribute to the design for others in their environment. Sharing ideas and strategies through research will continue to impact the need and necessity to implement sound and, more importantly, evolving mentoring.

This chapter is arranged to provide the reader with an overview of (a) origins of mentoring and the need to define it, (b) elements of an effective mentor, (c) components of an ineffective mentor, (d) communication in the mentoring relationship, (e) bridging mentor-mentee needs, (f) emotional intelligence in the mentoring process, (g) designing the curriculum, and (h) environmental issues that impact the mentoring relationship.

Origins of Mentoring and the Need to Define It

To understand the significance of a mentor, it is important to explore where the word originated in ancient history. This chapter provides a brief orientation to the history of mentoring, while Chapter 1 goes into greater depth. Various cultures mention the act of mentoring; however, the oldest origin of the word mentor comes from Greek mythology. The name mentor comes from Homer's classic poem, *The Odyssey*. Homer's poem describes the character Odysseus, king of Ithaca, preparing to leave for Troy. During his preparations, he wanted to ensure there was someone who could look after his son, Telemachus, should he not return. Odysseus needed someone to act in his place as a teacher and advisor. Athena, the Goddess of Wisdom, disguises herself as an old friend of Odysseus, named Mentor, so she can impart wisdom and courage to Telemachus (Colley, 2001). In the same way that Athena guides Telemachus, the mentor's role is to support the mentee by listening, sharing their knowledge and experience, providing different perspectives, and offering feedback to help the mentee progress in their career.

In ancient Asian cultures, there are references to the mentor Confucius. In *The Analects*, Confucius has multiple conversations with his followers and depicts himself as a mentor to his disciples. Confucius mentors a group of young men who want to serve in the government. His response to their questions leaves the followers with various learning insights (Colley, 2001). Confucius loves to learn and conveys wisdom from the ancient past. Confucius showed that learning was essential to knowing, and knowing was essential to doing, which, in part, depicts how we understand the term mentor.

Institutions across the country understand the importance of mentoring and are establishing both formal and informal programs to support mentoring in their environment. Understanding that each institution will have a unique mentoring culture, it is important that there be a clear adoption and definition for mentoring. For example, the University of Oklahoma Health Sciences Center defined a mentor as:

An experienced individual engaged in a longitudinal professional developmental relationship with a more novice colleague or mentee; to aid the mentee's transition toward fuller mastery of

knowledge, skills and aptitudes necessary for success, professional progression, and capacity for independent contribution to science and/or practice in the field and productive professional and interprofessional engagement with others. (Mickel et al., 2018, p. 37)

Depending on at the institutional type, ensuring clarity that there is an identified clear definition (see Chapter 1) of mentoring is important to guide the mentoring program. Mentorship in any organization is about building a relationship. In this relationship, two people will learn new things from one another while one person helps lead the other to become better at a job or task. People who are mentors are invested in making a good relationship with their mentees. Mentors envision what it would take to help achieve a mentee's success. Mentors in a formal mentor program will generally mentor individuals at the beginning of their academic journey. Informal mentors offer advice at various points in a mentee's career.

Mentors also help by providing information or resources needed to do the best in their careers. For example, if the new employee has trouble adjusting to their new role or has questions on how best to accomplish certain tasks specific to the organization, a mentor can be a valuable asset to help find resources faster. A mentor will help a mentee navigate their environment and find their role within the organization. Keep reading for a detailed look at which characteristics make a good mentor and which do not . The next section will explore elements of an effective mentor. It includes characteristics of an effective mentor's personality, tips for practicing active listening skills, as well as the importance of providing constructive feedback.

Elements of an Effective Mentor

Personality

For a mentor relationship to be effective, a mentor should exhibit certain personality traits. Characteristics like empathy and a sense of humor can form the foundation of the relationship to help the mentor bond with the mentee. One who is too intense or too focused can be hard to work with in a mentoring relationship. When a mentor finds humor in a stressful or uncomfortable conversation, it creates an open environment to explore topics or questions that might otherwise be uncomfortable for the mentee to convey.

Humor creates an environment where a mentee may feel more open and free to express themselves. While building a rapport, it is easier to express disappointments or frustrations with someone you can laugh with. Thus, humor cultivates a safe space to present critical feedback or persuade the mentee to discuss challenging issues.

Empathy is a complex relational process that means understanding the feelings, thoughts, or attitudes of others. A key aspect of all relationships is understanding how it may feel to put oneself in another's shoes. Empathy can become a strong component of a successful mentoring relationship in the mentoring process. While the mentor's primary obligation is to provide sound advice and direction, empathy is critical to the success of the relationship. If the mentor cannot sympathize with and understand the mentee's circumstances, then their efforts to build a connection with the mentee will be ineffective.

Empathy also extends beyond sympathies. It requires mentors to relate to, support, and reassure the mentee in a judgment-free zone. This type of environment is developed through thoughtful communication. For example, in discussions with mentees, mentors can use reflecting and rephrasing as mechanisms to implement empathetic communication. More broadly, institutions and organizations that encourage empathetic communication in their mentoring programs effectively create more equitable atmospheres.

Active Listening Skills

Active listening can be a vital approach for mentors to build trust in their mentoring relationship. Active listening involves more than just listening; mentors need to consciously analyze what they hear and try to pick up on verbal and nonverbal cues from mentees. Even if mentors are paying attention, mentees will appreciate eye contact, verbal or nonverbal acknowledgment, and replies with suggestions that convey their enthusiastic support. Active listening can help mentors collaborate more effectively, reduce misunderstandings, negotiate more effectively, and build more successful mentoring relationships.

Active listening takes practice. Here are a few tips on improving active listening skills as mentors:

- Pay attention. Being an effective listener starts by setting a comfortable tone that allows mentees to think and speak. Then, pause before responding. Do not cut mentees off, finish mentees' sentences, or start formulating the mentees' answers before they have finished.

- Have an open mind. Mentors have to be open to new ideas, new perspectives, and new possibilities when practicing active listening in the mentoring relationship. Even when successful mentors have strong opinions, they suspend judgment, hold any criticisms, and avoid interruptions like arguing or selling their point right away.

- Clarify. Mentors should be willing to ask questions about any issue that's ambiguous or unclear when engaging in active listening with the mentee. Open-ended, clarifying, and probing questions are important active listening tools that encourage the mentee to do the work of self-reflection and problem-solving rather than justifying or defending a position or trying to guess the right answer.

- Summarize. Restating key themes as the conversation proceeds confirms and solidifies the mentor's grasp of the mentee's point of view. It also helps both parties to be clear on mutual responsibilities and follow-up. As mentors summarize what they have understood while practicing active listening, they should ask the mentees to do the same. (Steele et al., 2013)

Constructive Feedback Skills

Similar to active listening, constructive feedback also helps establish an atmosphere of mutual trust and regard in the mentoring relationship. When mentees develop trust with their mentors, it is often easier to both give and accept feedback. The mentee must feel like the feedback is necessary to help them obtain success. Providing and receiving feedback can be a positive experience for mentors as they learn to connect to the needs of each mentee. When providing feedback, the mentor should always be

specific and refrain from harsh critiques. Feedback is most helpful when it is specific to a particular element of work or step in the mentee's career. By keeping the feedback simple, the mentee is able to easily modify tasks or assignments, thus helping the mentee build their self-efficacy. Like any relationship, the mentor-mentee dynamic is at its best when both parties are feeling understood. Taking the time to understand effective mentor personality traits, practice active listening, and provide constructive feedback is a great way to show the level of engagement in the mentoring relationship. The next section explores the components of an ineffective mentor in an effort to avoiding the possibility of creating an unproductive mentoring relationship.

Components of an Ineffective Mentor

After 5 decades of academic research supporting mentoring relationships (Fleming et al., 2012; Feldman et al., 2010; Packer-Williams & Evans, 2011), the evidence is irrefutable: people who have strong mentors accrue a host of professional benefits, including more rapid advancement, higher salaries, greater organizational commitment, stronger identity, and higher satisfaction with both job and career. They also see personal benefits, such as better physical health and self-esteem, ease of work-life integration, and strong relational skills. At its best, mentoring can transform lives and careers while bolstering retention and maximizing employee potential. Too often, we focus on the mentor and the effective components they should exude, but we fail to recognize when a mentor is being ineffective in a mentoring relationship.

How do you determine a mentoring failure? Some indicators of a failing mentoring relationship are poor progression toward mentee goals and unproductive mentoring sessions. Additionally, when the mentees decline the advice of mentors or simply miss sessions, the relationship is likely no longer advantageous. The mentee or mentor starts to get stressed out because of the mentoring relationship, which could possibly lead to or exacerbate issues in mental and physical health.

If there is a single, consistent Achilles' heel in organizational mentoring structures, it is marginal mentoring. Marginal or mediocre mentoring may be a consequence of assigning mentors who are too busy, disinterested, dysfunctional, or simply lack the competence for the role. Prospective mentors often are randomly selected or told to participate. Leaders fail to give resources to, evaluate, or reward mentoring. With no meaningful incentives attached, it is justifiably seen as an onerous add-on duty, a thankless distraction from real work leading to pay and advancement (i.e., faculty who believe mentoring is not part of their academic role).

What is more, too often program leaders erroneously assume that any successful manager can mentor effectively with minimal (if any) training. But since so many never had mentors themselves, they lack mental maps for how it is done well. Evidence indicates that poor mentoring can be worse for employees than no mentoring at all (Jung & Bozeman, 2020). Ill-prepared and marginally competent mentors not only give mentoring a bad name in an organization, but they also sabotage retention, commitment, and mentee development—the very objectives that drive mentoring program initiatives in the first place.

<center>**Communication in the Mentoring Relationship**</center>

You do not have to be a work rock star to be a good mentor, but you should probably be invested in your job and be respected by your colleagues. Enthusiasm to be a mentor and readiness to invest time and energy into the relationship is necessary. When someone agrees to become a mentee or is told they will have a mentor at their new job, they often are looking forward to meeting with someone who can truly show them guidance. A mentor should be able to answer the basic questions of a mentee, and when they do not know the answer, they know whom to ask to figure it out. Being a helpful resource for the mentee should not be an annoying work distraction but something the mentor is excited about.

<center>**Bridging Mentor-Mentee Needs**</center>

This section explores several factors displayed during the initial phases of the mentor-mentee relationship, which include: onboarding, expectations, trust, motivation, and a mentoring plan. The function of mentor-mentee relationships can vary across each individual connection. Generally, the purpose of the mentoring relationship is to help the mentee achieve their professional and personal goals. It is significant to understand that mentoring relationships tend to thrive more when mentors understand the difference between mentoring and apprenticeship. An apprenticeship is a formal employment program where an individual attends classes to complete a certificate or degree for a particular trade or career path. An apprentice is a person who is learning a trade from a skilled worker. However, a mentee is in a mentorship to connect with their mentor to obtain a specific skill or knowledge and focus on professional and personal development. Mentors should explore the definition of a mentee in their environment in an effort to make distinctions to how the term is defined in their mentoring climate. For example, the University of Oklahoma Health Sciences Center defined what a mentee means for them on their campus as:

> An individual engaged in their own professional development who seeks and obtains guidance from a more experienced individual (a mentor) in an active partnership, over a continuous time period of at least six-months, and through which the individual expects to be constructively challenged, and to acquire counsel, advice, technical guidance and other input to build personal and professional knowledge, skills and aptitude for advancement in a discipline, field of study, or inter-professional area, scholarly credibility, career and personal growth. (Wiskur et al., 2020)

The main objective of the mentoring relationship is to help the mentee realize their potential. As confidence, motivation, and trust evolve in the relationship, the mentee will be able to reach their objectives easier with the guidance and reinforcement of the mentor. Additionally, it is vital to understand that the mentor-mentee relationship is reciprocal in nature, meaning the relationship is bidirectional, where the mentor can learn from the mentees, resulting in an improvement of their own mentoring skills.

Onboarding

Onboarding into a mentoring relationship is an important factor in sustaining an effective relationship. Avoiding the tasks of adjusting to the needs of each individual mentee can be detrimental for both the mentor and mentee, resulting in a mutual waste of time, effort, and opportunity. Generally,

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institutions and organizations match mentors and mentees based upon like-mindedness or shared interests. There may be a mentor-mentee matching (see Chapter 9) process completed by both parties, resulting in a pairing that could be either unceremonious or agreeable. Regardless of how the mentoring relationship was established, once formed, the mentor should take steps to ensure an exchange of information, which includes some of the following: background experiences, career path, mentoring history, expectations, personality traits, and learning styles. Mentors can obtain the information from their mentees through various exchanges; in preparation for the relationship, I recommend these strategic steps from Eisner (2015):

- Exchange background experiences with your mentee before your initial meeting with the mentee.

- Reach out to your mentee to schedule a meeting with a sincere interest in establishing the mentoring relationship.

- Share your career history with your mentor, especially the obstacles and adversities you may have endured.

- Discuss your mentoring history and give your mentee permission (if applicable) to meet with other mentees you are directing.

- Learn your mentee's expectations for the mentoring relationship and share your expectations of the mentee during the partnership.

- Be willing to share your assumptions and limitations about the mentoring relationship with your mentee.

- Discuss your personality and learning style, especially if it differs from your mentees.

- Be ready to share how the new mentoring partnership will benefit the development of your mentoring skills.

- Be clear about what opportunities and resources will be available for your mentee.

Additionally, mentors should strive to implement guidelines with their mentees as a way of providing structure about the conduct upheld in the relationship. Although mentors can implement additional structures, we recommend three areas as an initial start, which include confidentiality, respect, and flexibility. Mentors should be clear that the relationship will remain confidential. Confidentiality is essential for building and maintaining trust with your mentee. If there is ever a discussion or situation that cannot remain confidential, clearly communicate why the conversation or statement would be excluded at that specific time. It will also be helpful to clearly define what confidentiality means from the perspective of each person, as assumptions can tarnish future communication. In addition to confidentiality, respect is also an essential aspect of building a strong partnership in the relationship. As a mentor it's necessary to respond to a mentee in a way that demonstrates understanding about their position, welcome their willingness to be vulnerable, and allow them to explore their professional needs. As a result of this approach, mentees will likely value the relationship more when they feel they have mutual respect and a voice in making decisions. When mentees feel confident to share without being scorned or lectured, mentors open the space to build a stronger rapport.

Moreover, mentors must remain flexible with their mentees in all aspects of the partnership. There will be times when goals and objectives lack completion, but exploring inconsistencies from the mentee

could be due to unforeseen circumstances or lack of motivation to complete assignments. Mentors should also be flexible to adjust to the fluctuating needs of the mentee as they progress through various career and personal transitions. It's beneficial for both the mentor and mentee to evaluate the partnership, objectives, goals, and accomplishments periodically to ensure the relationship remains efficient.

Expectations

There are some expectations that apply to both the mentor and mentee in the relationship. The expectations should be agreed upon and written in a document (see Appendices A and B). Mentors are encouraged to utilize this agreement to help facilitate discussions of expectations and goals. These expectations may include respect of each other's time, confidentiality, a regular meeting schedule, and acceptance of differing opinions. Discussing expectations early and often will provide a clear understanding of what is needed to deem the mentoring relationship successful. When developing the mentoring relationship, the mentor should also work with the mentee to consider how they will a) support the mentee's career development, b) assist the mentee with obtaining additional professional development, and c) assist the mentee with developing their academic skills.

Building Trust

Building trust in any relationship is important, but it is even more significant in a mentoring relationship. Developing a trusting mentoring relationship involves creating a safe and supportive environment where both mentor and mentee can engage in setting goals and achieving them. If the mentee does not trust the mentor, they are unlikely to open up and be vulnerable with the mentor. If some topics are seen as being off limits for the mentee to share with the mentor, this can limit the growth that the mentee can achieve professionally and academically.

Trust contains multiple elements. A mentor's trustworthiness depends on the mentee's beliefs in the mentor's competence and motives. In a university-sponsored mentoring program, it's likely that the mentee already accepts the competence of the mentor, as they have the stamp of approval from the university by virtue of being tapped as a mentor. However, the mentor will need to focus on proving themself with regard to their motives. If the mentee perceives that the mentor is in the mentoring program for the wrong reasons, the relationship isn't likely to be successful.

We often picture mentees to be a miniature version of the mentor. But this is not always the case. Many times, background and experiences will differ greatly from that of the mentee. While many mentors are naturally inclined to ignore differences, it could be more helpful to trust the building process to acknowledge them in certain circumstances (Evans, 2018). Differences in education, socioeconomic status, gender, and race can make a mentee reluctant to open up.

Gaining trust as a mentor takes time, but this relationship is also a two-way street. If the mentee is unwilling to open up, there's not much hope for a successful relationship. As a mentor, keep in mind that it is not uncommon for a mentee to resist your guidance or go against your suggestions, especially in the beginning. The important thing is how the mentor responds. If mentees go against your guidance and succeed, let them know that sometimes it's good to go with their gut. If they go against your

guidance and fail, let them know that it's also part of the mentoring process.

Motivation

Understanding the motivations behind any task is usually the best way to complete it with a full buy-in. Mentoring is no different. The rise of academic mentorships becomes not just a good idea for idea's sake, but a necessity. Many people have their own reasons for wanting or seeking out a mentor, which could be to support talent within the organization and to ensure practices and values are upheld. But the motivations behind mentoring is only part of the journey. The motivational impact that mentoring can have on individuals, groups, and even the organization—before, during, and after the process—are what will drive organizational improvements. Following through on promises of implementing mentoring programs that will help mentees advance in their career is not enough anymore; the transparency behind programs' motivations is what is needed to have a lasting impact. The program will need to promote the following motivational impact:

- Serve. The most outstanding mentors are those who genuinely want to give back and make a difference in someone's life. No matter the stage of your career, being a mentor can also enhance your skills and life experience, even if you are already a business leader.

- Share. When it comes to being an inspiring mentor, sharing is key. Do not be afraid to pass along your knowledge and your contacts. Introducing your mentee to your network does not take anything away from you, and it helps them build their network.

- Positivity. Rather than focusing on the skills that a mentee lacks, an inspirational mentor will help them develop their strengths. Be realistic about your mentee's weak points and help them focus on developing the things they're good at.

- Give. Good mentors are in it to help others rather than gain something for themselves. If you give of yourself without expecting something in return, it can make a big difference in your mentoring relationship.

- Be real and authentic. Connect with your mentee by sharing some of your struggles. Mentors that have stories to share can convey that overcoming hurdles and obstacles is possible. It can encourage your mentee to keep going when they are struggling.

- Engage. Talented mentors know what it takes to engage with others. They are skilled at drawing out the best from their mentees.

Mentoring Plan

A mentoring plan is a formal agreement between a mentor and a mentee that establishes guidelines for the relationship (see Appendix B). It's essential to draft a mentoring plan at the beginning of the relationship so that both the mentee and the mentor are set up for success and there aren't any major misunderstandings.

You probably would not want to enter an employment relationship without knowing when you needed to show up for work, what you were to be paid, or what you were expected to do. Without knowing these things, both you and your employer aren't likely to have your unspoken expectations

met and are likely to be disappointed as a result. For the same reasons, it makes sense to have a mentoring plan. A mentoring plan might answer the following questions for the mentor and the mentee:

- How often should we meet? How long do we anticipate this mentoring relationship to last? If a mentee wants to meet once per week while a mentor only has time for once-a-month meetings, it's going to be difficult for the relationship to be successful. By agreeing on the frequency of meetings, both the mentor and mentee can be clear about their availability and their needs. In addition, some mentoring relationships may have a natural endpoint, like the end of the calendar year or when the mentee graduates from business school. Other times, it might not be so clear how long the relationship will last, and in this case it will be more important for the mentor and mentee to voice their expectations.

- Where will we meet and how will we interact? While traditionally mentoring pairs meet face-to-face, a mentor no longer needs to be local to the mentee for the relationship to be effective. Many mentors and mentees utilize online mentoring to connect, saving time and making possible relationships across long distances.

- What specific activities will the mentor and the mentee undertake? Most often, a mentor and mentee will simply have conversations. However, there are many more activities that the mentoring pair can engage in that can support the mentee's career development. For example, a mentor might bring a mentee to a conference as a guest, the mentee might shadow the mentor for a day, or the pair might work on a specific project together.

- What are the mentee's goals for the relationship? This is one of the most important questions for the mentoring plan to answer, as the role of the mentor changes due to the goals of the mentee. How is the mentee going to grow and change over the mentoring relationship? Sometimes, mentees may be focusing broadly on developing their leadership skills, or they may be focused on developing a narrow set of skills, or they might be focused on making a critical career decision. Depending on the mentee's goals, the mentor may be more passive and act as a sounding board for the mentee or take a more active role and focus on providing feedback to the mentee.

- How will we evaluate the success of the mentoring relationship? While every effort should be made to pair up each mentee with the right mentor, sometimes a mentoring pair just doesn't click. A solid mentoring plan should have opportunities for the mentee to check in and evaluate how the relationship is supporting their development goals as well as opportunities for the mentor to give feedback. If the stated goals of the mentoring plan aren't being achieved, the mentor and mentee should make adjustments or consider ending the relationship.

The beginning of the mentoring relationship in which you engage in the tasks of onboarding, trust building, and motivation techniques play a part in determining the success of the entire mentoring relationship. As a mentor, having a plan with the mentee may assist in avoiding miscommunication, misalignment of goals, as well as misaligned expectations. The next section will review the role emotional intelligence plays in establishing and sustaining the mentoring relationship with mentees.

Emotional Intelligence in the Mentoring Process

Emotional intelligence (EI) is how well a person understands and manages their emotions and the emotions of others and how they use this knowledge to manage relationships. Developing these skills is critical in the workplace, with strong emotional intelligence being linked to high performance. Emotional intelligence assessments typically provide answers to questions such as:

- How aware is this person of their strengths and limitations?
- How well can this person understand the emotions of others?
- Does this person excel at developing relationships?
- How self-motivated and adaptable is this person?
- How does this person react to pressure?

For a mentor, emotional intelligence is important. It has been found that in mentors there is a positive relationship between emotional intelligence and the degree of confidence that a mentee has in them (Chun et al., 2010). Researchers suggest that to get the most out of a mentor-mentee relationship, emotional intelligence should be measured and discussed, and both parties should develop self-awareness of their own emotional intelligence. They argue that this may result in heightened learning, more successful mentoring relationships, and improved retention.

The previous sections reviewed information for establishing and maintaining the mentoring relationship. The next section involves reviewing steps for designing a mentoring curriculum from the analysis to the evaluation. An expansion of each section mentioned in the design curriculum can be found in other chapters of this handbook.

Designing the Curriculum

Mentoring programs are a great strategy for improving retention with faculty, staff, and students. Implementing a mentoring program within your organization requires thoughtful planning and sustained commitment to frequently evaluating the program structure. The guidance and support that mentors provide can help mentees achieve both personally and professionally. Additionally, the function of the mentoring program is to align with an organization's overarching mission (see Chapter 6) and strategic plan. Mentoring programs are a valuable tool that can be used to build an effective and diverse organization as it assists to ensure that all mentees are given equal opportunity to be successful.

For mentor workshops, organizations will need to focus on what characteristics or competencies are desirable for mentors in their environment. While mentoring competencies like communication skills are likely included across most mentoring programs, characteristics about mentees may drastically differ across locations. In an effort to deliver the best program, mentoring competencies should be selected based off the needs of the mentoring climate and mentees. The mentoring program should also allow the mentors to share their personal insights and provides additional guidance that has assisted them in reaching a mentee's professional goals. Lastly, the mentoring program should include an opportunity for mentors to discuss when partnerships aren't working and give the space to articulate unique concerns or lessons learned.

The following sections are essential factors to explore when designing the curriculum for a mentor

program. The first section will briefly examine the analysis stage in which you will define the purpose, audience, and structure of the program. Next, defining what competencies, tools, and activities will be presented in the curriculum. And, last, considering an evaluation plan to assist with frequent and summative evaluation.

Analysis

Mentoring programs require a thorough analysis of the specific aims and outcomes before implementation (see Chapter 8). Gathering a detailed amount of information from leadership in your organization will assist in meeting organizational goals, which include: recruitment, retention, engagement, and professional development. Leadership stakeholders can also provide great support and feedback for mentoring programs. Having leadership members publicly endorse an organization's mentoring program conveys the importance of mentoring for everyone (see Chapter 6).

A strong framework will help your mentoring program succeed and establish a foundation participants can rally behind. Frameworks also provide clear expectations for mentoring programs by explicitly stating the theoretical research of mentoring, parameters of the program (e.g., time commitment, frequency, and benefits), curriculum, and recruitment. The framework should also include the benefits of establishing the mentor programs. Mentoring is an opportunity for an organization to grow and educate the next generation. Mentoring programs also provide a way for mentors and mentees to establish a mutual respect through shared experiences, common interests, and social interactions.

Mentoring Components

The mentor skills, tools, and behaviors included in a mentoring program should be slightly unique in every organization. Core principles of mentoring (i.e., communication, expectations, and trust) are essential; however, adding unique mentoring skills to review according to your environment is also crucial. Providing skills for mentors that can assist addressing mentees' psychological and organizational barriers tend to be favorable because they provide mentors with tools that aren't typically included in mentoring programs.

When creating goals (see Chapter 8) for mentors in the program, think of the SMART goal model. Using this framework, your goals should be:

- Specific—Achievements of the mentoring program for mentors.
- Measurable—How will the program be quantified in order to track progress?
- Achievable—Reaching this goal should be realistic in the time frame allocated. The mentor should have the necessary skills and resources to achieve the goals of the program.
- Relevant—The goals should line up with your organization's mission and strategic plan.
- Time-bound—Creating time frames for accomplishing the goal should be realistic given that mentors have other professional responsibilities outside of the mentoring program.

Evaluation

A requirement for all mentoring programs is the ability to measure its success. The inability to prove the program is successful can result in the suspension of the program or, even worse, both mentors and mentees losing interest in participating. Establishing distinctive metrics for evaluating mentoring programs will help ensure the success of a program. Key performance indicators (KPIs) of a mentoring program should be both observable and measurable. For example, if an organization is focused on retention of their employees, a KPI could review if the annual turnover rate has decreased after implementation.

Monitoring a mentoring program involves tracking and measuring how the program is delivered as opposed to the goals of the program. When executed throughout the entire program rather than at the end, minor adjustments can be done as a way to continually improve the mentorship program. Quick feedback assessments after every programmatic occurrence should allow for ample feedback for adjustments.

Evaluating the entire mentor program involves reviewing the goals and objectives defined in the initial stages of the proposal. Choosing to use an evaluation tool will make the process of measuring and evaluating goals much easier and seamless. Utilizing milestones to show how much progress is made in obtaining the mentoring program's goals can be key. Milestones are steps or achievements necessary to make progress toward goals. When goals aren't met, stakeholders will be able to understand the progress and give specific performance feedback. Be sure to provide explanations that will provide additional information and context to your stakeholders that provides context for the outcomes of the mentoring program. Some programmatic goals take years to complete, so demonstrating improved progress, no matter how incremental, is what amounts to success (for more details on program evaluation, see Chapter 13).

Environmental Issues That Impact the Mentoring Relationship

Organizational environments can affect mentoring relationships across various academic fields. If informal mentoring has been implemented in an organization for a period of time, introducing a forced formal mentoring program could produce negativity. It's important to evaluate and understand the mentoring climate of an organization before a mentoring program is implemented. Research indicates there are a small number of instruments available to measure organizational mentoring climate. Tigges et al. (2020) developed a scale that examines an organizations mentoring climate across four dimensions, which include: structure, programs/activities, policies/guidelines, and value. The scale shows how organizational climate may affect mentoring behavior and if the climate can be altered to improve faculty mentoring outcomes. Although specifically geared toward faculty, components of scales measuring mentoring climate is recommended no matter the target participant group. Assessing and ultimately changing a mentoring climate may be difficult, but it could have a serious impact of the success of a mentoring program.

Conclusion

Mentors are an integral part of implementing mentoring programs. Although mentoring is deemed a reciprocal relationship, it's the mentor's role to guide the mentee through areas of growth, which include: career development, learning opportunities, strategic thinking, and mentor network expansions. A mentor's accumulated wisdom and expertise must be passed on to the next generation. Good mentors make this process conscious, discussing challenges and satisfactions of mentorship with mentees.

Mentorship is integral to recruiting and retaining faculty, staff, and students in higher education. Mentoring is especially important to support and recruit underrepresented individuals within higher education (Tigges et al., 2020). As we push to retain individuals across academic institutions, it may serve our institutions well to instruct mentors on how to support mentees at different stages of academic careers. In particular, mentees that are underrepresented minorities face challenges of career advancement and grant attainment. For faculty members without a mentor or for those that have an unskilled mentor, they may not have the support needed as they continually strive to obtain promotion as well as preserve personal and professional integration.

Mentors can also be helpful in identifying critical skills for potential future roles for the mentee. Mentors can help uncover these professional blind spots, which can help professionals target their developmental efforts. In addition to these external challenges in their career, they may also face internal challenges that may negatively impact their ability to overcome the environmental challenges. By designing mentorship programs with inclusion and diversity in mind (see chaper 12), we can more easily foster an inclusive workplace where opportunities to succeed are available to everyone.

As a researcher, I have worked on implementing mentoring workshops and strategic plans to enhance mentoring at an academic medical institution for the past several years. Mentoring is something that feels natural to most faculty members, however it's important to convey that not all ways of mentoring are the correct way for all mentees. Just like we have students with different learning needs, we encounter mentees that will have different mentoring needs. As mentors, a strong point is that they are not born mentors; just like professionals, you have to work hard at your craft and continue to mentor to gain insight in becoming successful. As a mentor, you will enhance your leadership and communication skills with every mentee interaction. The best mentors are able to work in a creative way to help a mentee envision and strive for an integrated personal and professional career. Lastly, a mentor should strive to practice storytelling with their mentees. Sharing personal stories and adversities with your career will enhance relatability with your mentee. For a mentor, the single most important principle to follow is that no one cares how much you know until they know how much you care.

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<center>**Appendix A**</center>

<center>**Mentorship Alignment Tool: Priorities for Mentoring Planning Document (McDaniels, 2019)**</center>

Instructions: This planning document should be completed by both a research mentor and mentee. After completed individually, research mentor and mentee should come together to discuss the results.

Prompt for Mentee: It is important to become clear about what your priorities are for professional development. This will enable mentor-mentee pairs to make priorities for how they will use their time together. Identify your top 4 or 5 areas of need by adding checkmarks (√) into boxes in *Column 2*.

Prompt for Mentor: It is important to become clear about what areas you feel you are most able to support in a mentee's development. There may be other mentors that are more suited to support a mentee in certain areas than you. Identify the top 4 or 5 areas you feel most able to provide support to your mentee by adding checkmarks (√) into boxes in *Column 3*.

Prompt to Both: Compare your results. A "good" mentor-mentee relationship does not require a match between responses. The results (as indicated by degree of alignment between mentee needs and mentor ability) will help you start a conversation about the areas within which: (1) the mentor can provide the mentee with direct support; or (2) the mentor is better suited to focus their efforts on helping the mentee seek out resources they need from other mentors.

Column 1: Domain of Mentoring Need	Column 2: Mentee Need	Column 3: Mentor Ability	Column 4: Notes (may include next steps)
Oral Communication			
Written Communication			
Managing Difficult Conversations			
Managing Expectations			
Column 1: Domain of Mentoring Need	**Column 2:** Mentee Need	**Column 3:** Mentor Ability	**Column 4:** Notes (may include next steps)
Work-Life Balance			
Affective (e.g., motivation, self-confidence, emotional support)			
Public Speaking			
Networking with Funding Sources			
Networking with Community Stakeholders			

Networking with Research Community			
Data Analysis			
Methods and Research Skills			
Column 1: Domain of Mentoring Need	**Column 2:** Mentee Need	**Column 3:** Mentor Ability	**Column 4:** Notes (may include next steps)
Frameworks, Models			
Collaborating with Community Stakeholders			
Grant Writing			
Evaluation			
Writing for Community and/or Non-Academic Stakeholders			
Research Resources			
Research Integrity and Ethics			

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Column 1: Domain of Mentoring Need	Column 2: Mentee Need	Column 3: Mentor Ability	Column 4: Notes (may include next steps)
Career Options			
Job Opportunities			
Professional Organizations with Which to Affiliate			
Other:			
Other:			

Mentorship Alignment Tool: The Process of Mentoring (The "How" of Mentoring) Planning Document (McDaniels, 2019)

Instructions: This planning document should be completed separately by both a research mentor and mentee. After completed individually, research mentor and mentee should come together to discuss the results.

Prompt for Mentee: It is important to become clear about what your preferences for communication and collaboration with your mentor. Once you make your preferences explicit, you can engage in a conversation with your mentor that can involve learning about each other and *negotiating* communication and collaboration strategies for your relationship.

Prompt for Mentor: It is important to become clear about what your preferences for communication and collaboration with your mentee. Once you make your preferences explicit, you can engage in a conversation with your mentee that can involve learning about each other and *negotiating* communication and collaboration strategies for this relationship.

Prompt to Both: Compare your results. A "good" mentor-mentee relationship does not require a match between preferred communication and collaboration styles. Comparing your responses will help you start a conversation about preferred communication and collaboration strategies for this particular relationship and will involve negotiating approaches that work for both of you.

Column 1: Expectations for General Communication	Column 2: Notes *(may include the approaches you and your mentor/mentee decide to utilize in your mentoring relationship)*
Through what channel will we communicate? (e.g., email, text, cell phone, other)	
What is our expectation for a timely response?	
Are there certain days of the week or times of the day we prefer to communicate? Are there "sacred" times during which no communication should occur?	
To what degree is the content/context of our conversations confidential?	
What should we do if confidentiality is a concern?	
How should we handle conflict if it arises?	
Column 1: Expectations of Project Meetings	Column 2: Notes *(may include the approaches you and your mentor/mentee decide to utilize in your mentoring relationship)*
How often should we meet and for how long?	
What channel should we use for these meetings (e.g., Skype, Zoom, other)?	
What should a mentor do in preparation for a project meeting?	
What should a mentee do in preparation for a project meeting?	

How goal oriented or free form should our meetings be?	
If one of us needs to cancel, what should we do?	
How should we follow-up on meetings? (e.g., communicate advice taken, information promised, support offered)	
Column 1: Expectations for Formal Feedback	**Column 2:** Notes *(may include the approaches you and your mentor/mentee decide to utilize in your mentoring relationship)*
In what form and how often will a mentor give the mentee feedback on project progress?	
How much time should be allowed to review short documents?	
How much time should be allowed to review longer documents? (e.g., grants, manuscripts)	
Column 1: Expectations for Working with Other Mentors	**Column 2:** Notes *(may include the approaches you and your mentor/mentee decide to utilize in your mentoring relationship)*
What other mentors will be involved in the mentee's experience?	
How will the mentor interact with other mentors (if at all)?	
Column 1: Expectations for Collaboration	**Column 2:** Notes *(may include the approaches you and your mentor/mentee decide to utilize in your mentoring relationship)*

Co-Authorship: Will we consider it? Under what circumstances?	
Grant Collaboration: Will we consider it? Under what circumstances?	

Column 1: Other Expectations	Column 2: Notes *(may include the approaches you and your mentor/mentee decide to utilize in your mentoring relationship)*

PREPARING THE EFFECTIVE MENTEE

Dionne Clabaugh

Abstract

The purpose of this chapter is to help the mentoring program director create, implement, and evaluate academic mentoring programs after identifying structures that can effectively prepare their mentors and mentees for a successful mentoring experience. Some of the considerations explored are mentor program structures that are relationally based, goal-oriented, and grounded in autonomy supportive strategies. This chapter opens with the author's lens in order to describe a human development approach to mentoring and then how to prepare mentees to be self-directed. The third section portrays mentoring program structures that promote self-directed mentees. This chapter concludes with generalizable findings and recommendations based on key lessons learned. It is the author's belief that mentees and mentors are learners who benefit most when they (a) have a clear understanding about the mentoring program's purpose and objectives, (b) understand the rationale for and benefits of participating in a mentoring relationship, and (c) hold accurate schema for what is expected of them regarding program tasks and activities.

Introduction

Mentor, know thyself. Mentor, know thy mentee! The frame of reference for this chapter is toward developing mentees who are very successful because of their mentor's guidance and modeling of autonomy supportive (Jang et al., 2010) strategies, which inherently activate engagement and self-directedness. In other words, the better a mentor knows the full context of their mentee's approach to learning, living, and communicating, the better their mentee's outcomes will be.

You may think that knowing your dissertation student well does not matter much. However, if you perceive your dissertation mentee as a future colleague, then your investment now benefits you, them, and your field of study from today forward. You may think investing this much in your junior faculty mentee will take too much time away from your other responsibilities and projects; however, if one values the funds of knowledge you both bring to the table, you have an opportunity to be enlivened after each conversation. These are the frames of reference that I apply to my practice of mentoring—we are engaged in human development across the lifespan.

This chapter provides the reader with an overview of the contextual spaces in which an impactful mentoring relationship lives and offers theoretical strategies you can incorporate into your practice of, and engagement in, your own mentor-mentee relationships. The chapter is divided into the following four sections: (a) The Author's Lens, which provides background for this human development approach to mentoring; (b) Preparing Mentees to be Self-Directed, because intrinsically motivated mentors and mentees apply volition for their growth; (c) Mentoring Program Structure to Promote Self-Directed Mentees, to illustrate how and why all program practices promoted mentor-mentee engagement; and (d) Findings and Recommendations, to summarize lessons learned from a human development perspective.

The Author's Lens

I began my doctoral program asking: What makes learning—learn*ing*—happen? I was interested in the interplay between the content, content delivery within the learning environment, the facilitator's context for teaching and the learner's context for learning. As a learner and practitioner in three spaces, I learned "what makes people tick" and "why people do what they do" from therapeutic, developmental, and organizational lenses. This learning prompted my human development approach to mentoring based on my bachelor's degree and practicum in music therapy, a community college certificate program in lifespan development, and my master's degree in organization development.   In all three spaces, learning was applied to real-life situations through projects that we designed, implemented, assessed, and presented. In the music therapy program, I learned how and why the structures of music are utilized to design, implement, and assess treatment plans to increase a client's functioning. In the lifespan development program, I learned about emergent curriculum and making learning visible (Ritchhart & Church, 2020). In my organization development degree program, I learned how to identify and select relevant assessment tools to evaluate organizational health based on the effectiveness of its structures and attention to human factors before designing an intervention to increase functioning and productivity. Knowing what and whom one is working with is central to promoting meaningful and sustainable change.

In my music therapy degree, from 1973–1983, I learned that individual change and increased functionality are primary goals. Change was described as progress over time and was assessed by comparing baseline functionality to end-of-treatment functioning in any developmental area: physical (cerebral palsy, multiple sclerosis, spina bifida), cognitive (Down's Syndrome, stroke, speech delays, sensory processing differences), and mental (depression, schizophrenia, guilty by reason of insanity). Treatment plans were developed to promote observable, incremental steps toward what was considered socially acceptable functioning while ensuring the highest quality of life possible for every individual.

Across 40+ years teaching in preschool, elementary, and college environments, I see change as developmental, individualized, and situated in social groupings. The quality of a learner's growth and development relies on skill-building across developmental domains. One critical outcome is for people to develop social and emotional skills to interact and express themselves in socially appropriate ways throughout their life, initially learned in their family and cultural contexts, then expanded in school learning environments. Growth, development, and learning are promoted through developmentally appropriate practices (Bredekamp & Copple, 2009) coupled with the learner's volitional (i.e., self-selected) exploration of their environment and materials and participation in skill- and knowledge-building activities across developmental domains (California Department of Education, 2021). These domains are typically categorized as social-emotional; physical; cognitive; language; and health, arts, sciences, and social sciences in preschool through high school and categorized as professional or vocational skill sets in higher education.

In my organization development degree and ongoing consulting practice, from 1989 to present, I came to believe that change is based on increased individual functionality and increased team or workgroup productivity. Work group quality is assessed through a systems lens—what are the processes and procedures used to get work done? How well do employees know what is expected of them? To what extent do employees engage with civility and respect? How strong is their customer service and what risks and wastes impact market share and profit? The answer, of course, is that the quality of an individual's contribution impacts overall effectiveness.

I apply this integrated lens to address the purpose of mentoring: to grow humans into better versions of themselves, regardless of their work environment. People use volition and agency to change themselves. Thus, the mentor's role is to integrate their mentee's context into the mentoring relationship. The mentor then constructs informed and reasonable expectations for their mentee's readiness, willingness, and ability to learn and grow.

Why so much about my background? Most people do not have degrees and work experience in therapeutic, business, and education environments. It seems important that readers understand *how* my mentoring practice integrates these lenses and *why* I want to increase an individual's quality of life—by engaging them in their own development. Mentoring is a learning partnership that begins with interest and commitment and moves through the stages of negotiation, cultivation, and ending (Clabaugh & Dominguez, 2022).

Knowing this context offers mentors my frame of reference to make decisions about applying these practices and advice to mentoring. Just as each mentor has agency and volition to grow into a well-prepared mentor, their mentees use agency and volition to become well-prepared mentees.

Preparing Mentees to be Self-Directed

Many mentees are ready, willing, and able to be mentored and enter the program prepared and ready to set goals, indicate willingness to engage in program activities, and demonstrate their ability to apply guidance. These mentees are self-directed because they have internal resources (readiness, willingness, and ability) to follow through and succeed. Other mentees are unprepared for mentoring, which can frustrate well-intentioned mentors with thoughtful preparation. However, what is actually happening? Mentees need resources, modeling, and opportunities to understand what it means to be a mentee, especially to form accurate perceptions and expectations for being mentored.

Mentors are human developers. Mentors need to know how to respond to self-directed and non-self-directed mentees by applying strategies that develop mentee agency for learning and development. One's volition is a motivator, and every mentee's motivational context is individualized. This second section describes (a) what it means to be self-directed; (b) what dispositions self-directed mentees bring to the mentoring relationship; (c) suggestions to activate mentee dispositions of readiness, willingness, and ability; and (d) mentee motivational resources and self-determination.

What Does it Mean to Be Self-Directed?

Self-directed means taking responsibility, initiating interactions, seeking help, resources, or guidance, and following through. Self-directed learners are self-aware, know their limitations and interests, and willingly apply effort to meet goals. Self-directed goal setting means choosing meaningful, achievable goals that lead to greater accomplishments (Clabaugh & Dominguez, 2022).

Self-directed mentees take charge of their learning within the mentoring relationship. They use agency to set and act on goals, use volition to seek help, and ask for information and tools to promote their learning, growth, and success. Self-directed mentees use emotional intelligence to communicate effectively; they recognize their impact on others and others' impact on them (Clabaugh & Dominguez, 2022). For example, active listening skills are used to clarify and ensure they understand what is suggested or conveyed.

The self-directed mentee communicates their desire and intention to improve their performance and effectiveness and motivate themselves for action. Mentees respond to their mentor's help toward success and recognize their mentor's efforts toward making themselves available. The mentee can then engage with the mentor to increase their skills and knowledge (Dominguez, 2017).

Self-directed mentees realize that goals are achieved over time. The mentee applies a growth mindset (Dweck, 2007) by keeping an open mind and believing they can learn new strategies and   meet challenges. In practice, mentees with a growth mindset adopt a "not yet" attitude in response   to making mistakes. This attitude indicates that mentees see errors as learning moments rather than evidence that they cannot learn, when applying their mentor's suggestions. The self-directed mentee accepts and learns from these mistakes and missteps. The mentee recognizes their progress and asks questions (Miller, 2018) for guidance, reassurance, and feedback. They are accountable and follow through because they want to reach their goals.

A self-directed mentee acknowledges their shortcomings and is accountable. For example, if mentees do not listen well or tend to procrastinate, they could open a conversation to discuss these tendencies with their mentor. The pair could then explore options for new skills, such as active listening or using productivity tools. A skilled mentor then models listening and planning skills into mentoring conversations, and the self-directed mentee may notice this. A self-directed mentee works hard to follow through and be successful. They may also initiate check-in conversations to describe progress and hear additional suggestions or insights.

What Dispositions Do Self-Directed Mentees Bring to the Mentoring Relationship?

Successful mentoring relationships are built on effective mentor-mentee interaction and engagement. Mentee dispositions center on their readiness, willingness, and ability to engage in mentoring activities. Giving mentees opportunities to deepen dispositions in five specific areas builds effective mentoring relationships where mentees can be self-directed. These five specific dispositions discussed next are (a) being ready, willing, and able to engage and connect; (b) being willing to try new skills and strategies; (c) being willing to co-construct new knowledge; (d) being able to develop efficacy for learning; and (e) being able to set and work toward goals. Each of these five dispositions will be described, then a section of suggestions to leverage dispositions to build strong mentoring relationships will follow.

Being Ready, Willing, and Able to Engage and Connect

Learning is a social-emotional-cultural interaction that requires being introduced to something new, interacting with the information, integrating it into one's ways of thinking and working, and then trying and practicing new skills. In the mentoring relationship, a mentee learns from the mentor directly, not necessarily from a book or resource. Effective mentoring is a healthy relationship based on respectful, observant, positive interactions that are rooted in self-awareness. To begin this relationship, the mentee must be ready, willing, and able to engage and connect—to show up and be present—with their mentor. Mentees must feel they can reach out to their mentor for help and guidance because they are in pain of some sort, that is, under-resourced, frustrated, or inexperienced. A self-directed mentee knows they need additional information and skills to make desired improvements.

A mentee in a formal hierarchical mentoring relationship (see Chapter 3 on diverse form of mentoring relationships) may subordinate themselves and believe they should not ask questions or push back on their mentor, even when the tool or approach suggested does not fit or work for the mentee. In a formal pairing the mentor is highly skilled and the mentee is a novice, which sets up a power differential in which mentees may incorrectly assume they made a mistake, feel guilty, and then disengage from the mentor. In effective mentor-mentee relationships, discords are addressed even when it is difficult to discuss. A self-directed mentee uses reflection to understand and then describe their experience. The effective mentor makes themself available to listen and then promotes a cooperative conversation to identify more viable suggestions or strategies.

Being Willing to Try New Skills and Strategies

A prepared mentee knows they are missing key skills, resources, or strategies to be successful and/or meet professional, career-oriented, academic, intrapersonal, or psychosocial goals. A self-directed mentee identifies and respects their mentor's skills that help the mentee advance. The mentee asks interesting and courageous questions, listens carefully, and then applies the strategies and advice provided (Clabaugh & Dominguez, 2022).

As many readers know, Bandura conducted experiments on the impact of "expert models" of behavior, such as a parent, teacher, or businessperson, to understand the impact of the expert's modeling on the decisions made by the novice, or lesser-experienced person in similar situations. Some readers may recall his studies on aggressive behavior modeling with the Bo-bo doll, which concluded that children will imitate behavior observed in trusted adults, even if it is aggressive or hurtful in some way. Similarly, the mentee sees their mentor as a guide and copies the observed behaviors. Mentors can leverage this disposition by providing opportunities for the mentee to observe mentor behaviors or can create opportunities for the mentee to practice skills under protective guidance within the mentor's setting. The self-directed mentee is eager to work alongside their mentor, agrees to the mentor's suggestions, and practices the strategies modeled by their mentor.

Being Willing to Co-Construct New Knowledge

The self-directed mentee wants to participate in a mentor-mentee relationship to co-construct success. Mentees ask questions about what their mentor knows and advises. Mentees use resources suggested by their mentor and open conversations about this content and information. Mentees often feel bad if they skip a meeting and appreciate the mentor's investment in their success and growth. These relationships are reciprocally rewarding, sustaining engagement and follow-through, building trust, and allowing each person to be fully themself in the relationship.

Self-directed mentees open conversations to share their thinking and make their learning visible. Mentees ask for specific feedback and accept it gracefully, knowing that the mentor's intention is to develop them and help them succeed. Feedback conversations are often perceived as scaffolds for improvement, and the self-directed mentee applies this feedback faithfully.

As the mentee becomes more successful, their efficacy and confidence grow. Success then provides direct experiential evidence of increased skills, which leads to mentee efficacy for taking new risks and applying new strategies. Soon, the mentee applies these new skills and continues seeking feedback while acting independently to achieve new goals.

Being Able to Develop Efficacy for Learning

If the goal is to solve a problem, then the mentor helps the mentee organize, reflect, learn new approaches, and identify solutions. The mentee is observed by the mentor, then feedback is used to encourage the mentee's confidence and competence. "The link between personal agency and a teacher's [mentor's] efficacy beliefs lie in personal experience and [their] ability to reflect on that experience and make decisions about future courses of action" (Bray-Clark & Bates, 2003, p. 14).

Thus, when the mentee and mentor use cooperative problem solving, the mentee feels efficacious, willingly shares their funds of knowledge, and stays open to new ideas. A self-directed mentee tracks their efficacy levels in various situations and seeks input to increase success. Efficacious mentees believe they can learn and make progress.

Being Able to Set and Work Toward Goals

A prepared mentee is goal-oriented and uses self-directedness to accomplish their goals (Clabaugh & Dominguez, 2022). They perceive the mentor as a resource and may have several mentors for different goals, such as in situational mentoring (Clutterbuck & Lane, 2004) or developmental mentoring (Murphy & Kram, 2014) relationships. Being goal-oriented means having the desire and intent to make progress, then creating and following a plan of action to accomplish something important (Ryan & Deci, 2009).

Mentees have high hopes for their progress and set short- and long-term goals and are prepared for conversations and work sessions to achieve their goals. Goal-oriented mentees are committed to their own learning and use various communication strategies to manage these goals (Clutterbuck & Lane, 2004). For example, a graduate student mentee wants to publish, so asks their mentor to suggest journal articles and books as exemplars for scholarly writing. The mentor and mentee discuss elements of publishable manuscripts, which directly engages the mentee in the writing and publishing processes. In addition to receiving suggestions and resources, the mentee may be invited to contribute to their mentor's current work and might be included as a co-author.

This concludes the focus on the five dispositions to be self-directed. The third section of preparing mentees to be self-directed gives suggestions on how to activate the mentee's dispositions of readiness, willingness, and ability.

Suggestions to Activate Mentee Dispositions of Readiness, Willingness, and Ability

To approach each mentoring conversation with a human development lens, mentors must ask themselves the following questions: What can I do and say to help this mentee improve the quality of their work, life, or self? Developmentally, where is this mentee's motivation (more externally focused vs. more internally focused)? In what ways do they regulate themselves and their work, and how effective is this regulation? How might I describe their emotional maturity? How well do they follow through? What do they not recognize about themself and their approach to their own development?

Consider asking your mentee these same questions after reflecting on the various ways they might respond. These answers help you identify your mentee's capacity to learn from you and help you gauge how much interest they have in doing so. The desired outcome is increased capacity for learning. Capacity for learning increases when a human development approach is used to engage authentically. Mentor stories and suggestions are meaningful and help mentees trace changes over time, which mentees can then overlay for themselves: "I see how my mentor approached this, and I can apply their strategies to myself."

Developmental conversations are in direct contrast with transactional interactions. In transactional

interactions, mentors tell mentees what to do or direct them to use specific skills or resources to make progress. In this transaction, the mentee is objectified, and the conversation focus is primarily on the task, goal, skill, or outcome. Transactional interactions can be dehumanizing at worst and are often demotivating because the mentee's locus of control is external—the mentee is encouraged to rely on an expert source outside of themself, which thwarts self-directedness.

The mentoring relationship may begin transactionally, where the mentee asks for guidance or suggestions from their mentor. However, the relationship is most effective and rewarding when mentor-mentee pairs discuss their thinking, brainstorm ideas together, and cooperatively identify desired outcomes. In this way, the mentee has multiple opportunities to use self-directedness, rather than dependence on someone else, to meet their goals. The mentor guides while being a sounding board, brainstorming partner, and reflective listener.

Importantly, mentees recognize the multidimensionality of their mentoring relationship. Developmental conversations bloom into trusted relationships that last for years, traversing life and work stages, simply because the mentor listened thoughtfully, invited the mentee to articulate their perspectives, feelings, and questions, and actively heard mentee experiences. Self-directed mentees are then able to co-construct strategies to replace concerns about competence; workflow worries are smoothed through courageous conversations and reflective practice. Efficacy develops when using effective and sustainable ways of working.

Developmental conversations invite mentees to be the agent of their work, tasks, and goals, appealing to their internal locus of control. When mentors ask, "From here, how do you want to move forward? What steps will you take toward your intended outcomes?" Mentors relate first to the mentee, then to the tasks, strategies, and outcomes. Developmental approaches build self-efficacy, the belief in one's capacity to accomplish what one sets out to do (Bandura, 1997). Mentees must become aware of and encouraged to increase their self-efficacy to be self-directed.

According to Bandura (1997), self-efficacy is when a person feels confident in their abilities and then controls their motivation, environment, and behaviors to ensure ongoing efficacy. Self-efficacious mentees evaluate their progress, adjust their goals and approach, and have high energy for goal attainment—they are *effectively* self-efficacious and know they can succeed. Then they seek *more* help because they recognize their need for additional guidance, tools, strategies, and perspectives.

Help-seeking is necessary for self-regulated learning (Shunk & Zimmerman, 1998). Self-regulated learners are aware of their actions, identify the outcomes of those actions, and assess the next steps for success. Help-seeking is critical for impacting one's success. Recall the dispositions described above: self-directed mentees are ready, willing, and able to engage and connect and know they need help to make desired improvements. It is one thing to know help is needed and another to actively seek that help.

The most important aspect of successful mentoring is that mentees accept and apply the help they are offered. Self-directed mentees are self-determined (Clabaugh & Dominguez, 2022) when they seek and accept help. Mentees' intrinsic motivation for growth and development is activated, so they become more engaged and successful (Ryan & Deci, 2000).

Help-seeking, applying intrinsic motivation, and being engaged are characteristics of the self-directed mentee. However, many mentors do not know how to assess their mentee's motivation level, which can positively or negatively impact the mentee's self-directedness. Understanding motivation through the lens of self-determination theory gives mentors a valuable tool for promoting self-directedness within the mentor-mentee relationship. Assessing the mentee's motivation level is the final section for preparing the mentee to be self-directed.

Mentee Motivational Resources and Self-Determination

In self-determination theory, "to be motivated means to be moved to do something. A person who feels no impetus or inspiration to act is thus characterized as unmotivated, whereas someone who is energized or activated toward an end is considered motivated" (Ryan & Deci, 2000, p. 54). To be self-determined is to use one's decision-making capacity and then apply motivation and effort to follow through (Ryan & Deci, 2000).

There are three levels of motivation: amotivation, extrinsic motivation, and intrinsic motivation, as described in the self-determination theory's motivation continuum (Deci et al., 1991). Motivational resources come from both one's external environment and one's internal environment. The external environment consists of the learning or working environment (structures, procedures, policies, ways of working, interactions with people), and the internal environment includes one's characteristics and internal processes (temperament, habits of mind, levels of efficacy, volition, regulation, and agency as well as how they perceive their success and failure). According to self-determination theory, external motivators include earning rewards or recognition and avoiding negative consequences, and internal motivators include pride, goal attainment, and joy (Ryan & Deci, 2002).

Ryan and Deci's motivation continuum (Figure 11.1) is a model of six motivation strategies, types of self-regulation associated with each motivation strategy, and the quality of behavior moving from less determined (extrinsically motivated) to more determined (intrinsically motivated).

Figure 11.1

Self- Determination Continuum With Types of Motivation and Regulation

Types of Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Types of Regulation	Non-regulation	External Regulation	Introjected Regulation	Identified Regulation	Integrated Regulation	Self-regulated
Quality of Behavior	Non-self-determined	Avoiding negative consequences or earning rewards				Self-determined

Note: From "An Overview of Self-Determination Theory," by R. M. Ryan and E. L. Deci, in E. L. Deci, & R. M. Ryan (Eds.), 2002, *Handbook of Self-Determination Research,* pp. 3–33, University of Rochester Press.

Looking at the left column, people who are amotivated present as not interested. They are "checked out," disengaged; they do not join in or participate. At the other end of the continuum, intrinsically motivated people demonstrate self-determination, engage volitionally, and use self-regulation for personally meaningful reasons such as joy, pleasure, or aspiration. The center section shows four levels of extrinsic motivation, in which people rely on the various elements of the external environment to activate their regulation and engagement.

People activated by external regulation are motivated by avoiding negative consequences or earning rewards for participation and engagement, regardless of interest, goals, or needs. People use introjected regulation when feeling controlled by guilt or shame, so they either avoid these feelings or increase their sense of self-worth, especially when they believe the task is not important, useful, or interesting. Identified regulation means placing importance on goals or outcomes, such as working diligently toward a goal because recognition is valued. Integrated regulation is autonomous, yet there is reliance on external motivators to engage or follow through. In this case, the goal or task is interesting or important to one's identity and future prospects, such as advancement or promotion (Clabaugh, 2013).

In mentoring relationships, it is valuable to know whether there is unresolved trauma. Traumatic experiences can lead to withdrawing from challenges, seeking perfection, resisting help or resources, or lashing out when frustrated, indicating lower emotional regulation. People who were criticized for not "measuring up" or who were praised for being compliant may enter a mentor-mentee relationship with expectations of punishment and praise or resist relationship-building. Mentees with trauma may be more comfortable with transactional relationships because the relational expectations are lower. However, this threatens opportunities for true change and development.

Although self-determination theory has not been broadly studied in mentoring relationships, it has been studied extensively in other learning relationships: teacher-student, manager-employee, coach-athlete, doctor-patient, and parent-child (see https://selfdeterminationtheory.org/). In all cases, findings indicate that learners have increased engagement and success based on the activation of their intrinsic motivation.

I use self-determination theory to develop mentoring programs. I have observed self-determined dynamics in mentor-mentee pairs and mentoring cohort groups for nearly 10 years. In most cases, I can confidently say that intentionally responding to the dynamics of self-determination, motivation, and engagement positively impacts mentor-mentee relationships by encouraging growth-oriented professional interactions with strong engagement and program outcomes.

To ensure successful mentoring programs, program directors and mentors are advised to observe mentee behavior to assess motivation levels, regulation types, and identify motivational sources and regulators. Program directors thus assess the cohort's overall motivation, and mentors assess their mentee's motivation. Then, program directors can respond collectively and mentors respond individually to attain the critical goal of developing self-directedness in the mentees. Such intentional responses increase mentee motivation and regulation by promoting their self-determination and self-directedness.

Figure 11.2 labels the types of motivation (top row) related to their regulation (second row), behavior (third row), and sources of motivation (fourth row). The fifth row describes a person's internal processing that regulates their motivation at each level along this continuum. During the first part of an initial conversation program director-mentee applicant, such as a conversational intake interview, careful observation and reflection form a baseline assessment of each applicant's motivation and regulation types. In the second part of the initial conversation, the program director can confirm their assessment by asking situated questions that elicit nuanced evidence of the applicant's types and sources of motivation and regulation.

Figure 11.2

Self-determination Motivation Continuum with Motivation Sources and Regulators

Types of Motivation	Amotivated	Extrinsic Motivation				Intrinsic Motivation
Types of Regulation	Non-regulated					Self-regulated
Quality of Behavior	Non self-determined	External Regulation	Introjected Regulation	Identified Regulation	Integrated Regulation	Self-determined
Source of Motivation	Impersonal	External	Somewhat External	Somewhat Internal	Internal	Intrinsic
What Regulates Motivation	Nonintentional, Non-valuing, Incompetence, Lack of Control	Compliance, External Rewards and Punishments	Self-control, Ego-involvement, Internal Rewards and Punishments	Personal Importance, Conscious Valuing	Congruence, Awareness, Synthesis with Self	Interest, Enjoyment, Inherent Satisfaction

Note: From "An Overview of Self-Determination Theory," by R. M. Ryan and E. L. Deci, in E. L. Deci, & R. M. Ryan (Eds.), 2002, *Handbook of Self-Determination Research*, pp. 3–33, University of Rochester Press.

Looking first at the left column, a person who is amotivated (uninterested, does not involve themselves, disengaged) does not take any action, so there is no reason to regulate I. They do not have goals, so there is no need to be self-determined or self-directed. Their motivational source is impersonal, so there is no reason to activate agency or volition. Thus, what regulates one's motivation (i.e., what sustains their lack of motivation) are perceptions of no value, incompetence (theirs or other's), and a lack of personal control.

Understanding how amotivated people behave (by interpreting the meaning of observed behaviors) helps mentors and program directors effectively assess mentees who appear disengaged and informs intentional decisions about how to respond. There are two approaches: do not accept amotivated mentees into the program or invest a predetermined amount of time and effort to turn amotivation into motivation. The latter choice might work for mentees with low efficacy and high competence, identified as impostor syndrome (Vian, 2021). The effort and time required in the latter case must be acknowledged because mentee success takes longer and is not guaranteed.

Most people are extrinsically motivated by structures or policies outside themselves. Having a variety of responses to use during conversations is essential so that each mentee feels understood and included, building trust and engagement. Different responses address different motivation levels while ensuring engagement.

To assess motivational levels in an intake conversation, label the type of motivation based on their response. For example, an applicant says they thrive in environments where they "can shine" and "make a strong impact" is assessed as either introjected regulation (ego-involvement) or identified regulation (personal importance). To determine which level is more accurate, situate a follow-up question relating to past accomplishments (introjected regulation), inquire about what they value and ways they act on these values (identified regulation). The responses that are accompanied with energized body language confirm their level of extrinsic motivation.

Always respond as inclusively as possible. To someone regulated by compliance, one can say, "Our policies say that every mentee must participate in orientation before signing into the mentoring program." Those motivated by external rewards could be told, "After completing orientation, you will receive a certificate of completion that enters you into the mentoring program." A small number of people are motivated by avoiding punishment, so an effective response would be, "People who do not complete the program orientation will be placed on a wait list for upcoming orientations, which are held in August each summer." Note that these responses incorporate two strategies that support autonomy (described in a later section): *positive phrasing* and *providing information*.

Fewer people are motivated intrinsically for workplace activities than extrinsically. Intrinsic motivation characteristics are self-regulated and self-determined, and volition is used to engage and succeed based on interest, enjoyment, and inherent satisfaction. These mentees typically ask questions, seek help, and take initiative; they do not need reinforcers or external structures to get started. Intrinsically motivated people may work longer hours for lower salaries. They derive deep personal pleasure in their work and often experience flow (Csikszentmihalyi, 1990), meaning their sense of time dissipates, and they work at the top of their capacity on meaningful goals or projects.

Intrinsic motivation is often assessable based on people's hobbies and "side gigs"—doing things they value and love for sheer pleasure and joy. Quite a lot of people's time and money are spent on their hobbies, and great satisfaction is derived from them. During intake conversations or program orientation introductions, ask people to describe their hobbies so intrinsic motivators can be assessed and relationships can be built around commonalities, leading to cohesion and unity.

You may have heard people say, "If you paid me, it wouldn't be a hobby anymore." This sentiment indicates that for intrinsically motivated people, external motivators diminish experiences of happiness and fun. It is interesting that managers believe they need to offer rewards or punishments no matter what. However, the person motivated at higher levels does not benefit from extrinsic motivators. Research in self-determination theory describes this dynamic (Ryan & Deci, 2002) and suggests that when motivators below one's actual level of motivation are applied, the person disengages.

Overall, mentoring program directors and mentors can pay close attention to their mentee's

demonstrations of motivation from the very beginning of the relationship. Program directors can identify how each mentee responds in various situations and can guide mentors to (a) match various motivators to various situations and (b) to promote the mentee's use of more intrinsic levels of motivation more frequently. The mentor must observe their mentee's responses to various situations: What does the mentee need in order to accomplish a boring or undesirable task? What choices does the mentee make to approach success and take initiative? What are the mentee's hobbies?

The mentor can then make intentional suggestions that fit the type of motivation best suited to succeed in any situation. Contextually, if the mentee views their future self as a presenter or public speaker, then fame and recognition are viable motivators, and ToastMasters® may be a perfect suggestion. Alternatively, if the mentee's context is to advance career skills or increase employability and they enjoy being in the community, then a service-learning opportunity or volunteer role might be appealing to them. If the mentee wants to spend most of their energy on composing and playing gigs yet needs to pay the rent, then a job with reasonable pay, benefits, and little to no take-home responsibly would fit well for them. In this second context, the job is the mentee's means to an end, and the duties are not important.

In summary, the mentee who is ready, willing, and able has the disposition to participate in the mentoring relationship to learn by applying guidance offered to them. These dispositions are fundamental internal resources that are the context for their learning and development within the mentor-mentee relationship. These internal resources, coupled with emotional intelligence and self-awareness, equip the mentee with social-emotional skills to initiate and sustain mentoring relationships, to solve problems with efficacy (Bandura, 1997), and to hold a growth mindset (Dweck, 2007).

The mentee who self-regulates their motivation and actions (Shunk & Zimmerman, 1998) sets goals, works to attain those goals, incorporates feedback along the way, and makes adjustments for goal attainment. The third section of this chapter describes how to structure mentoring programs to promote self-directed mentees.

Mentoring Program Structure to Promote Self-Directed Mentees

The mentoring program structure can promote or thwart a mentee's self-directedness. Program structures include the policies, procedures, expectations, cycles of activity, and relationship-building strategies. Specifically, the mentoring program structure should provide to mentees: (a) the program's purpose and objectives, (b) the rationale for and benefits of engaging in the mentoring relationship, (c) program and mentor expectations, and (d) examples of self-directed behaviors.

But how can mentor program directors incorporate the above provisions into the mentoring program? They can ground all aspects of program structure and delivery in autonomy-supportive instruction (ASI) (Jang et al., 2010). ASI is a set of six strategies that builds relationships, promotes autonomy, and develops competence. ASI is well-researched and empirically validates that learner engagement is promoted when intrinsic motivational resources are supported.

In autonomy-supportive mentoring programs, program structures and relational practices

intentionally encourage mentee intrinsic motivation, help mentees set and reach goals, and support self-regulated and self-determined behavior, all of which ultimately develop self-directedness. In developmental mentoring relationships, mentees see themselves as learners. As previously described in Figure 11.2, intrinsically motivated actions are based on awareness, interests, and inherent satisfaction. In short, self-directed mentees *want* to learn and grow and they apply effort to activate their motivation for success.

The first subsection in this portion of the chapter, *Using ASI in Mentoring Programs and Practices*, explains ways to use ASI in mentoring programs and practices; includes a table of ASI strategies and their operationalized mentor behaviors; and describes how to use ASI to promote engagement in mentoring program activities, build mentee initiative, and respond to mentee emerging competence. The second subsection, *Program Expectations Aligned to Self-Directed Learning Activities*, aligns ASI strategies with program expectations and self-directed learning activities. The third subsection, *Promote Self-Directedness with ASI Mentoring Program Structures*, describes how ASI mentoring program structures promote self-directedness. And the fourth subsection, *Using ASI to Develop Mentor Program Assessment Strategies*, provides suggestions for how to use ASI to develop program assessment strategies that are aligned to an ASI-based mentoring program's structures for building relationships and competence, and it includes a table of suggested quantitative and qualitative measures.

Using ASI in Mentoring Programs and Practices

In this subsection, I will first explain the six ASI strategies and how they were operationalized for mentoring programs; second, describe training environments that are highly interactive; third, describe developing the mentee's efficacy for success; and I conclude with suggestions to intentionally activate mentee self-directedness.

The Six ASI Strategies

ASI is comprised of three relational strategies and three competence-building strategies that have been shown to positively impact learner engagement in many learning environments, for example, in K–12 education, higher education, language learning, sports, health management, nursing training, and business or corporate environments (Center for Self-Determination Theory, 2022).

To date, it appears that I have been the only person to apply ASI to mentoring programs, and I have found effective outcomes thus far (Clabaugh, 2013, 2020). These publications describe how ASI strategies were enacted within program structure, training, and mentor-mentee pairings, which advances our understanding of the impact of ASI beyond teacher-student, coach-athlete, manager-employee, health provider-patient, and parent-child pairings.

Each ASI strategy on the left of Table 11.1 promotes either belonging or competence and is operationalized as a set of behaviors (Reeve & Jang, 2006). ASI strategies can be successfully trained (Reeve & Halusic, 2009), practiced, and assessed. In one of my ASI-based mentoring programs, one assessment outcome was an ASI vernacular specific to the mentoring program. This vernacular was used to operationalize ASI strategies within the mentor-mentee relationship.

Table 11.1

Autonomy Supportive Instruction (ASI) Strategies and Operationalized Behaviors

ASI strategy	Operationalized mentor behaviors
Mentor nurtures the mentee's inner motivational resources (belonging)	Shows interest in and enjoyment of mentee response and work
	Identifies and supports mentee needs, interests, and preferences
	Provides time to work on program tasks and act on requests
	Provides encouragement that boosts program engagement
	Provides challenge by asking mentoring program questions Provides opportunities to take initiative for using tools, resources, strategies, and skills to meet mentor goals
Mentor uses supportive and informational language (belonging)	Provide information that connects mentee context goals and content
	Affirms mentee competence and success
	Explains why mentee is doing well and making progress
	Promotes value by providing rationale for task usefulness
	Promotes importance of mentoring program activities
Mentor acknowledges and accepts mentee's positive and negative learner affect (belonging)	Responds affirmingly to mentee perspectives and ideas
	Treats mentee complaints as a valid reaction
	Treats mentee resistance as a valid reaction
Mentor provides clear and detailed instructions (competence)	Mentee clearly knows what to do
	Instructions are well organized
	Information frames upcoming mentoring program activities
Mentor provides strong guidance (competence	Demonstrates leadership in the mentoring relationship
	Offers a clear action plan to meet mentee goals
	Gives hints and tips for mentee success
	Mentee goals and responsibilities are clearly and positively stated
Mentor provides informational feedback (competence)	Suggests skill-building actions, tools, or strategies
	Gives instructive statements to increase mentee knowledge
	Gives statements using positive and affirming phrases
	Statements promote mentee understanding and competence

To apply ASI during mentoring programs, the structure must provide opportunities for mentors and mentees to apply initiative during program activities. The rationale for this is that mentors directly experience ASI as a learner and then use competence and efficacy to model and intentionally apply ASI with mentees. Before the program begins, mentors need to be trained, observed, and assessed in ways that apply ASI strategies to their learning and practicing of ASI strategies. Thus, mentors are learners who experience the relational elements of ASI situated in a mentoring relationship. This contextual learning environment helps mentors develop efficacy for applying ASI strategies with mentees.

Program directors also need training and mentoring to learn why and how to use ASI and are then assessed to demonstrate their capacity to effectively and confidently model and apply ASI with mentors during training and orientation, with program communication and documents, and during program assessment. In this way, the program manager becomes a meta-mentor for mentors; mentors who are mentored and assessed by the meta-mentor will be prepared to efficaciously model and apply ASI with their mentees. The program manager as meta-mentor must be able to describe the value and relevance of ASI to the mentors and model ASI strategies as intentional exemplars.

Therefore, all aspects of the mentoring program are grounded in ASI strategies: training and orientation, invitations and communication, program structure and delivery; mentoring program activities, policies, and procedures; mentee assessment and feedback; program assessment items and assessment protocols; and recommendations for program improvement. For example, to promote intrinsic motivation, engagement, and self-directedness when providing program overviews, invitations to participate, and describing program activities, program directors apply the strategies of *using supportive and informational language* and *providing clear and detailed instructions*.

A mentor uses ASI to promote their mentee's intrinsic motivation for taking initiative during program activities by applying the strategies of *nurturing inner motivational recourses* and *acknowledging and accepting positive and negative affect*. How a mentor responds to their mentee's level of success can develop competence when they apply the strategies of *providing strong guidance* and *providing informational feedback*. The next section unpacks each of these examples by describing how and why each ASI strategy can be applied.

How to Use ASI to Promote Engagement With Mentoring Program Activities

The program director introduces mentors and mentees to ASI and mentoring program components in a training (mentors) and an orientation (mentees) that is delivered using ASI strategies. The ASI strategy of *using supportive and informational language* promotes belonging, so use this strategy intentionally when writing program invitations, when designing the training agenda, and when facilitating orientation and initial mentor trainings.

ASI phrasing is inclusive, welcoming, and clearly stated without being threatening. The second phrasing is controlling and transactional, and it assumes that people need to be directed or they will not comply. For example, the orientation email uses ASI phrasing such as, "We are looking forward to your attendance at this important orientation. Remember, mentees who attend will be able to . . ." instead of saying, "You must attend this mandatory orientation. Mentees who don't attend will not be able to   " This second phrase also presents a punishment ("if you don't attend you won't get to . .

.”), which appeals to lower levels of extrinsic motivation. Trying to motivate people at lower levels than they naturally have for the program can create feelings of condescension and low trust.

During mentor training, describe mentor and mentee roles and mentee expectations, and walk through the program calendar and activities using the strategy of *providing clear and detailed instructions* to build mentor competence for knowing what is expected of them. Present the information in a logical sequence, from broad to more specific. Clearly identify the tasks mentors and mentees need to do and when to do them, for example, “First, complete this application, then fill out this intake form before your first meeting so that there is time to review your information and formulate your first meeting agenda.” After providing clear directions, mentors and mentees know what to do, why, and what the benefit is to them. After this explanation, walk through the actual application and forms.

The goal is to provide clear instructions that are well organized and are provided in the same sequence as the set of tasks to complete. Importantly, this protocol gives participants (mentors in a training, mentees in an orientation) immediate ASI strategy exemplars that can be discussed later between mentors and offers incidental learning opportunities about how ASI can be used in multiple circumstances. Administering a short interactive summative assessment next would provide feedback to the participants and program director on how well they are grasping the information while providing opportunities for participants to build relationships with each other.

A training environment that is highly interactive includes multiple opportunities for relationship building and contextual sharing. Each interaction sets the stage for participants to build relationships, engage in the program, and build competence for their roles and the roles of others in the program. For example, there could be a 4-minute partner recap, where each partner in a pair of participants has 30 seconds to state their name and a hobby and describe the paperwork, due dates, and benefits of following through.

How to Use ASI in Mentor Responses to Build Mentee Initiative During Program Activities

During program activities, using the strategy of *nurturing inner motivational recourses* to promote participant belonging, initiative, goal setting, and follow-through. Mentors find opportunities to show interest in what their mentees are doing by asking open-ended questions in a conversational tone: “How did that conference go last week?” Mentors listen to mentee responses so they can identify their mentee’s needs and preferences, and then connect those needs and preferences to upcoming program activities. For example, if the mentee enjoyed the conference, ask them for examples about what they enjoyed, then identify topics of interest to them. The mentor can then provide information on the topics the mentee found interesting, link them to upcoming opportunities for taking initiative, and then comment on the mentee’s ongoing engagement.

Sometimes things do not go well; mentors and mentees need trust to build confidence in the program staff, activities, and outcomes. There should be enough trust for mentors to confide in program directors and for mentees to confide in mentors so they feel comfortable sharing stressors and negative impacts on their progress. In these situations, apply the ASI strategy of *acknowledging and accepting positive and negative affect* to develop belonging and efficacy for building knowledge and skills over time. Self-directed mentees use volition to set meaningful goals, so the mentor takes an affirming approach

in response to mentee frustration. The mentor listens thoughtfully and becomes trusted and respected. A mentee's frustrations and difficulties are heard as valid and important to the mentor, and the mentee develops awareness of their own process and progress (Bray-Clark & Bates, 2003), which can reduce negative self-talk.

The intention here is to develop the mentee's efficacy for success even when things seem to go wrong and be reminded that learning happens when taking risks to try new things. In times when the mentee seems to resist a suggestion, the mentor not only knows what interests the mentee has but also knows what motivates them. Coupling interests and motivators is a way to break through resistance and demonstrates that the mentor is "in their corner" and sees the mentee as capable. The mentee uses internal motivation when there is congruence between their identity as a learner, in the absence of negative consequences for not yet succeeding. Ultimately, mentees activate intrinsic motivation because they are interested in meeting their goals in partnership with their mentor.

How to Use ASI in Response to a Mentee's Emerging Competence

Self-directed mentees want to impact their professional development by meeting their goals, applying more successful tools and strategies, and finding new approaches to make progress. The mentor can *provide strong guidance* to build mentee competence by modeling decision-making and problem-solving strategies and by sharing their own stories of success over time. Mentors who describe their developmental processes give the mentee vicarious learning experiences that includes clear action plans, hints, and tips.

For example, if the mentee has a publication goal for next semester, the mentor can recount their process for developing their first successful manuscript and then help the mentee develop a clear action plan. The mentor provides hints and tips from their experiences, couched as "if I knew then what I know now" scenarios, which helps the mentor identify realistic goals and responsibilities for themselves. The mentor also uses positive phrasing such as, "Remember to . . ." rather than "You better not forget to . . ." and "You can expect a few set-backs, and you have some strategies to use when these happen" instead of "It never works out like you planned, but oh well, get used to that."

Not all people relate to feedback in the same way. Some mentees need more time and practice to process and then implement feedback because they have had experiences with controlling, condemning, or ineffective feedback. *Informational feedback* can be used with the intention to develop rather than correct, and it provides resources for success rather than highlighting skill deficits that should be "turned around." *Providing informational feedback* develops competence, efficacy, resilience, and a growth mindset ("not yet" thinking), which leads to self-determined behavior changes.

For example, if a mentee writes their draft manuscript for publication, and when reviewing it, the mentor notices several organizational issues. The mentor identifies what is and is not working with the manuscript organization (where the draft flows and where it gets off track, where the voice is consistent, and where it changes). Rather than focus on what is not working, the ASI mentor leverages what is working to illustrate where the draft falls short.

This feedback can be worded as "The first two sections flow well because they are organized

chronologically, and a reader can easily identify change in the historical significance over time. I suggest you write the third and fourth sections chronologically too, so that they flow just as smoothly." This suggests a skill-building strategy, is instructive, and is stated in an affirming way. There is room for the self-directed mentee to ask clarifying questions, brainstorm some suggested revisions, or try a brief revision to determine whether they are getting the hoped-for result.

Useful feedback is actionable and acknowledges effort while promoting progress and success. However, *informational feedback* goes further—it is delivered with intention to promote the mentee's understanding and competence while practicing new skills. Mentors want their self-directed mentees to have a clear idea of what to do next, to know what tools and resources they can apply, and to set feasible goals for themselves. The bottom line here is that a self-directed mentee will *want* to use volition and initiative to follow their mentor's suggestions to develop new skills or apply new tools and strategies.

This section has described mentoring programs that, when delivered via ASI strategies, promote the development of self-directed mentees who are ready, willing, and able to apply intrinsic motivation, determination, and regulation to engage in mentoring program activities to meet their goals. There is an exciting opportunity to improve mentoring as a field by increasing the quality of mentoring programs and mentor-mentee relationships that lead to improved mentee outcomes. Additionally, there is a gap in the ASI literature for describing how ASI contributes to the use and benefits of mentoring success so that program directors and mentors can begin to form schema for using ASI to promote relationships with their mentees in ways that develop self-directedness and engagement for mentee success.

As an additional take-away, I used ASI strategies to write this chapter in order to promote reader engagement with this information, and to encourage readers to use intrinsic motivation to develop mentoring programs that incorporate ASI. For example, clear and informative phrasing conveys how mentoring program directors can apply ASI to create a mentoring program that develops self-directed mentees. Also, I phrased information positively, and used details to offer my rationale for using ASI to promote mentor-mentee developmental relationships. Writing the chapter in this way "walks the ASI talk and talks the ASI walk" for readers to model ASI in action. Just as this content is meant to encourage and expect your self-directedness as a reader, ASI mentoring program expectations include intentional development of self-directed mentees by embedding specific learning activities into the mentoring program.

Program Expectations Aligned to Self-Directed Learning Activities

Mentoring program directors can use ASI themselves to ensure the mentors know and apply ASI in mentoring relationships. Program directors can intentionally design the program and promote the same expectations of their mentors that mentors are expected to have for their mentees. In this way, the program structure invites both mentors and mentees to be self-directed.

This section outlines a series of mentoring program expectations and describes how each can be presented as self-directed opportunities, followed by suggestions for relevant learning activities that the mentor can facilitate using ASI strategies. Structurally, the mentoring program needs to match its

audience's context. For example, a faculty-mentoring program may have a late-summer orientation, fall semester and spring semester activities, and a closing evening scheduled near commencement. In contrast, a staff or administrator mentoring program does not need to be tied to the academic calendar. In general, an ASI-based mentor program has three phases: program development, mentor development, and mentor-mentee orientation, followed by a series of mentor-mentee program activities. The program-development phase is used to consider the program's needs and purpose, determine the desired mentor and mentee outcomes, and explore ways to select and train mentors in ASI and orient mentees to the program. Then the program is developed and marketed, and all program materials are created and produced.

During the mentor development phase, the mentors are selected, trained in ASI and relational mentoring strategies, and given structured opportunities to practice and then reflect on their role and use of ASI as mentors. Then, mentors who continue in the program are oriented to program expectations, procedures, and relevant aspects of the specific mentoring program. If several mentoring programs are being developed, the development and mentor training phases can be conducted as a whole; then, mentors can separate into departments or cohorts based on their specific areas of mentoring.

The mentor-mentee orientation and program activities are grounded in ASI to develop self-directed participants. As described earlier, mentors experience ASI in their training and program development phases so they have direct experience from which to apply ASI as a mentor. The orientation typically starts with a welcome and introductions that include personal and professional information and apply the ASI strategies that promote belonging. The program purpose and expectations are clearly presented, and time is provided for mentees to ask questions for clarification and understanding, which activate mentee initiative and help-seeking.

Program materials and activities are first overviewed and then discussed in smaller groups to facilitate relationship-building, efficacy, and competence with the program content and resources. Facilitating interactive activities during the orientation models and validates the benefits of relationship-building between the mentees as a cohort, and between mentor-mentee pairs. Mentees appreciate knowing who their mentor is toward the end of the orientation, after they have had opportunities to interact with mentors as a group. Regardless of how mentor-mentee pairs are matched, providing some time during the orientation for each mentor-mentee pair to get acquainted is important. This can be semistructured or a free-flowing conversation. The orientation ends in an upbeat, positive way and with a sense of optimism and excitement for the program and mentor and mentee growth.

The program sequence of mentor-mentee activities advances the mentor-mentee relationship over time and promotes the mentee's progress toward their goals. Mentors are expected to help develop this sequence because they are content experts and have insights and experiences for best practices. One size does not fit all, so mentors must use an emergent curriculum (Jones & Nimmo, 1994) approach during program activities in response to fluctuations in their mentee's engagement, learning pace, and success. Emergent curriculum is described as learning activities that are modified and shaped to meet learner needs in ways that integrate learner interests into the learning environment.

Mentor curricular decisions are responsive and tailored to their mentee's learning style and individual needs. In combination with ASI, emergent curricular approaches give mentors two powerful tools to ensure mentee engagement and success. During mentoring activities, mentors use ASI to explore how their mentee's past experiences impact their current role and learning. Mentors view the mentee as a self-directed and autonomous learner and respond in ways that assume competence and engagement. Each mentee enters the program with their own funds of knowledge, which requires an individualized mentee curricula. The mentee makes progress based on the mentor's observations and suggestions as well as the mentee's dispositions for learning and overall engagement.

When the mentee appears to want reassurance or specific direction, this may indicate they have lower experience, efficacy, and/or confidence than anticipated and may need more structure and guidance. The mentor intentionally applies ASI strategies to be responsive and supportive. They share their own experiences and learning as one approach to provide options and choices for the mentee. Mentors may invite the mentee to talk about past learning and goal attainment from other settings. Mentors may suggest the mentee talk with other people or coworkers as resources for ideas and strategies to meet their goals. These responses are examples of three ASI strategies: *Providing strong guidance*, *providing informational feedback*, and *nurturing inner motivational resources*.

Sometimes mentees demonstrate resistance, which indicates they may not have confidence in themselves or goal attainment. The mentor may consult with the program director first to broaden their perspective before meeting with the mentee to understand the mentee's context and perspectives. The mentor uses active listening techniques and applies the ASI strategies of *accepting negative affect* by concurring with the mentee's perspective and *nurturing inner motivational resources* by asking clarifying questions for deeper understanding that shows interest in the mentee's past experiences and how those experiences inform their perspective.

After mentoring program directors have determined their program expectations and mentee self-directed learning activities, the program director aligns these expectations and activities to the mentoring program structure. As mentioned earlier in this chapter, autonomy is thwarted in controlling situations because choices are not encouraged or relationships are more transactional. Likewise, the program procedures, policies, and practices need to be developed so that they promote self-directedness. The next section provides a mentoring program blueprint for developing mentee self-directedness within the mentoring program structure.

Promote Self-Directedness With ASI Mentoring Program Structures

The mentor can use reflective practice (Kolb, 1984) or critical reflection (Fook, 2015) to explore the mentee's context and needs, discuss possible approaches, and collaboratively determine next steps. The mentor may have an opportunity to *provide informational feedback* when the mentee seems ready to accept the mentor's suggestions and perspective, which may differ from the mentee's.

This subsection describes how the mentoring program structure promotes self-directed mentees knowing that transactional conversations thwart motivation and self-regulation, while autonomy-supportive conversations activate intrinsic motivation, self-regulation, and self-determination—all of which promote self-directedness. ASI strategies promote engagement at higher motivational levels,

which activates the mentee's interest and competence in becoming self-directed. The six ASI strategies and their operationalized behaviors (see Table 11.1) are intentionally employed to set a mentee's stage for their engagement, relationship, and self-motivated learning when the program structure is grounded in ASI strategies.

Additionally, mentors take an emergent approach to developing curricula for their mentees and building trust and respect through intentional relational exchanges. Mentors show interest in their mentee, mentors develop the competence of their mentee, and mentors promote their mentee's goal attainment. When developing the program training, orientation, and materials, ASI strategies are used during facilitation, mentor training, and mentor-mentee interactions. Program managers and mentors need to be well-prepared to use ASI so that mentees can successfully be self-directed to meet their goals and succeed.

To determine how well your program structure promotes self-directedness and to engage in ongoing program improvement, assessment strategies must be developed during the program-development phase. The process for designing assessment, as well as the types of and specific assessment items, and the assessment cycle can be grounded in self-determination theory and ASI. In the next subsection, I explain the value of aligning program assessment strategies with ASI. Grounding program assessment in ASI's principles of autonomy, belonging, and competence ensures that the mentoring program's expectations and practices uphold an autonomy-supportive culture overall.

Using ASI to Develop Mentor Program Assessment Strategies

Program assessment strategies that use various tools and measures to collect different data types can be validated to ensure reliability within an authentic assessment protocol. The assessment strategy was developed and administered using ASI strategies, which increased participants' sense of congruence across mentoring program activities that were inclusive and relational. Authentic assessment results described individual success, mentor-mentee pair success, cohort success, and overall program success to inform continuous improvement.

Program assessment included quantitative and qualitative measures collected from individuals and a focus group each semester. Quantitative measures included Likert scale items for mentors and mentees on student evaluation forms that rated mentor effectiveness, mentee engagement, and mentee self-directedness, as well as overall instructional satisfaction. Qualitative measures were ASI observations made by the program director and mentors, open-ended items for individual and group perspectives and examples of ASI that were collected from program directors and mentors, mentor evaluations of mentee success, and mentee evaluations of mentor and program success. Items collected in focus groups assessed mentor and mentee perspectives, testimonials, and suggestions for improvement.

These data were analyzed to describe program effectiveness, identify mentors', mentees', and students' satisfaction and success, and to identify relational elements of mentoring, levels of engagement and self-directedness, and suggestions for improvement. These data were analyzed across subgroups of mentors compared to mentees, in mentor-mentee pairs compared to past pairs, and by program cohorts compared over time. Results informed program improvement in structure, training, and materials. The purpose of the quantitative items was to collect role-specific program ratings

and the purpose of the qualitative items was to collect spontaneous perspectives and suggestions for improvement. Table 11.2 provides suggestions for program assessment items to measure in both categories.

Table 11.2

Suggested Quantitative and Qualitative Assessment Measures

Suggested quantitative measures	Suggested qualitative measures
- Training effectiveness - Orientation effectiveness - Usefulness of materials - Helpfulness of program staff - Mentoring program communications - Interest in program - Level of responsiveness - Level of preparation - Timeliness of responses - Usefulness of goal-setting resources - Effectiveness of program activities - Interest in program activities	- Goal-setting conversations, supports, suggestions, progress - Resources, materials, suggestions for professional growth and personal growth - Mentor-mentee relationship norms (regularity of meetings, follow-through, feedback, communication style fit, addressing differences/conflicts, confidentiality, trust/ respect) - Mentor-mentee relationship outcomes (appreciation, opportunities, shared meaning, shared funds of knowledge) - Levels of interest, engagement, self-directedness, motivation, self-regulation, efficacy

Focus groups invite the cohort of mentors and mentees to meet with the program director at the mid-point and end of the program to share program experiences and suggestions. Mentors and mentees were asked to describe how they used ASI and about the impact of ASI strategies on mentee motivation, engagement, and directedness. Mentees heard other mentees' impressions about participating in the program. Mentors heard how other mentee-mentor pairs experienced being in a mentoring relationship.

Focus groups facilitated using ASI strategies elicit honest and candid conversations through the strategies of *accepting negative affect* and *nurturing inner motivational resources* because each of these strategies builds relationships, trust, and respect. Mentors and mentees can also engage in reflective conversations about the impact of ASI strategies across mentor-mentee pairs. There are multiple ways to implement ASI, and each mentee has differing needs, so these were often lively conversations yielding insights into ASI's contribution to program success.

Focus group data informs what needs were and were not met for mentors and mentees and helps the program director understand mentor competence with ASI and mentee efficacy for goal attainment. Focus group data combined with individual qualitative and quantitative results can be analyzed for themes, trends, and program improvement suggestions. Results are used to identify and describe evidence of program effectiveness and inform upcoming training and related materials. For grant-funded mentoring programs, a comprehensive and integrated assessment protocol provides evidence and levels of mentee success, supports claims of program effectiveness, and verifies of continued improvement over time.

Findings and Recommendations

In this fourth and closing section, I present findings generalized from my 8 years of facilitating ASI-based mentoring program. Overall, when ASI was used over time and became a valuable element in the mentoring program structure and culture, there were benefits to mentors and mentees. Following these findings are a set of recommendations to consider for your own program's success. These findings and recommendations are designed to inspire you and get you thinking about learning how to develop and implement an ASI-based mentoring program.

Generalized Findings

Mentors indicated that their mentees became more self-directed over time, based on how and when they engaged and took the initiative to meet their goals. Mentees reported that they experienced and understood how and why the mentoring relationship with embedded ASI strategies promoted their engagement and self-directedness. Mentees also said they wanted to learn about and apply ASI strategies in their teaching and professional interactions.

A major theme across several mentor program cohorts was that being involved in an ASI-based mentoring program was an integrated experience of personal and professional significance. Mentees' intrinsic motivation was activated more frequently, and they took increasing levels of initiative for their learning and goal attainment. They stepped up to the plate and became more ready, willing, and able to exceed program expectations, and thus made more progress and had more success.

Recommendations

The value of using ASI as a foundation for mentoring within a mentoring program to model and promote autonomous self-directed mentees relies on the mentors being self-directed and on program structures that model and promote self-directedness. Future research on mentoring programs that are not successful or cannot be sustained could assess mentor-mentee engagement levels, implement ASI strategies for 2 years, and then remeasure engagement levels.

Suppose mentors and mentees are struggling to engage. In that case, I recommend assessing the levels of controlling behavior versus autonomy supportiveness within the mentoring program structure and the mentor-mentee relationships. Next, I recommend incorporating ASI to revitalize the program structure by training program directors and mentors and then helping them develop their new program with clear outcomes, expectations, structures, and supports.

Looking at current research on the environments in which ASI is applied, it seems that no college faculty mentoring programs are represented. This may be because no one else is using ASI in higher education mentoring or because mentoring programs embedded with ASI are happening but information about them is not being published. Given the ASI literature's focus on K–12 education, management, sports, and health care, I recommend that many more ASI-based mentoring programs be developed, enjoyed, assessed, then described in the ASI and the mentoring literature.

After all, a well-structured mentoring program that integrates ASI as a method and an expected outcome can transparently "walk its talk and talk its walk" while promoting mentees' self-directedness and opportunities to use volition and agency to sustain their engagement and self-regulation. Mentees learn more effectively through intrinsically motivated participation because their needs for belonging, autonomy, and competence are satisfied. Mentees used self-directedness and self-determination to engage fully and deeply across the program's activities and, ultimately, meet their goals for advancement and growth.

Overall, I suggest that mentors and program directors observe, assess, confirm, and track mentee demonstrations of motivation and regulation levels across program activities. I suggest that program directors intentionally create opportunities to assess a person's motivation level for a task early in the program. Over time, opportunities for mentees to develop and demonstrate self-directedness should be promoted through written, spoken, and interactive communication. When a mentee is more self-directed, they are more intrinsically motivated, prepared to engage, and more likely to succeed. Mentors can then intentionally promote their mentee's self-directedness, creating a mentoring relationship with a personalized context for mentee learning and development.

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A NEW VISION FOR PROMOTING EQUITY AND INCLUSION IN ACADEMIC MENTORING PROGRAMS

Assata Zerai and Nancy López

Abstract

What are the pitfalls of conventional student, faculty, and staff mentoring programs? Despite good intentions, how might they negatively impact Black, Indigenous, and People of Color (BIPOC), as well as other marginalized faculty who are women, LGBTQIA+, Persons with Disabilities (PWD), or first-generation college students (e.g., grew up in household where no parent/legal guardian earned a four-year college degree in the United States or abroad)? How could employing an intersectional framework—attention to the simultaneity of systems of oppression and resistance—as inquiry and praxis transform student, faculty, and staff mentoring programs? This chapter examines the challenges and possibilities for advancing equity and inclusion that considers simultaneous and complex social identities and statuses of faculty, students and staff (and complex identities such as BIPOC, women, first-generation college status, *and/or* PWD), as relevant to structuring successful mentoring programs.

In this chapter, we (a) explain the vital necessity of mentoring to advance inclusive excellence, (b) discuss mentors' role in designing strategies for creating more inclusive educational and scholarly environments, and (c) review impediments to successful mentoring practices that have deleterious effects on students, faculty, and staff who are BIPOC, women, PWD, LGBTQIA+, and first-generation college status. This review shines a light on a number of common missteps in mentoring relationships, including senior staff and faculty members' fixed mindsets and one-dimensional approaches toward students, staff, and junior faculty from marginalized groups; deficit perspectives

about junior faculty members' intellectual contributions; color-, gender-, disability-, class-, and other power-evasive perspectives on the part of senior faculty and their resultant lack of intervention when students, staff, and junior faculty are targets of microaggressions and bullying; insensitive and triggering comments by senior faculty (even as content in conventional mentoring trainings); and lack of critical reflexivity amongst faculty who have been assigned to serve as mentors to BIPOC, PWD, LGBTQIA+, first-generation college status, students, staff, and other faculty.

Based on this review, we recommend several promising practices for mentoring BIPOC, PWD, LGBTQIA+, first-generation college status, and other minoritized students, staff, and faculty at all ranks, including but not limited to the importance of critical reflexivity and centering the assets of mentees so that senior faculty can become better mentors to students (both undergraduate and graduate), staff, and other faculty.

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Introduction

As colleges and universities in the United States become increasingly diverse, it is critically important to develop faculty from backgrounds traditionally underrepresented in higher education. Many faculty of privileged race, gender, and class status desire to learn more about mentoring early- career faculty, staff, and students who are from underrepresented and marginalized backgrounds. This chapter examines the pitfalls of traditional faculty, staff, and student mentoring approaches that have cumulative and consequential deleterious effects on Black, Indigenous, and people of color (BIPOC, to include Asian/Asian American and Pacific Islander [AAPI], Latinx, and multiracial individuals) and underrepresented racial minorities (URM—Black, Indigenous, and Latinx) faculty in particular, as well as for women, LGBTQIA+ folks, persons with disabilities (PWD), or those who were in the first generation of their families to complete baccalaureate degrees.

What is your mentoring story? Think back to when you were an undergraduate or graduate student. Professor Kimberlè Crenshaw, the African American legal scholar who coined the term intersectionality, shared a story about mentoring as a part of her presentation at the annual meeting of the American Sociological Association in 2016 that resonated with us. When she was a first-year student in law school, she went to talk to one of her professors, a white man, during office hours, and he immediately assumed that she was struggling in class. Rather than ignore his comments, she replied: "I know Bobby and Suzy, white law students, come to your office frequently; have you ever asked them if they are struggling in class?"

Professor Nancy López, a Black Latina, US-born daughter of Dominican immigrant parents who never had the opportunity to pursue formal schooling beyond the second grade and were rich in cultural wealth, remembers meeting one of her graduate instructors to talk about her research interest in race and education with the goal of producing policy-relevant research on Black Latinx communities; her advisor, a white man, responded with disdain, "You came to graduate school so you can help your community?" Indeed, throughout her career, Dr. López received messages that research, teaching, and community engagement about race, intersectionality, and social justice were problematic (López, 2019; Muhammad & López, 2023).

We tell these stories to call attention to the vital necessity of effective mentoring for the future of academia. We ask: How could the lack of critical reflexivity about power, difference, implicit bias, and justice impede effective mentoring of underrepresented students, faculty, and staff, including BIPOC, LGBTQIA+, PWD, first-generation college students, and others in the global majority? How do we arrive at a shared understanding of the definitions and praxis related to equity and racial and social justice, and what is their relevance to effective mentoring in academia? How could critical self-reflexivity about our own race, gender, class origin, and other systems of oppression improve mentoring for underrepresented students, faculty, and staff?

In this chapter, we share a few best practices for mentoring faculty, staff, and students from minoritized groups (with an emphasis on BIPOC, women, queer and trans individuals, PWD, and first-generation college students) to ultimately help our universities and academic disciplines benefit from the strategic advantage of justice, equity, accessibility, diversity, and inclusion (JEADI). We are particularly attentive to the value added by intersectionality to interrogations of systemic racism,

specifically the dynamics of individual and institutional gendered racism in the form of anti-Blackness and their impact on the distribution of resources (Collins, 2009; Crenshaw, 1991; Dancy et al., 2018; Zambrana, 2018; Vargas & Jung, 2021).

We argue that successful mentoring is vital for making students, staff, and faculty feel that they belong, are respected, bring value, and are encouraged to thrive (Zambrana, 2018. In the pages that follow, we discuss (a) the vital necessity of mentoring to advance inclusive excellence; (b) mentors' role in designing strategies for creating more inclusive educational and scholarly environments; (c) impediments to successfully mentoring BIPOC, PWD, and LGBTQIA+ students and faculty; (d) common missteps in mentoring relationships; (c) cumulative disadvantage and what it means for junior faculty who overcome numerous challenges; (f) encouraging potential mentors to do the work to prepare to advise, support, and advocate for BIPOC, PWD, and LGBTQIA+ students and faculty; (g) understanding best practices for mentoring within the context of higher education; and (h) lessons learned.

The Vital Necessity of Mentoring to Advance Inclusive Excellence

Building on the work of Franz Fanon (1963) and Lewis Gordon (2006), Reiland Rabaka (2010) has explained that our academic disciplines suffer critical decay due to a lack of intellectual diversity. This lack of diversity emanates from "institutional racism, academic colonization, and conceptual quarantining of knowledge, anti-imperial thought, and/or radical political praxis produced and presented by . . . 'especially Black' intellectual-activists" (Rabaka, 2010, p. 16). US and global Black scholarship is undercited across academic fields (Zerai et al., 2016). We quote Rabaka here, who notes that the intellectual works of Black scholars often do not appear in disciplinary canons. Instead of integrating the works of W. E. B. Du Bois into mainstream sociology, for example, if Du Bois is taught at all, his work often falls under the topic of "Black sociology." Sometimes the ideas and creative works of Black scholars and artists are appropriated either on purpose or because of a lack of awareness on the part of white scholars whose work replicates ideas previously published by Black scholars without citing those scholars (Greene, 2008). At other times racism directly contributes to the muting of Black innovation (Rothwell et al., 2020). We add *especially* Black *women* intellectual-activists and others who occupy various intersectional identities and characteristics, as we explain below (Zerai, 2016, 2019).

Given these omissions and the deleterious impact on knowledge production, JEADI initiatives and perspectives are needed to benefit our educational and scholarly missions in higher education. This has not only been theorized, it has also been documented. From the work of social scientists, behavioral scientists, decision-makers, and organizational researchers, we know that diverse groups are more productive, creative, and innovative (Herring, 2009). Research has shown that diverse groups generate higher-quality ideas (McLeod et al., 1996; Loyd et al., 2013; de Vaan et al., 2015). And the level of critical analysis of decisions and alternatives is higher in groups exposed to minority viewpoints (Sommers, 2006; Loyd et al., 2013; van Dijk et al., 2017). It is thus vitally important for our campus representation to reflect the diversity of the world, United States, and communities where we live and work.

Diversity and inclusion foster innovation (Bell et al., 2011; Hofstra et al., 2020), and diversity and inclusion are synergistic.

Decision-making improves when teams embrace different points of view; independence of thought; and the sharing of specialized knowledge. . . . Diverse groups also do better on sophisticated problem-solving tasks than homogeneous groups because accommodating different experiences breaks down the risk of groupthink. . . . Groups that make the time to openly discuss conflict and that want to learn from all perspectives can reap the greatest benefits of diversity through the development of an inclusive culture. (McConahey & Vernon, 2014)

Educational institutions suffer turnover, missed opportunities, low morale, and loss of contributions when white, established faculty in positions of power and mentors overlook and underutilize the full potential of BIPOC, PWD, LGBTQIA+, students, staff, and faculty members and marginalize them. "At their best, diversity and inclusion efforts work together to cultivate an empathetic understanding in leaders and colleagues that allows them to value each other as individuals and as a whole people" (McConahey & Vernon, 2014).

Diversity without actually including the ideas and centering the realities of all colleagues and students is tokenism. We love it when our colleague, Dr. Kirsten Buick—chair, Africana Studies, professor at the College of Fine Arts at The University of New Mexico—says, "Diversity means we will be changed." It is not enough to recruit talented faculty and students and make them just like you. Second, in order to operationalize the idea of *being changed*, it is imperative that established white middle-class continuing-generation college senior faculty members who occupy positions of power and privilege work with their colleagues to create an inclusive departmental, college, and university culture. This can mean different things in different settings. For example, it may (a) mean expanding the curriculum and enlarging the previously accepted contours of an academic discipline; (b) it can include cultural sharing, or accommodating employees who are caregivers; and (c) it can include changing the university and disciplinary missions in ways that embrace the community cultural wealth of groups that have been previously marginalized and it could even mean developing intersectional equity metrics (Yosso, 2005) and establishing accountability that corresponds to these metrics. Next, we discuss ways mentors can create more inclusive educational and scholarly environments.

Mentors' Role in Designing Strategies for Creating More Inclusive Educational and Scholarly Environments

As systems-thinkers, professionals addressing JEADI design strategies for creating more inclusive educational and scholarly environments. It is important to be explicit at the outset about the community that we want to strengthen. The National Association of Diversity Officers in Higher Education (NADOHE) offers a three-dimensional model of higher education diversity (Worthington, 2012). We expand that definition in Figure 12.1. Constituency groups' social identities and characteristics reflect the intersectionality of many social statuses and positions in systems of oppression and resistance, including race, ethnicity, class origin, parental educational attainment (including first-generation/continuing-generation college status), current socioeconomic status, gender, national and geographic origin, immigration status, sexual orientation and gender identity and expression (SOGIE), foster care experience, unsheltered/homeless status, disability status, religion, nativity, language use, tribal enrollment status, citizenship, veteran and military affiliation, DACA (deferred action for childhood arrivals) and undocumented individuals, rural areas and counties underrepresented in higher education within the states in which our universities are located, criminal

conviction history, and political ideology.

Figure 12.1

Three Dimensional Model of Higher Education Diversity

Status/Identity:
Race, Ethnicity, Gender,
Sexual Orientation Gender Identity and Expression
(SOGIE), Age, Disability Status, Deaf Culture,
Religion, Class, Tribal Nations & Territories.
National & Geographic Origin, Language Use,
Socioeconomic Status, First Generation College,
Veteran/Military, DACA/ Undocumented, NM
Underrepresented Counties, Criminal Conviction
History, Partisan Affiliation

Focal Groups:
Students: Graduate,
Undergraduate (current &
prospective)
Faculty: Continuing, Research
& Contingent, Grad Instructors
Staff
Administrators
Trustees
Alumni
Local/Global Communities
Others

Core Areas:
Recruitment & Retention
Campus Climate
Curriculum & Instruction
Research & Inquiry
Intergroup Relations & Discourse
Student/Faculty/Staff Achievement,
Success & Leadership Development
Nondiscrimination & Conflict
Management
Procurement/Supplier Diversity
Institutional Advancement
External Relations, Strategic
Planning & Accountability

Note. Adapted from three-dimensional model of higher education diversity. Adapted from "Advancing Scholarship for the Diversity Imperative in Higher Education: An Editorial," by R. L. Worthington, 2012, *Journal of Diversity in Higher Education*, 5, p. 2. Copyright 2012 by the National Association of Diversity Officers in Higher Education.

Recent calls for proposals from the National Science Foundation (NSF) bring attention to the critical importance of addressing intersectionality to promote institutional change (NSF, 2020).

For example, the NSF's *Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers* (ADVANCE) program requirements indicate, "All NSF ADVANCE proposals are expected to use intersectional approaches in the design of systemic change strategies in recognition that gender, race, and ethnicity do not exist in isolation from each other and from other categories of social identity" (NSF, 2020). Intersectionality or attention to the co-constitution of race, gender, class, and other axes of inequality *as both analytically distinct and simultaneous* systems of oppression/ resistance in a given sociohistorical context is a powerful tool for making inequities visible and helping institutions of higher education create effective actions for advancing undergraduate student success

(Collins & Bilge, 2016). Intersectionality is a way of understanding the world that makes visible "where power comes and collides, where it interlocks and intersects. It's not simply that there's a race problem here, a gender problem here, and a class or LBGTQ problem there" (Crenshaw, 2017). Intersectionality provides tools to analyze the multiplicative and simultaneous operation of historic configurations of intersecting systems of oppression and their accompanying domains of power, privilege, and oppression at the structural, institutional, disciplinary, interpersonal, and hegemonic cultural levels (Collins, 2009). A few examples illustrate the relevance of intersectional perspectives to effective mentoring. To employ intersectionality, for example, the types of questions to consider include:

- Though a high percentage of *women* are gaining entry into jobs in the university, are *women of color* gaining the same types of promotional opportunities as white men—and are there salary discrepancies when they do? How can mentors operate as champions to promote greater levels of equity and justice to address these salary discrepancies where they exist?

- How are challenges of successful promotion and tenure amplified for women who also have a disability? What are ways that we can design mentoring efforts to support individuals who are *both* women and PWD? What does this mean for traditional tenure clocks?

- How about addressing the physical infrastructure and resources for our undergraduate students? Are these designed with women students *who are also working mothers or single mothers* in mind? How can mentors help their students to address such systemic barriers?

- What about class origin? How are the mentoring experiences of BIPOC *first-generation* college students different from BIPOC continuing-generation college students? As mentors, how can we learn to provide effective resources to promote the well-being and academic success of our first-generation college students?

We need to make sure that we are asking these kinds of questions, setting policy and practice, and planning for long-term solutions in ways that will facilitate responding to the unexpected. As noted by the NADOHE, these social characteristics can be found in various focal groups (as indicated by circle 2 in Figure 12.1). In fact, it is our goal to diversify the social identities represented in those focal groups and to promote their inclusion in core areas (as shown in circle 3 of Figure 12.1). An example relevant to first-generation college students and those who are immigrants is designing recruitment activities in multiple languages and focusing on families and communities—not just the individual.

Our goal is to create and foster campus climates that are welcoming and that promote cultural humility (among all faculty, staff, and students). Further, we wish to deliver a curriculum that teaches us about ourselves as well as to appreciate the culture of others, and include instruction that is culturally responsive. Inclusion extends to procurement practices that encourage the use of minority- and women-owned businesses. We want to encompass foundation work and advancement in culturally sustaining ways, as well as to promote engagement of alumni from diverse backgrounds. Finally, accountability must include intersectional metrics to assess JEADI performance goals. For example, institutions of higher education generally define equity using one-dimensional metrics, such as race, gender, first-generation college status, disability, or LGBTQIA+ status alone; yet intersectional metrics that consider the simultaneity of race-gender-first generation college status, disability, LGBTQIA+ as simultaneous social statuses in a given sociohistorical context is necessary for advancing equity (López et al., 2018).

Equity is the goal. We know that we have arrived at an equitable state when social identity and characteristics do not determine access, opportunity, and outcomes—and when there is total inclusion in all core areas noted in Figure 12.1 (Worthington, 2012).

Recruiting talented women, PWD, people of color, undocumented citizens (Vargas, 2018)[1], LGBTQIA+, international, or first-generation college students and faculty, inclusive of all other communities noted in Figure 12.1 (hereafter referred to as "BIPOC, PWD, LGBTQIA+") may require rethinking traditional admissions, assessment, hiring, and mentoring strategies, and research shows it is worth the effort (Herring, 2009; McConahey & Vernon, 2014; Williams, 2000; Springer, 2004a, 2004b; AAUP, 2000). In fact, it is not about just going out and recruiting individuals from minoritized groups. As senior faculty and staff who are often responsible for making these admissions and hiring decisions, it is important that we do the preparatory work so that we will be able to see the promise of potential recruits; handle recruitment processes in diversity-aware ways that are balanced with cultural humility; and finally, after admitting students or hiring faculty from one or more minoritized groups, are prepared to mentor our new students and colleagues in ways so that we do not reproduce academic woundedness (as defined by McIver, 2021; Neal-Barnett, 2003). In fact, the goal is to mentor students and colleagues and provide necessary resources and support so that they flourish in their academic and scholarly pursuits.

We will therefore review some impediments to successful mentoring before moving on to the discussion of best practices in mentoring that keeps JEADI at the forefront.

Impediments to Successfully Mentoring BIPOC, PWD, and LGBTQIA+ Students and Faculty

One impediment to inclusion today is implicit bias (Jackson et al., 2014). Faculty members are encouraged to unveil their own implicit biases that we may bring to our daily tasks, decision-making, collective work, and mentoring and evaluation of peers and students that might form barriers to a welcoming climate. According to researchers who have produced the Harvard Implicit Associations tests (https://implicit.harvard.edu/implicit/takeatest.html), several implicit associations affect our mental processing. Some implicit associations include automatic preference for thin people relative to overweight people; automatic preference for heterosexual relative to LGBTQIA+ people; assumptions that images held by Black individuals are weapons, relative to assumptions that images held by white individuals are harmless; automatic preference for light skin relative to dark skin; the automatic relative link between family and females and between career and males; and many more (see Appendix 1 for a list).

While the Harvard Implicit Associations tests are an excellent start for this journey, once mentors have a sense of their implicit associations, they are in a better position to challenge them and to employ proven strategies to diminish their impact. There are a number of evidence-based behavioral strategies (Carnes et al., 2015). Here are four:

- Identify and intentionally replace stereotypes with accurate information;
- determine hiring criteria before assessing candidates;
- take your time to focus on specific information about a colleague to prevent group stereotypes from leading to potentially inaccurate assumptions; and

- use positive counter-stereotypic imaging by creating and taking advantage of opportunities for contact with counter stereotypic exemplars (e.g., meet with a senior Latina botanist to discuss her future plans and learn more about her route to success).

Finally, we can expand our repertoires (e.g., by reading the work or listening to podcasts from BIPOC, women, LGBTQIA+, and PWD colleagues within your discipline) so we can absorb novel concepts and tools and begin to understand lived experiences, both of which will enable the growth of cultural humility, which has been shown to enhance commitment to equity and be the first step to creating inclusive work environments (DallaPiazza et al., 2018).

Research shows that when we do not take the time to learn about our biases and attenuate their effects, this can have consequences within our individual spheres of influence, as well as systemically. The impact of implicit and explicit bias shows up with regards to the effectiveness of our letters of recommendation (Madera et al., 2018), assessments of students' academic performance (Boysen & Vogel, 2009), fewer citations of women's and BIPOC scholarship (Dion et al., 2018; Chakravartty et al., 2018), appraisal of faculty members' scholarship for promotion and tenure (Deo, 2018; Fang et al., 2000; Lisnic et al., 2019; Matthew, 2016; Moody, 2010), or choices of finalists among job applicants (Moss-Racusin et al., 2012; Player et al., 2019). Recognition of our own implicit biases is just a start. Bias is not just an individual phenomenon. It is also structural and is visible as discrimination. The next impediment to recruiting and mentoring talented students and faculty is the lack of recognition of the possible cumulative professional disadvantages that may result from implicit bias and other systemic barriers (as noted by Reade [2015]; see Appendix 2). Awareness of these roadblocks can help us begin to remove these barriers to finding prospective students and faculty whose unique perspectives could potentially transform our departments, disciplines, and even academia itself. Below, we enumerate the following three potential sources of implicit bias: (a) letters of recommendation, (b) gender stereotypes, and (c) jobs and promotions for BIPOC scientists.

Letters of Recommendation

Rice University has shown that letters of recommendation for BIPOC and non-BIPOC women applying for graduate programs and positions have more doubt raisers and are more likely to refer to them as students (even when the applicant is applying for a faculty position), and are more likely to mention their family responsibilities (see https://www.sciencedaily.com/releases/2018/06/180607133639.htm). Senior faculty may therefore wish to revisit letters of recommendation written on behalf of their mentees, and hiring and evaluation committees may want to take these facts into account when evaluating prospective women students and faculty or considering faculty for promotions.

Gender Stereotypes

Research shows that hiring officials are affected by pervasive gender stereotypes, unintentionally downgrading the competence, salary, and mentoring of a female applicant compared with an identical male applicant. In STEM, a study with a broad, nationwide sample of biology, chemistry, and physics hiring committees evaluated application materials of scientists for a laboratory manager position

(Moss-Racusin et al., 2012). *The application materials were exactly the same.* The only difference in

the two applications reviewed was the gender of the applicant. Hiring officials rated the applicant's competence, amount of mentoring they would offer, and likeability.

Both female and male search committee members judged male applicants to be more competent, more hirable, and more capable of receiving mentoring than female applicants. Mirroring other research, ratings of likeability were higher for the females relative to males; these patterns reflect common stereotypes that men are perceived to be more competent and women more likable. However, *liking* the female applicant more than the male applicant *did not translate into positive perceptions of her composite competence* or material outcomes in the form of a job offer, an equitable salary, or valuable career mentoring. These findings underscore the point that hiring officials were affected by pervasive gender stereotypes, unintentionally downgrading the competence, salary, and mentoring of a female student compared with an identical male student.

Jobs and Promotions for BIPOC Scholars

A study by Stanford University researchers provides evidence of the diversity-innovation paradox in academia that the research innovations women and BIPOC scientists introduce are devalued when it comes to decisions about hiring and promotion. It offers extensive evidence that women and racial minorities introduce scientific novelty at higher rates than white men across all disciplines, *but they are less likely to benefit*—either through sought-after jobs or respected research careers. The findings were published on April 14 in the *Proceedings of the National Academy of Sciences* (Hofstra et al., 2020). Now that we have reviewed impediments to successfully mentoring minoritized students, faculty, and staff we will turn to common missteps in mentoring relationships.

Common Missteps in Mentoring Relationships

Common missteps in mentoring relationships include senior faculty members' fixed mindsets (Quay, 2017) in their approaches toward students and junior faculty from various minoritized groups; deficit perspectives about students' and junior faculty members' intellectual contributions; gender-, SOGIE-, disability-, class-, and color-evasive perspectives on the part of senior faculty, and their resultant lack of intervention when students and junior faculty are targets of microaggressions and bullying; insensitive and triggering comments by senior faculty; and lack of critical reflexivity among senior faculty who have been assigned to serve as mentors to BIPOC, PWD, and LGBTQIA+ students, staff, and early-career faculty.

We explain missteps by offering a scenario that involves a junior faculty member who is a Native American woman and is assigned to a white male mentor (as developed by Culbreath et al., 2020). The mentor immediately assumes she will not be successful in their department because she, against his recommendation, is pursuing an interdisciplinary community-based research topic. At the end of her first year as an assistant professor, he indicates to the annual review committee that she "just doesn't have what it takes" to achieve tenure. He apparently assumes this despite her outstanding publication record and her recent success in obtaining substantial external funding.

In this example, the white male senior faculty member cannot effectively mentor BIPOC, PWD, and LGBTQIA+ students or junior faculty if he believes in fixed mindsets. If this senior faculty member has

effectively mentored white junior faculty in the past, even if they have simply followed in his footsteps, replicating his area of expertise within the discipline, it appears that *he does* believe in growth mindsets for white faculty. If such a senior faculty member reverts to a fixed mindset when mentoring a Native American woman who is a junior faculty member, for example, then he is displaying clear bias toward his colleague. His framing of the Native American woman assistant professor and her interdisciplinary community-based research from a deficit perspective discounts the intellectual contributions of this Native American woman.

In the case of senior faculty displaying bias, department chairs must be given the tools and presented with the expectation that they will step in and interrupt the bias, and even consider reassigning the junior faculty to a mentor who is willing to challenge their own biases. Failure to do so would be an example of color-evasive racism. "Color-evasiveness . . . acknowledges that to avoid talking about race is a way to willfully ignore the experiences of people of color," it is a "refusal to address race, and its corollary racism" (Annamma, 2017, p. 157). Color-evasive racism in mentoring relationships occurs when white faculty do not affirm the racialized experiences of students or colleagues who are people of color.

The Association of Public and Land-Grant Universities (APLU) indicates that "[academic] environments . . . can be 'motivating' or 'demotivating' in their design. We can sustain people's natural drive to learn [and become experts in their fields]—or we can undermine it" (Quay, 2017). In our theoretical example, by assigning the Native American faculty member to this so-called mentor, the department chair is creating a demotivating environment for her. This could result in a number of deleterious effects, including that she may question her fit in the department or at the university despite other early career accomplishments. This discussion is well informed by exploring the cumulative disadvantage experienced by faculty, staff, and students from minoritized groups.

Cumulative Disadvantage and What it Means for Junior Faculty who Overcome Numerous Challenges

As shown in the figure in Appendix 2 (Reade, 2015), women, BIPOC, PWD, LGBTQIA+, and first-generation college faculty often need to overcome cumulative disadvantages to get through graduate school, become recognized as worthy of being added to the pool of finalists, and become hired as tenure-system faculty (Whitaker & Grollman, 2019; Buenavista et al., 2022). For example, BIPOC faculty have to publish at a higher rate compared to white faculty to be considered worthy of being hired for the same positions or promoted at the same rate, as shown in multiple academic disciplines (Fang et al., 2000; Matthew, 2016; Deo, 2018). Researchers at Stanford University have shown BIPOC graduate students and postdocs who are applying for junior faculty positions and attempting to publish are not recognized for their novel approaches and ideas (Hofstra, et al., 2020). Minoritized faculty surmount additional hurdles to advance in their fields and prepare to submit dossiers for tenure, promotions, and beyond. BIPOC faculty, for example, face time taxes and are pressured to spend more hours in service (relative to time spent teaching and researching). Furthermore, extra time preparing for class is required for many BIPOC faculty who are not considered to be credible by their white students (Hendrix, 1998). Such time investments are especially required for BIPOC women faculty, to address and attempt to head off bias and racialized sexism from white and even sometimes BIPOC students who are more apt to challenge and behave disrespectfully toward women of color faculty

(Hendrix, 1998, 2020; Stolzenberg et al., 2019).

> Nonwhite faculty members report that to be seen as "legitimate" scholars, they must do more emotional work interacting with their colleagues around research. Almost three-quarters of Black, Asian and Latinx professors reported "feeling a need to work harder than their colleagues to be seen as legitimate scholars," compared to less than half of white professors. The work involved in supporting and mentoring students, legitimizing one's research, and navigating racial microaggressions is part of the "invisible labor" that most colleges and universities do not recognize in the tenure and promotion process. (Rucks-Ahidiana, 2019; Zamudio-Suarez, 2021)

As noted above, a number of scholarly articles document these challenges (Dion et al., 2018; Chakravartty et al., 2018; Deo, 2018; Fang et al., 2000; Lisnic et al., 2019; Matthew, 2016; Moody, 2010). The good news is that anyone who has overcome even a sampling of these obstacles brings a wealth of experience and *inclusive excellence* to one's department, university, and academic discipline. This is a tremendous gift to all students and faculty in your university, and especially students of color. Minoritized faculty have faced many of these challenges during their years as graduate students, postdocs, and junior faculty and are often prepared to mentor differently. They often understand the importance of seeing URM students and faculty colleagues from the standpoint of growth mindsets and do not assume fixed innate intelligence and ability, that either you "have it," or you do not. Junior faculty who see URM students and all students from the perspective of growth mindsets recognize that we all learn and grow and that it is important for faculty to provide students the tools they need and contribute to motivating environments in which to grow. Research has shown that students' growth mindsets flourish when we change the messages we send to them as educators (Quay, 2017). One reason that URM faculty serve as excellent mentors to URM and all students is that they are likely to offer crucial mentoring and professional development opportunities to their students. Finally, BIPOC, PWD, and LGBTQIA+ mentors and supervisors who have overcome various barriers can help mentor their students and colleagues and build a roadmap for success that avoids many pitfalls. While it is helpful for mentors to understand these cumulative disadvantages, it is equally important for mentors to enhance their skills as mentors.

Encouraging Mentors to do the Work to Prepare to Advise, Support, and Advocate for BIPOC, PWD, and LGBTQIA+ Students and Faculty

As leaders and mentors, we can actively employ strategies to attenuate the impact of bias and create more inclusive learning and scholarly environments in higher education. Two of these strategies include cultural humility and theorizing academic woundedness.

Cultural Humility

Culturally responsive teaching, also called culturally relevant teaching, is a pedagogy that recognizes the importance of including students' cultural references in all aspects of learning (Ladson- Billings, 1995). It builds on individual and cultural experiences and prior knowledge. We posit that culturally responsive mentoring recognizes the importance of including students' cultural references in all aspects of mentoring and must build on individual and cultural experiences and mentees' prior knowledge in order to strengthen our students' sense of identity, promote equity and inclusivity in

mentoring practices, and support the holistic academic success and wellness of all students, and especially for students who are BIPOC, PWD, & LGBTQIA+, and so on. Culturally relevant mentoring is just the first step.

Culturally sustaining (CS) mentoring goes a step further and (drawing from Django Paris's work on CS pedagogy) exists wherever mentors encourage students' and scholars' academic work that "sustains the lifeways of communities who have been and continue to be damaged and erased through schooling" (Paris, 2012, p. 93) and higher education. As such, CS mentoring "explicitly calls for our educational institutions to be a site for sustaining—rather than eradicating—the cultural ways of being of communities of color" (Paris, 2012, p. 93) and for mentors to serve as advocates and accomplices in this work.

Finally, once mentors become aware of and begin praxis around culturally relevant, responsive, and sustaining mentoring, the most important place of growth is for mentors to embrace cultural humility (Zerai, et al, in press). In response to the concept of "cultural competence," cultural humility is the "ability to maintain an interpersonal stance that is other-oriented (or open to the other) in relation to aspects of cultural identity that are most important to the [mentee]" (Hook et al., 2013, p. 2). As Hook et al. explain, cultural humility requires:

- lifelong commitment to self-evaluation and self-critique;
- attention to fixing power imbalances (in the classroom, within our disciplines, and in our academic departments); and
- developing partnerships with people and groups who advocate for others.

The gold standard for effective mentoring includes a demonstrated commitment to cultural humility. And critical reflexivity that considers complex inequalities (Boveda & Weinberg, 2020) promotes cultural humility. It is only with this stance that we put ourselves in true service of our students and others whom we mentor and that we approach them with mutual respect and with the recognition that the mentoring relationship is a space of reciprocity, where we enter with the expectation that we will learn from each other.

Martinez-Cola (2020) offers a number of examples of cultural humility in her description of mentors who are allies. For example, she notes that allies have the ability to recover from a disagreement. In her words:

Disagreements are part of every relationship. Collectors are devastated when confronted with their bias, implicit or otherwise. I almost hesitate to point out a Collector's problematic words or behaviors because I know they will respond as if their whole world has just collapsed. DiAngelo (2018) describes this response as "White fragility." What is worse is that they will expect me to help them feel better about themselves and affirm their imagined place in my world. An Ally, on the other hand, apologizes, uses the experience for self-reflection, and then puts in the work to self-educate. The onus for growth is on them, not me. An Ally also knows when to push back and when to support, when to question and when to validate. The most important aspect of a relationship with a mentor who is an Ally is trust. They have earned a [BIPOC student's] trust with their consistency and humility. (Martinez-Cola, 2020, p. 38)

Theorizing Academic Woundedness

Though the experiences of academic woundedness have been ubiquitous, especially for individuals who are BIPOC, PWD, and LGBTQIA +, discussions of this phenomenon are only recently entering the academic literature (Neal-Barnett, 2003, 2020; McIver, 2020, 2021; Lee, 2021). In a 2021 survey, we learned of multiple examples of woundedness resulting from experiences of racial and intersectional microaggressions (RIMAs), often perpetrated by faculty, staff, advisors, and others serving as mentors to BIPOC, PWD, and LGBTQIA+ graduate, professional, and undergraduate students. UNM Student Counseling Center director, Dr. Stephanie McIver, explains that the foundation of academic woundedness comes from the concept of psychological woundedness (2020). Drawing from the work of Ivey and Partington (2014), McIver indicates that woundedness is the residual impact of adverse experiences and psychic conflicts. Further, McIver helps us to understand that one of the negative outcomes from woundedness is rumination. Quoting Julianne Malveaux, McIver reminds us that microaggressions are "slights that grind exceedingly small." One reason such slights stick with those of us who experience microaggressions daily (Lewis et al., 2019) is that we sometimes ruminate on the intention of the individual's offensive actions or words. "Ruminating thoughts are excessive and intrusive thoughts about negative experiences and feelings. A person with a history of trauma may be unable to stop thinking about the trauma, [and,] for example, . . . may persistently think negative, self-defeating thoughts" (Villines, 2019). In our 2021 survey results, we found evidence that students who have been targets of RIMAs experienced negative impacts that are consistent with rumination. For example, the majority of BIPOC, PWD, and LGBTQIA+ students report that they lost interest in daily activities or coursework, felt a lack of energy, were less confident, had difficulty concentrating, and felt restless, subdued, or had trouble sleeping as a result of being targeted by RIMAs (Zerai et al., 2021).

Further, the primary concern of BIPOC, students with disabilities, and queer and trans students in our survey is the perceived inaction of authorities—staff, department chairs, faculty, advisors, and graduate assistants who observe RIMAs and say and do nothing. Therefore, mentors can exert a tremendous amount of power and influence on behalf of their students and colleagues when they serve as upstanders. Students rightly expect authority figures to serve as upstanders who bear witness to RIMAs and are courageous enough to interrupt them.

We offer upstander workshops in which we invite faculty to practice interrupting microaggressions. In one of our skits, we depict a Black medical student who asks for guidance from a Latina nurse who dismisses the student's concerns about a patient who used a racial slur when referring to the medical student. The mentor responds, "As women we are strong. And you will need to be a bit more thick skinned if you want to succeed in the medical profession." Our skit ends with a spotlight on an Asian American attending physician, who clearly overhears the exchange. Our faculty upstanders-in-training offer a number of ways to respond so that the student's experience is validated and her education is supported holistically. Faculty upstanders recommend that the attending physician can move from a passive bystander to an active bystander (or *upstander*), by stepping into the conversation. In this role, the attending physician has a number of options. They can offer to report the incident to the university's ethics, compliance and equal opportunity office; they can share the link for reporting disciminatory incidents with the student; they can also communicate that racial slurs are not to be tolerated by physicians, staff, *or patients* and point to hospital policies to this effect. Further, if appropriate signage indicating the requirement for respectful interactions with hospital staff is not

currently present in treatment and waiting rooms, the attending physician can contact the hospital's communications team to request that this signage be posted. Actions such as these can help to validate the experiences of BIPOC, LGBTQIA+, and PWD students, staff, and faculty and disrupt patterns of rumination and possible continued negative effects, such as academic woundedness.

Once prospective mentors learn more about implicit biases, cultural humility, and academic woundedness, they are ready to delve into best practices for mentoring individuals from minoritized groups.

Understanding Best Practices in Mentoring: Resources for Higher Education

In this section, we discuss resources from the National Center for Faculty Development and Diversity, National Research Mentoring Network, and researchers promoting intersectionally conscious collaboration in mentoring. The National Center for Faculty Development and Diversity (NCFDD) has created a mentoring map (see mentoring map, https://ncfdd-production-file-uploads.s3.amazonaws.com/media/399d28e3-a382-44b1-8bfa-4394ad6148d5-MentoringMap-Interactive.pdf). NCFDD founder Kerry Ann Rockquemore has published a mentoring series in *Inside Higher Ed* (2013) in which she explains that the old-school "guru" style of mentoring is insufficient for today's students and junior faculty. Instead, she encourages the use of a mentoring map that invites graduate students, faculty, and other academic professionals to extend their network of mentors (see Chapter 27 for more on networked mentoring). In today's ever-changing landscape, and with greater attention to work-life balanc—especially important for BIPOC and all women, individuals who are first-generation college status, PWD, LGBTQIA+ folks, and parenting students or faculty—it is unusual for one mentor to provide all of the support needed.

Furthermore, in the academic literature, there is a distinction between different types of mentors. There we see mentors can range, for example, from role models, coaches, advocates, and champions, to sponsors, and beyond. Sponsors who provide specific strategic opportunities to an individual at a particular time are crucial (see Chapter 1 of this volume; also see Martinez-Cola, 2020).

There are several resources to grow the mentoring capacity of faculty. These include the NCFDD, which provides a six-part series on effective mentoring, the National Research Mentoring Network (https://nrmnet.net/), and the Center for the Improvement of Mentored Experiences in Research. (CIMER, https://wcer.wisc.edu/About/Project/2359). These networks that provide "train the trainer" models are excellent because they teach mentoring through skill-building. Further, they provide useful resources, such as sample contracts that academic advisors, research advisors, principal investigators (PIs), and chairs can establish with dissertation students so that expectations are clear concerning coauthored publications, turn-around time for providing feedback to dissertation chapters, and the like.

At its purest level, a mentoring relationship is a type of collaboration. Boveda and Weinberg (2020, p. 481) offer a protocol that provides a strategy for what they call "intersectionally conscious collaboration" to "encourage reflection on marginalized and privileged identities on how these influence educational and professional experiences." Such tools could be useful for mentors. In reflecting on social and spatial location, mentors may pose questions that result in "reflection on

marginalized as well as privileged identities, and on how these influence(d) educational and professional experiences." This information may be helpful to cocreating "professional roles and responsibilities, . . . to assess how educators' identities may influence the experiences of students." This information sets the stage for collaborators in a mentoring relationship who can build from this base of knowledge and discussions about the respective goals of mentor and mentee to negotiate expectations on the basis of a shared understanding of respective strengths.

An Example

Dr. López offers an example of intersectional inquiry that yields effective mentoring and collaboration. She starts with an intentional conversation that invites the mentor and mentee to share their respective positionalities, experiences, academic background, and hopes for their intended scholarly pursuits (see Appendix 3 as an example of a tool for cultivating a critical reflexive praxis centered on intersectionality). She always asks, "Is there anything else you would like me to know." This could be done verbally or in writing to accommodate introverted students. Sharing the answers to these questions may be the beginning of a productive and collaborative relationship between a mentee and mentor.

The following is a composite reflection of the mentoring meetings that Dr. López had with numerous BIPOC students who seek her mentorship for pursuing doctoral studies:

> Dr. López: Thank you for reaching out. I find that it is powerful to start a mentoring relationship by sharing a bit about our differences and similarities in our identities in our positionalities in systems of inequality. I'd like to start with sharing a bit about myself. I am a U.S.-born Black Latina. My first language is Spanish. My parents are Dominican immigrants who worked in the garment industry sweatshops in Lower Manhattan in New York City for mostof their lives. I grew up in New York City public housing and attended de facto segregated public schools. I participated in upward bound, a federal program for those who are first in their families to earn a college degree. I earned a BA in Latin American Studies from Columbia College, Columbia University, and earned a doctorate in sociology from City University of New York because I want to do research that I hope makes a difference for communities like the one I grew up in. I've been teaching at UNM for over 20 years. I am married to a Brown-skinned Chicano man artist and gallery curator who has deep roots in NM. We have two adult daughters. Now I invite you to think about your social and spatial location and share any parts of your identity that you think will help us work well together. Please only share information you are comfortable sharing.
>
> Lucia Rodriquez's (composite undergraduate mentee) response: Gracias profe! Thank you for sharing your background. Español es mi primer idioma también! [Spanish is also my first language]. I love that I can speak to you in Spanish. I actually shared your TED en Español talk about the Census with my mother. I am a white Latina or Whitina—Mexican American born and raised in the U.S. Sometimes people are shocked to learn that I'm Latina because, according to them, "I don't look Latina." I also identify as LBTQIA+, and I am not out to my family. My mom is an educational assistant, and she earned a GED. My father only when to middle school, and he is undocumented. I want to go to graduate school so I can become a professor and teach at the university. I want to do research on the health consequences of racism for undocumented

immigrants.

This sharing allows for clarification in the ways that structural inequalities may be different for my mentee and myself. While Lucia and Dr. López could say that they are both the children of immigrants, Spanish is their first language, and they have similar class origins and ethical and political commitments, they also had major differences in terms of citizenship status, racial status, LGBTQIA+ status, and ethnicity (Zambrana, 2018; Yuval-Davis, 2011). Baca Zinn and Zambrana (2019) state:

> We caution that "Latino/Latina" as a social construct must be problematized, that it is complicated by differences in national origin, citizenship, race, class, and ethnicity and by the confluence of these factors. An intersectional approach seeks to reveal and understand how they shape social experience. (p. 678)

Dismantling the myth of a homogenous Latinx experience for Latinx undergraduate students, graduate students, staff, or faculty is important for practicing inclusive mentoring. An intersectional approach to mentoring includes not adding oppressions (race + gender + class origin + LGBTQIA+ status) to assess who is most oppressed but rather understanding our very different experiences with systems of oppression (Bowleg, 2008). To round out the discussion in this chapter, we next discuss some lessons learned.

Lessons Learned

So, you want to improve your mentoring? Below are some notes on lessons learned.

1. At the individual level, practice ongoing and lifelong critical reflexivity. Part of this is critical reflection on your own positionality in grids of power (race, gender, class as in your first-generation college status, disability, citizenship, LGBTQIA+ status, etc.) and considering how that influences your approach to mentoring. This does not mean that you cannot be an effective mentor if you differ from your mentees, but it does mean that you are consciously taking all those things into consideration in creating a productive collaboration.

2. At the institutional, unit, and department level, challenge deficit narratives and approaches to marginalized and underrepresented communities. When you hear discourses about equity and excellence as mutually exclusive or discussions about "fit" or "at-risk" students, invite your colleagues to center the cultural wealth of staff, students, and faculty. Ask what it would mean if we acknowledge that students who are parents, have family responsibilities, or come from minoritized communities possess experiential knowledge that can improve our institutions, disciplines, and services in the university (Yosso, 2005). What would it mean if we eschewed race-, color-, class-, gender-, sexuality-, disability-, and power-evasive narratives in our mentoring and support of students by explicitly engaging in critical reflexivity, not as individual supervisors or faculty, but rather as whole departments across time?

3. At the university-wide level, create a community of practice, a convergent space, with colleagues across different sectors (faculty and staff governance, high-level administrators) for sharing strategies and approaches for mentoring that work with students who are what

Elisa Sanchez, lifelong activista and education subcommittee member of the New Mexico Governor's Advisory Racial Justice Council, calls "*at- promise*" (here we challenge the notion of "at-risk"), but are often overlooked in mentoring approaches. Create accountability structures when units fail to engage in these conversations and refuse to become a part of the solution. Discuss how you plan to create intentional mentoring experiences that challenge business as usual and one-size-fits-all mentoring approaches. Question your assumptions, and imagine the possibilities when embracing mentoring with renewed purpose and clarity as we harmonize our mentoring practice from the individual to the department and university levels. Ask yourself, your colleagues, and university administrators, how would we know we have been successful in transforming our mentoring praxis (action and reflection)?

Conclusion

In this chapter, we have described the vital necessity of mentoring to advance inclusive excellence, mentors' role in designing strategies for creating more just educational and scholarly environments, and impediments to successfully mentoring BIPOC, PWD, and LGBTQIA+ students and faculty and common missteps in mentoring relationships. Though minoritized groups often experience cumulative disadvantage that has major consequences for their success as students, staff, or faculty, when members from these groups have overcome these numerous challenges, they are poised to contribute to universities and disciplines in multiple and unique ways.

We encourage all prospective mentors to do the work *to prepare to mentor* BIPOC, PWD, first-generation college status, and LGBTQIA+ students, staff, and faculty. We posit that the gold standard for effective mentoring must include a demonstrated commitment to cultural humility. We point readers to national resources to improve their mentoring. Finally, we share examples, including how intersectional inquiry yields effective mentoring and collaboration by applying Boveda and Weinberg's (2020, 2022) intersectionally conscious collaboration to mentoring.

In the future, we recommend the importance of developing mentors' cultural humility, their facility with strengths-based perspectives, fortifying their growth mindsets in their approaches to students, staff, and early career faculty, and learning to appreciate the cultural wealth of BIPOC, PWD, and LGBTQIA+ colleagues. In the end, high-impact strategies for senior faculty mentors include promoting culturally sustaining pedagogy, mentoring and research, and developing critical self-reflexivity so that they actively challenge their own biases. At the institutional level, ethical accountability can be practiced through setting department-, college-, and university-level metrics for annual reviews, promotions, and special awards that reward senior faculty for their improvements in mentoring students, staff, and colleagues who are BIPOC, PWD, and LGBTQIA+. We recommend future research focused on case studies of academic departments making changes across time to measure the effectiveness of mentoring strategies guided by the principles of inclusive excellence. This would include interviews with students, staff, and faculty who are BIPOC, first-generation college status, PWD, and LGBTQIA+ to focus on their experiences with mentors in order to identify their perspectives concerning successful mentoring as well as their recommended areas for improvement.

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Appendix A: Implicit Associations Tests

https://implicit.harvard.edu/implicit/takeatest.html

Asian American **(Asian – European American IAT).** This IAT requires the ability to recognize white and Asian-American faces as well as images of places that are either American or foreign in origin.

Presidents **(Presidential Popularity IAT).** This IAT requires the ability to recognize photos of Donald Trump and one or more previous US presidents.

Weight **(Fat – Thin IAT).** This IAT requires the ability to distinguish faces of people who are obese and people who are thin. It often reveals an automatic preference for thin people relative to fat people.

Sexuality **(Gay – Straight IAT).** This IAT requires the ability to distinguish words and symbols representing gay and straight people. It often reveals an automatic preference for straight people relative to gay people.

Disability **(Disabled – Abled IAT).** This IAT requires the ability to recognize symbols representing abled and disabled individuals.

Race **(Black – White IAT).** This IAT requires the ability to distinguish faces of European and African origin. It indicates that most Americans have an automatic preference for white over Black.

Weapons **(Weapons – Harmless Objects IAT).** This IAT requires the ability to recognize white and Black faces, and images of weapons or harmless objects.

Gender – Science. This IAT often reveals a relative link between liberal arts and females and between science and males.

Skin-tone **(Light Skin – Dark Skin IAT).** This IAT requires the ability to recognize light- and dark-skinned faces. It often reveals an automatic preference for light skin relative to dark skin.

Religion **(Religions IAT).** This IAT requires some familiarity with religious terms from various world religions.

Gender – Career. This IAT often reveals a relative link between family and females and between career and males.

Arab-Muslim **(Arab Muslim – Other People IAT).** This IAT requires the ability to distinguish names that are likely to belong to Arab-Muslims versus people of other nationalities or religions.

Native American **(Native – White American IAT).** This IAT requires the ability to recognize white and Native American faces in either classic or modern dress, and the names of places that are either American or foreign in origin.

Age **(Young – Old IAT).** This IAT requires the ability to distinguish old from young faces. This test often indicates that Americans have an automatic preference for young over old.

Transgender **(Transgender People – Cisgender People IAT).** This IAT requires the ability to distinguish photos of transgender celebrity faces from photos of cisgender celebrity faces.

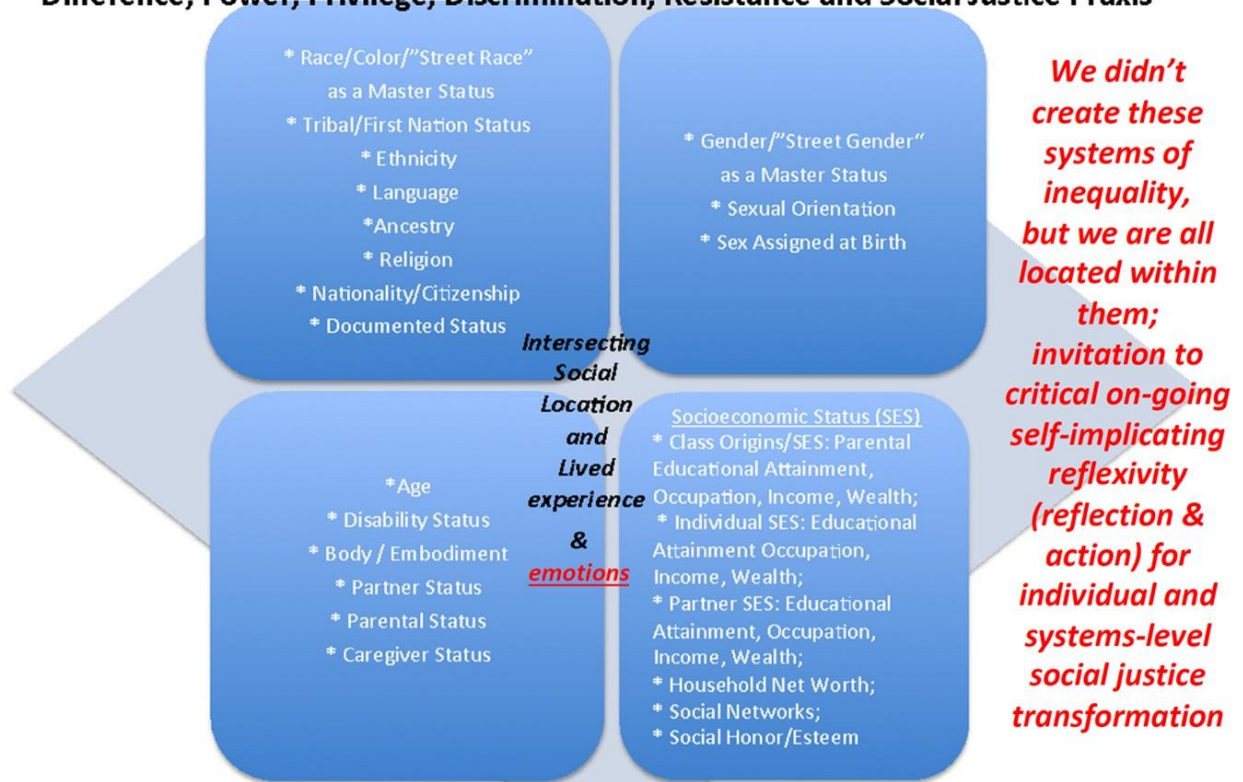**Appendix B: Cumulative Professional Disadvantage**

This image may help to address the ubiquitous merit issue and explain what we mean by inclusive excellence. BIPOC folks have not only risen to the top in terms of their academic accomplishments; many have also overcome cumulative professional disadvantage. What an amazing resource for our students!
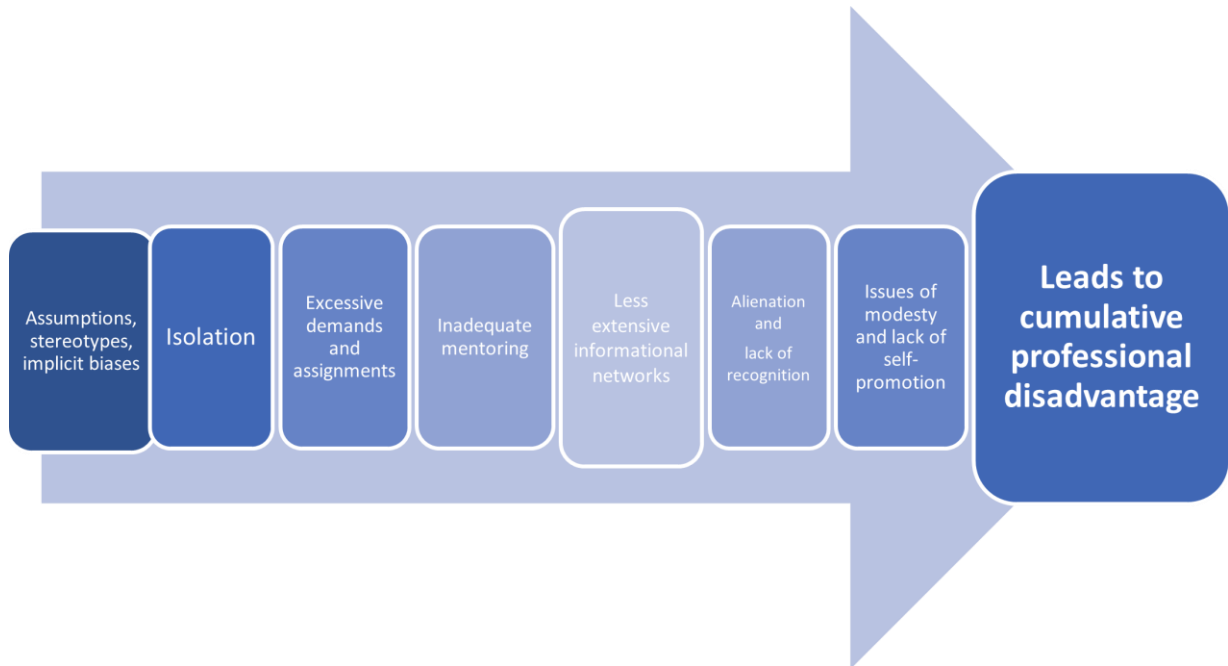
Note. From "Creating change from the middle", Joan Reede, Presentation at the American Public Health Association, 2015 https://apha.confex.com/apha/143am/webprogram/Paper338142.html
Thanks to University of Illinois at Urbana-Champaign Professor Wendy Heller for this image.

Appendix C: Tool for Cultivating a Critical Reflexive Praxis Centered on Intersectionality

What's *your* intersecting social location and experience in social structures of inequality?
An Invitation to On-going Intersectional Self-Reflexivity About
Difference, Power, Privilege, Discrimination, Resistance and Social Justice Praxis

* Race/Color/"Street Race"
as a Master Status
* Tribal/First Nation Status
* Ethnicity
* Language
*Ancestry
* Religion
* Nationality/Citizenship
* Documented Status

* Gender/"Street Gender"
as a Master Status
* Sexual Orientation
* Sex Assigned at Birth

Intersecting Social Location and Lived experience & emotions

*Age
* Disability Status
* Body / Embodiment
* Partner Status
* Parental Status
* Caregiver Status

Socioeconomic Status (SES)
* Class Origins/SES: Parental Educational Attainment, Occupation, Income, Wealth;
* Individual SES: Educational Attainment Occupation, Income, Wealth;
* Partner SES: Educational Attainment, Occupation, Income, Wealth;
* Household Net Worth;
* Social Networks;
* Social Honor/Esteem

We didn't create these systems of inequality, but we are all located within them; invitation to critical on-going self-implicating reflexivity (reflection & action) for individual and systems-level social justice transformation

[1] Vargas (2018) rightly coins the term "undocumented citizen," defined as individuals who live and work, pay taxes, and/or contribute to US talent pools, and simply do not possess citizenship documentation.

IMPROVING MENTORING RELATIONSHIPS AND PROGRAMS THROUGH ASSESSMENT AND EVALUATION

Laura Gail Lunsford

Abstract

Chapter 13, *Improving Mentoring Relationships and Programs Through Assessment and Evaluation*, presents frameworks for deciding how to improve mentoring experiences. Assessment activities solicit feedback from or about the participants and focus on participant learning and in situ improvement opportunities. Evaluation efforts determine if the program achieved organizational goals. The chapter has four goals. First, the chapter clarifies the difference between assessment, evaluation, and research. Second, the chapter presents frameworks to guide assessment and evaluation efforts. Third, the chapter describes tools for assessment. Fourth, the chapter describes how to evaluate mentoring programs, what data to collect, when to collect it, and from whom. This section also highlights how to share evaluation data for lay audiences and use it to improve mentoring programs. The chapter concludes with tips for getting started in this important improvement activity.

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Introduction

How do you know what, if anything, should be changed or improved in your mentoring program? This chapter seeks to address this question. Perhaps you inherited an existing mentoring program. If so, how do you know if the previous surveys should be reused? Maybe you have been asked to start a mentoring program. If so, how can you determine if the mentoring program is effective?

I often encounter people who wish to collect information about their program's effectiveness but are overwhelmed about where to start. Other program coordinators have some data, but they are not sure how to make sense of it. Sometimes program coordinators administer existing surveys but are then unsure the information helps them to examine the mentoring program's effectiveness. The focus is usually on getting the program started or underway, and evaluation is viewed as an optional activity to be completed when there is time to do it. But, of course, in many cases that time never arrives.

If people seem happy with their mentoring experience, then why is evaluation needed? Further, informal mentoring is not evaluated, so why should formal mentorship undergo assessment or evaluation? This chapter makes the point that assessment and evaluation are essential activities to ensuring the effectiveness of a mentoring program. There are three reasons to assess and evaluate your mentoring program:

1. Steward the resources entrusted to you.
2. Achieve desired organizational goals.
3. Align with international standards.

First, you need to be a good steward of the resources entrusted to you to coordinate a mentoring program. Resources include money—such as your salary—participants' time, office space, and a web presence. An ineffective or poorly designed mentoring program wastes these resources.

Second, the mentoring program was established to meet an organizational objective. Formal mentoring programs are supported by organizations to connect people who may not have otherwise found such support. Therefore, it is essential to know if the mentoring program is achieving the organizational goals.

Third, international standards for mentoring programs require assessment and evaluation as markers of an effective mentoring program. The European Mentoring and Coaching Council (n.d.) have "processes for measurement and review" as one of their six standards. The International Mentoring Association (2011) devotes two of its six standards to assessment and evaluation:

- Standard V: Formative evaluation
- Standard VI: Program evaluation

Assessment and evaluation do not have to be complicated. This chapter addresses program evaluation at both the individual level and the program level. You need some information about the participants and their perceptions of the mentoring process and outcomes. You might find that the participants

benefit from the program, but you have no idea if the program meets the organizational objectives. For example, first-year freshmen might like their mentors, but you find that the student retention (a goal of your mentoring program) has not increased. Good mentoring programs have data to support claims that they are effective.

In this chapter, you will first learn about the difference between assessment, evaluation, and research. Then, I present theoretical frameworks to provide guidance in making decisions around assessment and evaluation. Formative assessment is described as a way to evaluate the mentoring relationship. Summative assessment is presented as a way to evaluate the program outcomes. I describe who, what, how, and when to evaluate a program, along with examples. The chapter concludes with tips for getting started on this evaluation process.

Assessment, Evaluation, and Research

I have heard my share of sighs when running workshops on how to evaluate mentoring programs. The terms *assessment*, *evaluation*, and *research* can seem confusing or interchangeable. Program coordinators often feel too overwhelmed or overburdened to take on what is perceived as an additional task: finding out if the mentoring program is effective. The job of a mentoring coordinator may be seen as getting the program started or running it. The sense of dread usually stems from the feeling that a research study is needed to find out if a program is effective. You do not need a graduate degree to assess and evaluate your program. The following are the key differences between assessment, evaluation, and research.

Assessment involves direct feedback from mentoring participants about their self-reported experiences. Evaluation involves a judgment from you or others about whether the mentoring program is accomplishing its goals. Research is a testable systematic process and requires a public process to vet the findings, often called peer review. Research is designed to develop or contribute to generalizable knowledge. Chapter 14 goes into more detail about research.

You may have heard the terms *formative evaluation* and *summative evaluation* (Lipsey & Cordray, 2000). Formative refers to activities that take place during an intervention (your mentoring program). Such assessment focuses on participant learning in mentoring programs. Formative assessment allows you to make changes during the program to improve program activities. In contrast, summative refers to what happens when the program is over. Summative is the evaluation effort in which you determine if the mentoring program met participant and organizational goals. Thus, formative is to assessment what summative is to evaluation. Both approaches are described in greater detail after the next section on theoretical frameworks for assessment and evaluation.

Theoretical Frameworks for Assessment and Evaluation

Three theoretical frameworks can provide a foundation for your assessment and evaluation efforts:

- Kirkpatrick's four levels of evaluating training programs
- logic models
- the mentoring ecosystem

The first two frameworks are general evaluation tools, while the mentoring ecosystem highlights specific considerations for mentoring programs.

Kirkpatrick's Four Levels

Kirkpatrick's four levels of evaluation originally focused on training programs (Kirkpatrick, 1996). The four levels are reaction, learning, behavior, and results. While mentoring programs are not training programs in a strict sense of the word, they are arguably programs that seek to enhance participants' skills. Further, this evaluation framework has been applied to other social programs, not just training ones.

Praslova (2010) described how Kirkpatrick's levels can be adapted to higher education (see Table 13.1). Praslova suggests that the first two levels—reaction and learning—assess what your program does. These levels align with formative assessment. In contrast, the last two levels—behavior and results—will likely occur after your program is over. These two levels align with summative evaluation.

Examples of reaction criteria are participant self-reporting about mentoring activities (e.g., workshops) or the relationship. Learning criteria would be knowledge tests. Such tests might assess if participants learned more about mentorship from an orientation or professional education experience in your program. Learning could also be assessed relative to the goals the participants had when they entered the relationship. Most program evaluation efforts tend to be at the reaction level, in part because it is easier to assess how someone feels about a workshop, another person, or an experience.

Behavior and results refer to summative evaluation. Examples of behavioral criteria are if mentees wrote an effective essay for graduate school or completed an application to graduate school, graduated on time, or completed a project with their mentor. Results are related to the overarching goal of your program and may occur at the organizational level. Examples of results might be if faculty members were retained at the university or if undergraduate mentees were admitted to graduate school. Results align with outcomes in the logic model described next.

Table 13.1

Four-Level Model of Evaluation Criteria Applied to Training in Organizations and Higher Education

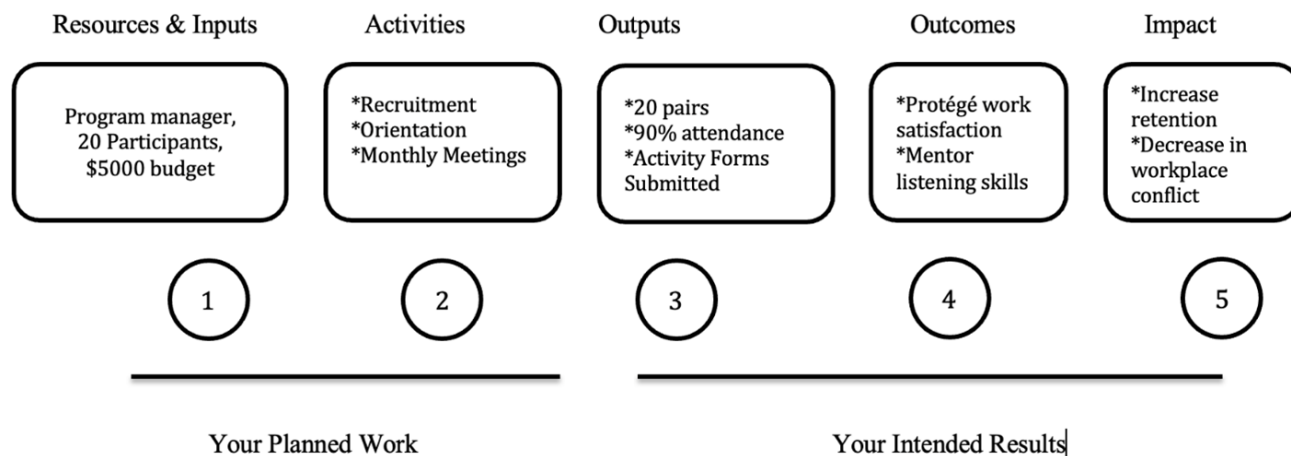| Evaluation criteria	Training in organizations	Learning in higher education	Sample instruments and indicators for higher education
Reaction	trainee affective reactions and utility judgments	student affective reactions and utility judgments	student evaluations of instruction
Learning	direct measures of learning outcomes, typically knowledge tests of performance tasks	direct measures of learning outcomes, knowledge tests, performance tasks or other graded work	national or institutional pre- and post-tests national standardized field test examples of class-specific student work
Behavior/transfer	measures of actual on-the-job performance: supervisor ratings or objective indicators of performance/job outputs	evidence of student use of knowledge and skills learned early in the program in subsequent work (e.g., research projects or creative productions, application of learning during internship, development of a professional resume, and other behaviors outside the context in which the initial learning occurred)	end-of-program integration papers of projects, internship diaries, documentation of integrative research work, documentation of community involvement projects, and other materials developed outside the immediate class context
Results	productivity gains, increased customer satisfaction, employee morale for management training, profit value gained by organization	alumni career success, graduate school admission, service to society, personal stability	alumni surveys, employer feedback, samples of scholarly or artistic accomplishments, notices of awards, recognition of service, etc.

Logic Models

Logic models present a visual representation that connect mentoring program activities to program goals. A logic model is a helpful tool for program evaluation because it makes your theory of change explicit. Your mentoring program seeks to support change for individuals and for your organization, or even for society. The W.K. Kellogg Foundation (2004) has a workbook on logic models that might be helpful if you are unfamiliar with them. See Chapter 8 in this volume for more information about logic models.

Logic models can be drawn in different ways (McLaughlin & Jordan, 1999); however, they present five elements: resources, activities, outputs, outcomes, and impact (see Figure 13.1). You read a logic model from left to right. The planned activities are on the left of the model (Items 1 and 2 in Figure 13.1), while the results of your mentoring program are represented on the right side of the model (Items 3–5 in Figure 13.1). Create a logic model for your mentoring program as you read about each element below. More detail is also provided about mentoring programs and logic models in Lunsford's (2021) handbook on mentoring programs.

Figure 13.1

Sample Logic Model

Resources & Inputs	Activities	Outputs	Outcomes	Impact
Program manager, 20 Participants, $5000 budget	*Recruitment *Orientation *Monthly Meetings	*20 pairs *90% attendance *Activity Forms Submitted	*Protégé work satisfaction *Mentor listening skills	*Increase retention *Decrease in workplace conflict
1	2	3	4	5

Your Planned Work — Your Intended Results

Note. Reprinted from Lunsford (2021).

Resources and Inputs

Resources and inputs refer to time, money, facilities, program website, recruitment materials, or similar items needed to operate the program. Your time as the program coordinator, along with the participants' time, should be considered under resources. Resources can usually be grouped into three categories: program operations, organizational support, and participants. The questions below may help you identify needed resources and inputs.

1. Who will benefit most from participating in the mentoring program?

2. Which individuals will make the best mentors, and how might these individuals be recruited to participate in the program?

3. Will you need office supplies or access to technology through computers and a website?

4. How will you document and recognize participation in the mentoring program?

5. How much of your time will be devoted to the mentoring program?

6. Which organizational leaders need to promote and advocate for the program?

Activities

Activities are expected events or interactions. A program briefing, monthly participant meetings, and a celebration reception at the end of the program are examples of activities. The questions below may help you identify all the program activities.

1. What recruitment efforts are needed?

2. How will you prepare participants to learn about the program and increase their mentorship skills?

3. Is a mentoring agreement expected from the participants?

4. What professional development, workshops, or other events will be part of the program?

5. How often do you expect participants to meet and what will they discuss or do?

Outputs

Each activity needs to have an output. The outputs provide you with information about the activity. For example, if you have a session on mentoring skills, then identify the related output of that session. One output of such a session might be a knowledge test that participants pass with an 80% score or better. Another output might be attendance or number of participants recruited. A word of caution: Be realistic about outputs; expecting 100% attendance is unreasonable, so make it 90% or 95%. If you do expect 100% attendance, then you need to have make-up opportunities for those individuals who may have an emergency or unavoidable conflict.

Outcomes

Your outcomes are what you expect to happen as a result of activities. Most mentoring programs measure short-term outcomes, such as completing a project in the mentoring program. Your program will have mid-term and long-term outcomes. These outcomes align with the behaviors and results criteria in Kirkpatrick's model. Examples of mentoring program outcomes might be that mentors learn how to develop rapport more effectively with mentees or that mentees are retained at the institution. Regular mentoring meetings might be expected to result in the outcome of increasing a participant's sense of belonging or professional identity.

Specifics are important in describing outcomes (Allen & Poteet, 2011). The more specific your outcome, the easier it will be to measure. Revise a general outcome of "increase retention" to "increase retention by 10%."

Impact

Impact refers to a mentoring program's overarching goals. How will the participants and organization be changed by the mentoring program? Mentoring programs might have goals such as increasing the number of low-income undergraduates pursuing careers in science.

Summary

A logic model can be shared with stakeholders to make sure you all agree on how the mentoring program activities will achieve the desired changes. A logic model simplifies your decisions about what to assess and evaluate. Consider using a spreadsheet to create a logic model. You may color-code the activities that align with outputs and outcomes (see Appendix for an example). Activities that are not associated with output and outcome need to be removed, as they do not help you achieve your goals, or else an output and outcome needs to be added. Similarly, you might find that you have some outcomes that have no associated activity. The goal is to ensure that all the activities are connected to at least one output and one outcome and that all the outcomes are associated with an activity.

Mentoring Ecosystem

The mentoring ecosystem draws attention to the environment that supports the individuals engaged in mentoring relationships and to the processes by which these relationships unfold (see Figure 13.2). Too often there is a singular focus on the participants. The mentoring ecosystem provides guidance about the process of mentoring and the contextual elements that should be assessed and evaluated.
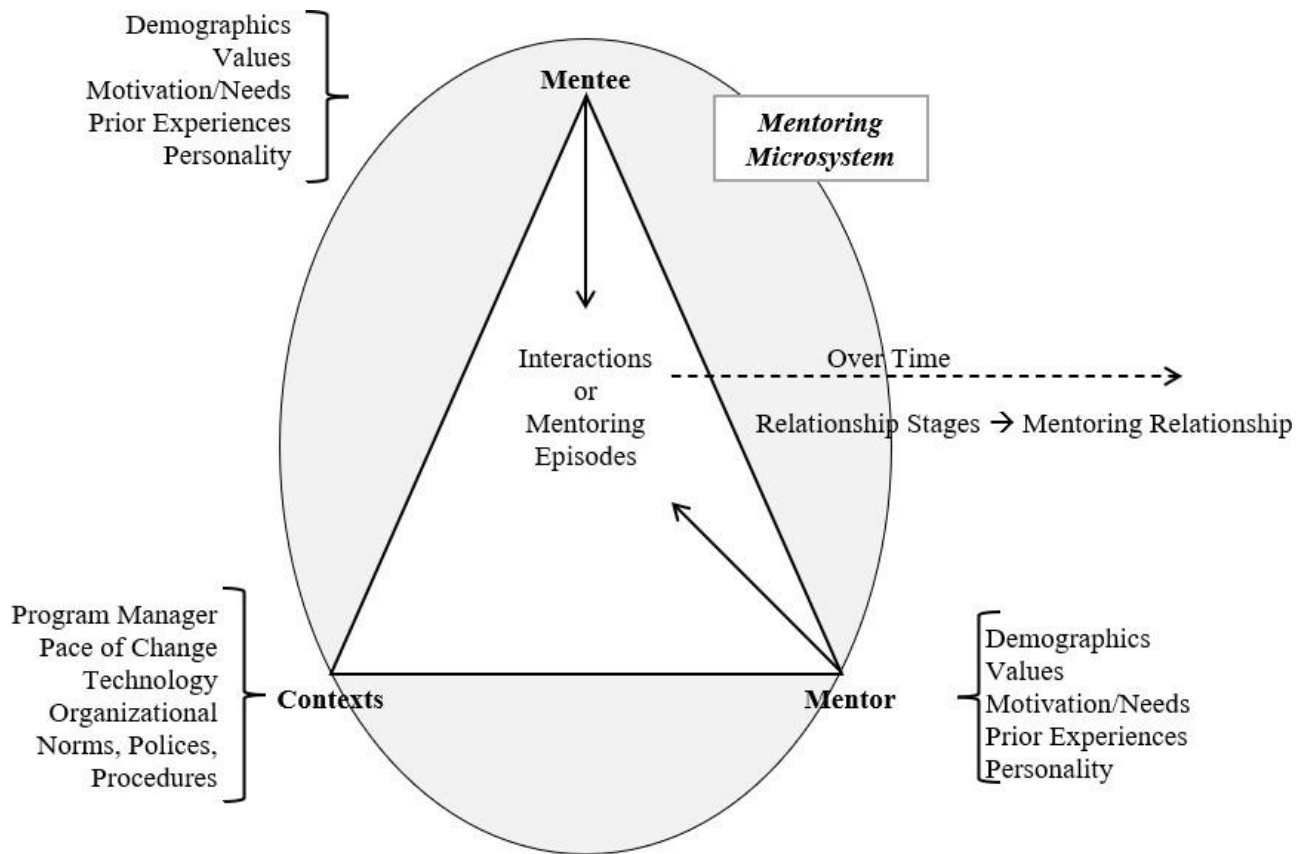
The mentoring ecosystem is adapted from systems theory (Bronfenbrenner, 1979), which posits that individuals are situated in nested systems. The inner system refers to direct interactions individuals have with others and is called the *microsystem*.

Microsystems are embedded in settings like departments or colleges. The interaction of a program manager with mentoring participants is part of this larger *mesosystem*. You may not directly interact with a mentee, but a mentor may come to you for advice about their mentee.

Mesosystems are embedded in *exosystems*. Other individuals may support or constrain your mentoring program through the resources (budget) they provide or through policies and procedures. The mesosystem influences individuals even though the person is not present in the decision-making.

The mentoring ecosystem also suggests that mentoring relationships develop over time and that different activities may take place in the stages of the mentoring relationship. This model highlights how to think about the policies, procedures, and other indirect effects on your mentoring program that may need to be measured.

Figure 13.2

Mentoring Ecosystem

Demographics
Values
Motivation/Needs
Prior Experiences
Personality

Mentee

Mentoring Microsystem

Interactions
or
Mentoring
Episodes

Over Time

Relationship Stages → Mentoring Relationship

Program Manager
Pace of Change
Technology
Organizational
Norms, Polices,
Procedures

Contexts

Mentor

Demographics
Values
Motivation/Needs
Prior Experiences
Personality

Formative Assessment: Mentoring Relationships

Formative assessment involves gathering feedback about the effectiveness of mentoring relationships. Such assessment is focused on individual learning. Do the mentees in your program feel the time spent with their mentors is of value? Or do they feel that their mentors are not helpful, which will likely reduce the time they will spend with them. Effective relationships make your program more likely to achieve the desired organizational goals, which you will evaluate as part of your summative assessment. Formative assessment enables you, as a program coordinator, to make improvements while the program is still operating. The main point is to create opportunities that support formative assessment.

Align Assessment with Activities

There are numerous ways to gather feedback for formative assessment. Your assessment efforts, formative or summative, should be aligned with the activities in a logic model that you have developed for your mentoring program.

In brief, logic models visually represent the resources needed for your program, along with the planned activities that comprise your mentoring program. The logic model connects each activity with an output, which lets you know that the activity has been successful. Each activity needs an output,

which then guides your formative assessment. Thus, if you hold an orientation and professional development on mentorship skills, then there should be an assessment that indicates if most of the participants attended and, ideally, a knowledge quiz that would evaluate acquisition of the mentorship skills.

The activities are what drive achievement of the desired goals. The model requires you to make explicit your theory of change. In other words, what activities are expected that will achieve the desired outcomes?

Types and Tools

The categories of formative assessment tools for mentoring programs are listed below.

- mentoring contracts
- reflective practices
- coaching mentors
- safety nets

Your program does not need to use all of these tools. You might start with one or two areas for formative assessment and build in more assessment opportunities as your program develops. The selection of tools will depend on what resources you have to support formative assessment and your organizational norms about what would be embraced by participants.

Mentoring Contracts

Many programs ask participants to complete a mentoring contract, sometimes referred to as a mentoring compact or mentoring agreement. The content of these contracts varies, but they usually include:

- expectations about participants, obligations to one another
- logistical information about how often and when to meet
- desired needs and goals

Needs and goals are sometimes presented in a checklist to help participants focus on areas that are relevant to the goals of the mentoring program. The example of the 1st Generation Mentoring Program Agreement shows a checklist for a first-generation mentoring program (see Figure 13.3). Some contracts also include information about communication preferences.

Figure 13.3
Mentoring Program Agreement

1ST GENERATION CAMPBELL MENTORING PROGRAM
AGREEMENT FORM

Student Name:
Campbell email: Best phone number:
Mentor Name:
Campbell email: Best phone number:
Logistical Information
How often would you like to meet (please circle one):

1 time/week   Every other week   2 times/semester
Where will we meet? _____

Content Area
In the first column, please rank the order based on what **your** concerns are in your first year at college. In the second column, please rank the order based on what you think **your family's** concerns are. Rank "1" for most interested and "6" for least interested.

You	Your Family
____Academic Goal Setting	____Academic Goal Setting
____Financial Management	____Financial Management
____School Life vs. Home Life	____School Life vs. Home Life
____Campus Involvement	____Campus Involvement
____Time Management (study skills, test-taking)	____Time Management (study skills, test-taking)
____Social Strategies (interacting with faculty, peers, etc.)	____Social Strategies (interacting with faculty, peers, etc.)

Academic Goals
Please list at least two goals you would like to accomplish this year.

Accountability Agreement
Please explain how you would like your mentor to hold you accountable for the goals you listed.

_____
_____

If you both agree to the information on this form, please sign and date below.

Mentor: **Student:**
_____   _____

Elmhurst University has a robust, accredited (by the International Mentoring Association) mentoring program that handles the mentoring contract with several forms. The program requires a separate protégé and mentor agreement with a checklist of the program's expectations. Participants check off the items and sign and return the form to the program coordinator. In addition, there is a worksheet for "defining your relationship together" that the protégé and mentor complete together at their first meeting. Their forms are located on the Elmhurst University (n.d.) website.

Mentoring compacts are more commonly used with graduate students. The Association of American Medical Colleges (2017) has developed a booklet to present a sample mentoring compact for biomedical graduate students and their research advisors. This compact presents the obligations and expectations that are presumably reviewed in advance of the first student-advisor meeting or perhaps together at that first meeting.

The University of Wisconsin–Madison leads the coordination of several mentorship support centers and activities focused on mentorship in the biomedical workforce. But most of their tools are also applicable to other contexts. Their website presents several examples of mentoring contracts for undergraduates, graduate students, and team mentorship (UW Institute for Clinical and Translational Research, n.d.).

The National Academy of Sciences online portal (https://www.nap.edu/resource/25568/interactive/) on mentorship has additional examples of mentoring compacts and contracts under "Actions and Tools."

Such contracts support program participants to reflect on their needs and what will make the relationship successful. Signing and submitting the form makes a public commitment that has been shown to increase the likelihood that participants will uphold their obligations to the program and to one another.

These forms need to be collected by program coordinators, who should review them to ensure participants have described plans that align with the program goals. This assessment tool can alert program coordinators to dyads who have not met with one another, which requires intervention and possibly rematching, or to items on the contracts that might present concerns.

Reflective Practices

Reflective practices refer to activities that encourage mentors and mentees to examine their beliefs about mentoring and their mentorship skills. These activities involve self-assessment. Mentoring is about creating learning spaces that support changes in behavior and beliefs. Thus, reflective practices allow participants to increase their self-awareness about their mentoring beliefs and skills. Mentoring philosophy statements, guided questions, and self-assessment are common reflective practices.

A mentoring philosophy statement asks participants to write an essay that reflects their core beliefs and practices about mentoring. Such statements might include their experiences with mentoring, their definition of mentoring, and their beliefs about mentoring others or being mentored. Writing this kind of essay is common in university settings, and there are numerous examples online, such as ones by

Davatzes (2016), Dill-McFarland (n.d.), and Ohland (2017).

Guided questions can be used to support mentoring partners through the course of the relationship. Thus, at the start of the relationship, mentoring partners might be asked to share preferences for how to communicate. Is it OK for a mentee to text their mentor, or is email the best communication method between meetings for rescheduling a meeting or addressing an immediate need? Guided question prompts could be provided to participants regularly to guide their discussions during the program. For example, peer mentors in a first-generation mentoring program might be provided questions at the beginning of the program that focus on how to access resources on campus. Questions in the next month might focus on getting involved in campus clubs, while midsemester questions might focus on midterm exams and tutoring opportunities. Mentoring participants can be encouraged to include routine questions at each meeting, such as:

- Share progress on goal(s): behind schedule, on track, ahead of schedule.
- Plus/Delta: what did you like about our meeting today? What can we do differently next time?

Another example of guided questions is to have participants share what they must have in the relationship and what they cannot stand. Some people do not mind if a mentee is late to a meeting, while other mentors might perceive being late as disrespectful behavior. Some programs use an appreciative inquiry strategy; asking people to share a time when they enjoyed collaborating with another person, and then discussing what that experience suggests for the current mentoring relationship. Reflection topics for a first meeting include:
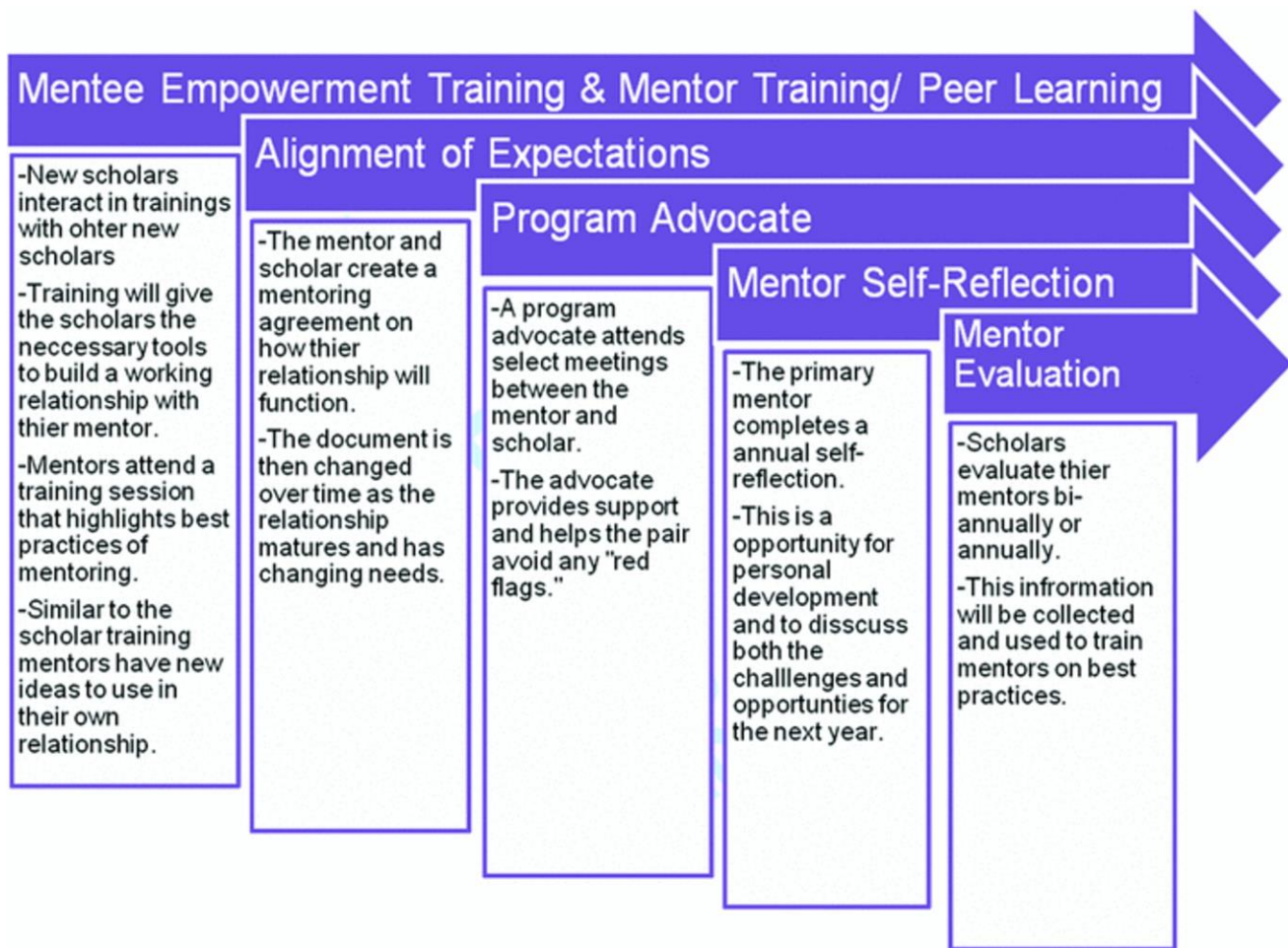
- communication preferences between meetings: text, phone call, email
- must have / cannot stand
- sharing an example of successful collaboration with another person

These activities involve self-assessment that helps individuals consider the relationship they are building together. It is possible to collect information about these activities that can be used for program evaluation. For instance, you might ask participants to share their mentoring philosophies with one another and with the program coordinator. Or you might have a survey early in the relationship to ask if they discussed communication preferences (if you directed them to do that) in their first meeting.

Self-assessment of mentoring competencies is another example of a reflective practice. Some programs ask participants to engage in self-rating at the beginning of the program, while other programs put this task at the end. In both cases, the information can be provided to the program coordinator anonymously to guide future workshops for skill development. Anderson et al. (2011) recommend that evaluation occurs at the end of the program as part of an assessment model that collects information from mentees and mentors (see Figure 13.4).

Figure 13.4

New Model to Evaluate Mentoring Relationship

Mentee Empowerment Training & Mentor Training/ Peer Learning

Alignment of Expectations

Program Advocate

Mentor Self-Reflection

Mentor Evaluation

-New scholars interact in trainings with ohter new scholars

-Training will give the scholars the neccessary tools to build a working relationship with thier mentor.

-Mentors attend a training session that highlights best practices of mentoring.

-Similar to the scholar training mentors have new ideas to use in their own relationship.

-The mentor and scholar create a mentoring agreement on how thier relationship will function.

-The document is then changed over time as the relationship matures and has changing needs.

-A program advocate attends select meetings between the mentor and scholar.

-The advocate provides support and helps the pair avoid any "red flags."

-The primary mentor completes a annual self-reflection.

-This is a opportunity for personal development and to disscuss both the challlenges and opportunities for the next year.

-Scholars evaluate thier mentors bi-annually or annually.

-This information will be collected and used to train mentors on best practices.

Note. Figure reprinted from Anderson et al. (2011). Open access.

Consider using existing self-assessment tools that have been validated by scholars. Note that many of the evidence-based examples focus on research. However, they can often be easily adapted to your context (see Table 13.2 for examples). In addition, there are examples of self-reflection assessments on the National Academies portal for the report on The Science of Effective Mentorship in STEMM referenced earlier.

Table 13.2
Self-Assessment Tools

Measure	Domains	Response	Reference	Audience
Mentor self-reflection template	Communication, expectations research, career support, psychosocial support	Free response	Anderson et al. (2011)	Research mentoring
Mentoring Competency Assessment	Communication, expectations, understanding, independence, diversity, and professional development	26 items 7-item Likert Response	Fleming et al. (2013) See full survey here: UW Institute for Clinical and Translational Research b (n.d.)	Research mentoring
Mentor Strength of Relationship	Affective, logistical	14 items, Likert scale	Rhodes et al. (2017)	Youth mentoring
Youth Strength of Relationship	Positive, negative	10 items, Likert Scale	Rhodes et al. (2017)	Youth mentoring

Coaching Mentors

Coaching mentors is another practice that supports formative evaluation. This practice appears to be more commonly used in teaching and health professions. A coach might observe a video of a mentoring session or sit in on a mentoring session. The coach then debriefs the session with the mentor to identify examples of good practices and an area to improve on a skill. There are many resources on coaching others—see, for example, *Brilliant Coaching* (Starr, 2017) or resources from the New Teacher Center (https://newteachercenter.org/resources/). The point of coaching mentors is to provide an opportunity for reflection on their mentoring practices and for further development of their skills.

Communities of practice are another example of coaching mentors. A community of practice provides the opportunity for mentors to share what is effective and areas where help is needed. Perhaps, for example, a mentor is having difficulty helping a mentee overcome an obstacle or develop in a desired area. Suggestions from other mentors who have faced similar situations can be helpful. Scholars find that communities of practice for mentors can build access to resources, increase motivation to be an effective mentor, and enhance one's identity as a mentor (Holland, 2018).

Safety Nets

Formative assessment can be used to reduce negative mentoring experiences. Unfortunately, mentoring is not an effective relationship for everyone. Although dysfunctional relationships are not common, they do occur. It is critical that formal mentoring programs have a process to identify

problems early to facilitate a graceful exit or what some call a no-fault divorce.

Establishing an early check-in at the start of the mentoring program is one example of a safety net. You might have a survey or request that mentoring partners submit a report about their first mentoring meeting. If pairs have not met yet, the program manager can intervene to discern the problem and rematch the individuals as needed. It might be that their schedules do not match, or a personal crisis might make it impossible for a person to participate in mentoring after all. Some programs provide the option to indicate in a survey if a mentor or mentee wishes to be rematched.

The point is to provide an opportunity for participants to indicate they can no longer participate or that they wish to be rematched. Programs that lack such opportunities may leave participants feeling that they have failed someone in the relationship. Mentoring programs are meant to motivate and empower participants, not leave them feeling like a failure.

Formative Assessment Can Contribute to Evaluation.

You might be wondering, "Can I use formative assessment for program evaluation purposes?" The answer is yes. Assessment can provide information during the program that improves participants' experiences, and it may provide you with information at the end of the program about whether the program achieved its goals.

To use formative assessment for evaluation purposes, it is useful to collect baseline data on the areas of interest to track changes over the course of the mentoring program. Baseline data refers to data on participants or the organization that is collected before the mentoring program starts. Use your logic model to collect relevant information related to the program goals so that you will be able to assess if there is a change in these indicators.

Baseline and subsequent data need to have identifying information to track the change for a person over time. If a goal of the mentoring program is to increase mentee career identity, you might collect that information in an application at the start of the program and at the end of the program in a survey. The information in the application might be shared with the mentor as part of a formative assessment. Changes at the end of the mentoring program can then provide information to evaluate the success of the program.

You could collect data from anonymous surveys to guide future mentoring workshops during the program and examine it at the end of the program to determine if the workshops met the intended program goals. Asking participants to complete session feedback reports is another way of collecting information that provides the participants time for reflection and provides you program-level feedback on meeting frequency and success.

This section was about formative evaluation, but you can also use this data as part of your summative evaluation of the program, which is described in the next section.

Participant Consent

Obtaining participant consent is a topic you need to consider at the start of your assessment efforts. Participant consent relates to research ethics; and remember that assessment and evaluation are not research studies. Universities have different practices related to their institutional research activities. This chapter discusses assessment that is related to determining the effectiveness of educational interventions. Such practices are not research activities and would be categorized as *exempt from research.* However, some institutions want any projects that are exempt from research to receive that designation from the institutional review board (IRB) or other ethical oversight committees. For more information about the IRB, see Chapter 14.

Assuming that your IRB agrees that your evaluation effort is exempt from review, you do not need participant consent to collect evaluation data. However, you should be prudent and careful in collecting identifying information as part of good practice. I suggest these practices:

- Anonymize data when possible.

- Refer to identified data by numbers, rather than by name, in any reports.

- Report data in the aggregate so that individuals cannot be identified; if the categories are too small, then combine them. For example, if there are only two women in one major, you should not report gender by major or combine the major with another one.

If you do plan to present your evaluation results, your work may be considered research (see Chapter 14), and participant consent may need to be obtained to include their data in your presentation.

Summative Evaluation: Mentoring Program

Evaluation occurs when the program is over. It is a summative practice that lets you know if the mentoring program achieved the desired goals and reflects your efforts to make that evaluation. It is important to evaluate your program to ensure that the program goals are achieved. If they are not achieved, then evaluation can help you determine what needs to be changed to improve the program next time to achieve the desired goals.

Evaluation is your way of determining if the program met the needs of the individuals and the organization. Your logic model should guide your evaluation efforts. In other words, there is no need to collect information that is not related to the outcomes in your logic model. Conversely, it is important to have data and information about each of the outcomes listed in your logic model. Evaluation activities provide you with data on the outcomes of your mentoring program.

This section first presents methods and designs used to evaluate mentoring programs, then highlights information about when, how, and from whom to collect data. I then present suggestions for summarizing data for a lay audience.

Methods

Method refers to your approach to collecting information. Quantitative information is numerical and

can be analyzed statistically if you have a large enough sample. Qualitative information is not easily summarized numerically. It might refer to written responses, photographs, or observations. Qualitative data can be transformed into numerical data by categorizing information.

There are benefits and costs to collecting both types of data. Quantitative data is easier to summarize using means or frequencies; for example, how many mentees applied to graduate school. However, it may not present the holistic experience of your mentoring program; for example, the challenges a mentee overcame with their mentor to apply to graduate school. On the other hand, qualitative data can provide vital details about the mentoring experiences. However, it can be time-consuming to summarize and share qualitative data with others.

An effective practice is to collect a combination of quantitative and qualitative data. For example, you might have a survey with Likert responses (1–5) with one free-response question. You might also keep attendance and meeting records along with a few photographs and quotes about key mentoring activities.

Design

An evaluation of the program's effectiveness requires some type of comparison, either with the participants before they started the program or with similar people who did not participate in the mentoring program. If all you have is a survey at the end of the program for only the program participants, then you have not engaged in evaluation. It is possible that people would have changed over time anyway, and it had nothing to do with the mentoring program.

There are two main designs for an evaluation effort: (a) control group comparison, and (b) time series.

Control Group Comparisons

Using a control group allows you to compare the outcomes your mentoring participants report to a similar group who did not participate in mentoring. Some programs use a waitlist control group, made possible when more people wish to participate than you can accommodate in the mentoring program. You can randomly assign some people to the program and the rest to a waitlist. You can then administer a similar survey to both groups to assess differences in outcomes between participants and non-participants. Presumably, you will select the people from the waitlist to participate in the next round of your program.

Another way to create a control group is to identify people similar to your participants, perhaps by grade point average or when they started at your institution. Mentoring programs for first-generation students often work with their institutional research office to find a similar sample of students by grade point average and year in school to determine if students in the mentoring program have increased retention.

Time Series

A time-series comparison means you are examining changes over time for participants. Thus, you

would collect relevant information related to the program outcomes at the start of the program (referred to as baseline or Time 0 data) and then at key points in the program (Time 1 or Time 2). For example, if a goal of the mentoring program is to increase faculty members' scholarly productivity, a short survey may have a question at Time 0 about how many articles they published or submitted in the last 12 months, and then a similar question is posed at 6-month intervals. The hope might be that for people in the mentoring program the number of articles published later in the program is greater than the number of articles published at Time 0.

When to Collect Data

Unless your program is shorter than 2 or 3 months, consider having three or four data collection points: at the beginning of the program, a month into the program (to make sure people are meeting), in the middle of the program, and at the end of the program. Of course, you do not need to collect the same data at every interval, but collecting similar information at the beginning and end could provide information about if the program resulted in the desired changes.

It is also helpful to examine data from program activities. If the program was not successful, then examining which activities might have had low attendance or did not go as planned might provide information about program changes. Similarly, if the program goals were met but few people participated in certain program activities, those activities might not be needed.

The timing of data collection efforts needs to align with your organizational calendar to avoid times that would lead to low response rates. For example, students will be unlikely to complete a survey during an exam week, and faculty members are unlikely to complete a survey over a summer break.

Your logic model should be a guide for when to collect information. Surveying participants monthly can become burdensome. However, having an evaluation at the end of a workshop will likely get you the needed information about that activity. Too little information means you do not have enough data to determine the effectiveness of program activities and outcomes. It is helpful to design a calendar at the start of the mentoring program that will highlight what data to collect and when. This information can also be shared with participants so they can be encouraged to fill out a survey before the survey arrives.

How to Collect Data

Most program managers rely on surveys to collect information. However, focus groups, interviews, and archival evidence are also useful data points. In the following sections, I briefly review each approach.

Surveys

Surveys are frequently used in evaluation efforts, and rightly so. With online survey software, they can be easy to automate, administer, and summarize. There are best practices for writing surveys and survey questions, which are beyond the scope of this chapter. However, there are three suggestions that might help you use surveys effectively.

First, use or adapt evidence-based surveys that have been used and tested by others. Resources in the assessment section above provide numerous examples. If you must create your own survey, then be sure to test it on others before sending it out to everyone.

Second, keep the survey as short as possible and have only one or two free-response questions. Short surveys will increase your response rate.

Third, be sure to share the results of the surveys with participants so they may be encouraged that you are using their information. This feedback may make them more likely to view completing surveys about the program as worthwhile.

Focus Groups

Use a focus group when you do not know enough to ask a succinct survey question. Perhaps there is a new component to the program, or you wish to examine a particular aspect of the mentoring program in depth. Focus groups should involve five to seven people and last 20 to 45 minutes. A focus group allows you to collect more detailed, nuanced information in a more efficient manner than in an interview.

There is a skill to conducting focus groups so that you do not unintentionally lead the participants to respond in certain ways to please you. Thus, be sure to practice, and prepare your questions to be open-ended and objective. Avoid questions that can be answered with a yes or no response. Rather than asking, "Did you like the mentoring program?" you might ask, "Describe what activity was most meaningful to you in the mentoring program."

Interviews

In general, I discourage the use of interviews, as they are time intensive to conduct and to summarize. However, there are times when interviews might provide evaluation information, especially if there is also a research component to the program. There are two other times when interviews might be warranted. First, if you have survey data that points to a problem, then you might want to conduct a few interviews to get more insight into changes that need to be made. You may have a survey response about a negative mentoring experience that escaped your safety net. It would be meaningful to talk to that person to learn more about what happened, how to prevent it in the future, and how to rematch or support the person.

Second, you may wish to interview participants who report exceptional experiences. An interview might provide insight into mentoring practices that could be shared with future participants.

Archival Data

Finally, remember to include archival data in your evaluation. Such data might include photographs of events that document attendance or key program activities. Unsolicited emails and assessment information is also archival data that can provide insight into the program's effectiveness.

From Whom to Collect Data (Participants and Stakeholders)

Most program coordinators collect information from mentees. However, be sure to collect data from mentors and other stakeholders. Such data will give you multiple perspectives to assess the effectiveness of the mentoring program.

Evaluation Summaries

It is important to prepare a brief report of your evaluation data to share with your stakeholders. Consider adopting the practice of creating an annual report or success story about your mentoring program. Rather than having pages of charts, tables, and reports, try to organize your data according to your mentoring program's key activities and goals.

Many program coordinators find a simple template helpful. Create a success story that has one or two tables or charts of data that provide information about your program goals, a couple of quotes from program participants, and a couple of photographs that highlight key program activities. This summary requires you to select the key data points, and it enables you to get feedback from stakeholders about the program's effectiveness.

There may be evaluation results that suggest changes are needed. Establishing an annual practice to examine the data with others, perhaps an advisory board, can help you to use evaluation information to improve the mentoring program.

Tips for Getting Started

In this chapter, I try to point out that assessment and evaluation are important activities that do not have to be complicated. Take these actions to get started. Administer a short survey at the beginning and end of the program that asks participants questions related to the program goals. Have a one-item check-in question after the first month of the program to ensure people are meeting. This check-in will enable you to rematch pairs or intervene so that participants are actually participating in your program. Provide a short evaluation of required events; see Lunsford's (2021) *The Mentor's Guide* for a suggested evaluation. Create one or two opportunities for participants to self-assess their progress in the mentoring program. Then, summarize this data annually and review it with stakeholders.

You do not need to have a comprehensive assessment and evaluation effort in your first year. Engaging in small, iterative improvements will be less overwhelming for you and your participants. Establishing a practice of assessment and evaluation, however, will create a culture that will support your participants and let you know if the mentoring program is successful.

Conclusion

Figure 13.5 presents an overview of the formative and summative activities described in this chapter. The formative activities refer to assessing the relationship. The program coordinator is directly involved in these activities by checking in to make sure participants are thriving in the mentoring relationship and resolving any problems (safety net and coaching). At the beginning of the relationship,

mentees and mentors may complete a mentoring contract or take other assessments, listed in the table, to provide an opportunity to reflect on their mentoring skills and relationship. Levels 1 and 2 in the Kirkpatrick model, and measuring outputs in a logic model, are the key formative assessment activities.

Summative assessment includes comparing mentoring participants to non-participants (a control group) or collecting information on change over time. Summative assessment focuses on Levels 3 and 4 in the Kirkpatrick model and on measuring outcomes and impact in a logic model.

The information in this chapter will help you to be confident in making claims about the effectiveness of your mentoring program. Mentoring programs are resource-intensive and it is important to use those resources wisely and well. Learn to create assessment opportunities in your mentoring program for your participants to reflect on their progress in ways that alert you to potential problems (and to successes). Evaluation, which occurs after the program is completed, will help you determine if the mentoring program achieved its goals.

Figure 13.5

Chapter Overview of Formative and Summative Activities
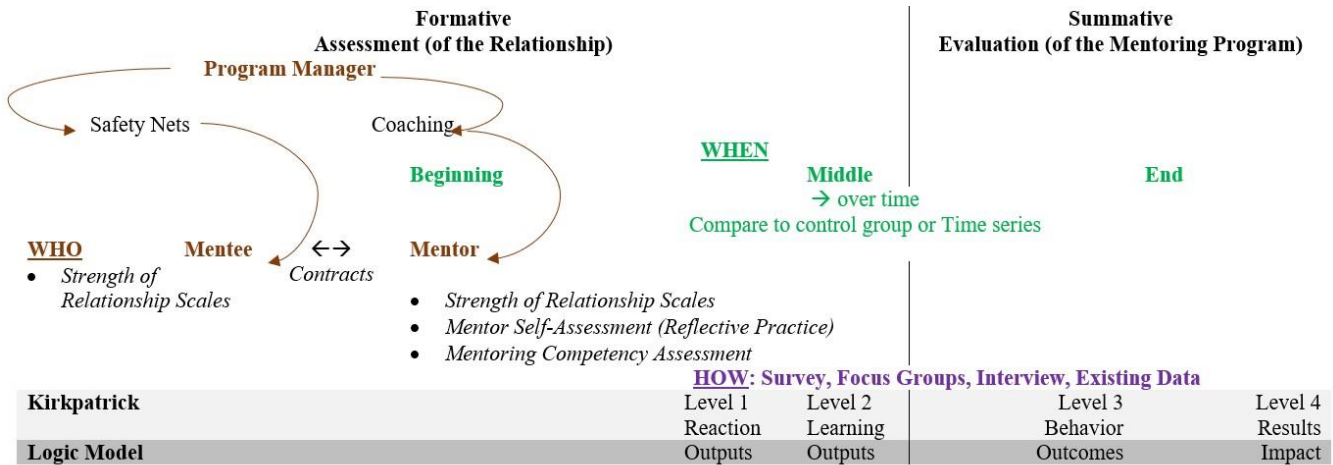
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First Generation Mentoring Program Logic Model							
Resources & Inputs	Activites		Outputs		Outcomes		Impact (Goals)
Office Space	Recruitment campaign for mentors and mentees	→	10 emails (Aug) to campus depts/organizations	→	People know about First Generation Mentoring Program (Attitudes)	→	Increase awareness of needs of first generation students
.05 Director Time	Review registration forms (mentors and mentees)	→	Review forms and match mentees & mentors				
Intern (6 hours/wk)	Hold August welcome reception	→	75% of mentee-mentor dyads will attend				
Mentors and mentees	Schedule and hold Game day	→	15 people will attend this event	→	Increase sense of belonging	→	Increase retention of first generation students
$5000 Budget	Schedule and hold Kickball tournament	→	10 people will attend this event				
	Schedule and hold Friendsgiving	→	15 people will attend this event				
	Schedule and hold National first gen day	→	all day event so more people will attend (aim for 25)				
	Schedule and hold Destress event (stress management)	→	15 student attend the destress event to learn about stress management	→	Develop resiliency among mentees (Behaviors)	→	
	2 required/recommended meetings	→	95% of mentors and mentees met at least 2 times a semester	→	Increase student motivation to stay in school (Attitudes)	→	Mentees feel they can be successful in college
	Administer satisfaction survey to mentees	→	90% completion rate	→	90% of participants satisfied with program	→	Program feels welcoming to participants
	Create email templates for the future	→	create and save email templates to a google drive	→	Improve program administration		

14.

THE MENTORING PROGRAM AS A RESEARCH PROJECT

David Law; Nicole Vouvalis; Andy Harris; and Jim LaMuth

Abstract

Chapter 14, "The Mentoring Program as a Research Project," helps stakeholders, program coordinators, and researchers distinguish the differences and similarities between program evaluation and program research. If stakeholders choose to include program research, they will need approval from their university's institutional review board (IRB). Therefore, the second section of this chapter helps stakeholders navigate the IRB. The third section of this chapter describes how theoretical frameworks, operational definitions of mentoring, and methodological designs factor into mentoring programs that contain research. While all formal mentoring programs in academia should include theoretical frameworks, operational definitions, and sound methodology, many do not. The third section of this chapter highlights the interconnectedness between theory, definitions, methods, and measurements. The fourth and final section provides examples of measurements that can be used. Some of these measurements may be used for both evaluative and research purposes.

Introduction

As described in Chapter 13 by Lunsford, modern mentoring programs are expected to be evaluated. When stakeholders of formal mentoring programs in academia give input into the design/ redesign, implementation, and evaluation of their mentoring program, they may also consider whether they want to include program research. For example, stakeholders could ponder such questions as Do we want our program's findings to contribute to generalizable knowledge in the academic mentoring field, or is the intent to provide information for and about our program only? Are we answering questions or testing hypotheses, or are we simply assessing the effectiveness of our program?

Stakeholders' answers to such questions provide insight regarding whether or not they should include program research as they design their program. Chapter 14 guides stakeholders who choose to include a research program in addition to their evaluation program. Program evaluation and program research have different and distinctive processes. However, some program evaluation and research activities, such as data collection, may have similar processes but different purposes. Thus, the differences and similarities between program evaluation and research can confuse novice program coordinators and other university leaders. We offer the following four sections to provide clarity to the novice program coordinator and help them make an informed choice of including program research in addition to program evaluation. The first section helps the reader distinguish between what is considered program evaluation and what is considered program research in academic mentoring programs. If stakeholders choose to include research, they will need approval from their university's institutional review board (IRB). Therefore, the second section of this chapter is to help the reader navigate the IRB. A long-standing shortcoming in formal mentoring programs in academia is a need for methodological rigor. The third section describes ways to improve methodological rigor to help program research contribute to the science of mentoring. The third section also highlights the interconnectedness of theories, operational definitions, research variables, and measurements. The fourth section of this chapter describes possible measurements to consider for research. Some of these measurements can be used for both evaluative and research purposes.

Differences and Similarities Between Program Evaluation and Program Research

An evaluation plan is critical for every formal mentoring program in academia. Figure 7.1 in Chapter 7 visually displays how evaluation informs all aspects of the mentoring program. Most formal mentoring programs have an evaluation plan; however, only some programs include a research component. While stakeholders (including university administrators and program coordinators) may consult with the IRB, ultimately, the IRB will determine whether program activities fall within the research category. For example, the National Institute of Health's (NIH) website on human research design (https://irbo.nih.gov) provides guidelines for methodological design, selecting subjects, and publicizing results. Still, it does not necessarily differentiate evaluation from research because some activities can occur in both. The NIH also has provided the following guidance to provide clarity between program evaluation and program research. We start with the following definition of program evaluation: "The Centers for Disease Control defines program evaluation as a systematic method for collecting, analyzing, and using data to examine the effectiveness and efficiency of programs and, as significantly, to contribute to continuous program improvement" (Centers for Disease Control

and Prevention 2022). This website provides critical concepts to help investigators understand the similarities and differences between program evaluation and research.

- When program activities respond to a research question or a hypothesis, and the information collected contributes to generalizable knowledge, then the program includes a research component (i.e., beyond the context of the specific institution[s] conducting the evaluation).

- The IRB determines whether these projects are research on a case-by-case basis.

- The IRB makes this determination by evaluating a group of factors, including the purpose and intention of the project, level of risk, and methodology.

- Publishing or presenting program evaluation findings does not automatically mean the project is research.

For program activities to fall within the category of research, the IRB assesses whether these activities meet the definition of research and whether the project involves human subjects. With the understanding that mentoring programs involve humans, we focus on the definition of research.

According to the federal regulation[1], research per human subject protection regulations means a systematic investigation (including research development, testing, and evaluation) designed to develop or contribute to generalizable knowledge.

The keywords in the definition of research are *systematic investigation* and *generalizable knowledge*. The dictionary defines systematic as having a method or plan, possibly concerned with classification. Definitions of investigation include a detailed or careful examination, exploration, or learning of the facts about something complex or hidden. Attempting to answer a question or prove/disprove a hypothesis indicates that an activity is a systematic investigation[2] Contributing to generalizable knowledge means that there is intent on sharing information about the mentoring program with others.

The IRB evaluates several factors in determining if program activities fall within evaluation or research. Both research and evaluation activities can share some of the same outputs, but with different content. For example, when designing the program's activities, program coordinators may choose to publish findings from the program. While both evaluation and research findings may be published, the content would differ. A publication stemming from the evaluation would describe the results of the evaluation. In contrast, a publication from the research activities might describe the effects of the mentoring program. To clarify this, we provide Table 14.1. This table is condensed and modified to focus on mentoring. In the first column are eight common elements that help distinguish between program evaluation and research. The first common element is intent, and the last is the dissemination of results. The second and third columns explain the difference between evaluation and research for each of the eight common elements.

Table 14.1

Common Elements of Evaluation versus Research for Mentoring Programs

Intent	The intent is to evaluate a specific academic mentoring program and only provide information for and about that particular program.	The intent is to do a systematic investigation, including research development, testing, and evaluation designed to contribute to generalizable knowledge. The data will be used to draw conclusions for the larger academic mentoring field.
Focus	The focus is on the mentoring processes, products, or programs.	The focus is on the mentoring population (human subjects) or strategies the mentors utilize.
Subject population	Statistical justification is not used to determine the sample size.	Statistical justification or other disciplinarily appropriate methodology determines the sample size.
Design and desired outcome	The mentoring program is designed to assess the effectiveness of or improve a process, product, or program via: · needs assessment · process, outcome, or impact evaluation · cost-benefit or cost-effectiveness analyses May involve a comparison of variations in the mentoring program.	The mentoring program or subsequent inquiry is designed to answer a question or test a hypothesis to develop or contribute to the scientific storehouse of knowledge or theory within the mentoring field via: · procedures, component(s), or analyses (i.e., involving combining data with other projects); · randomization of individuals to different processes or interventions; · novel research ideas, experimental activities that are not yet known to be efficacious; or · expanded sites or literature reviews. May be designed to be descriptive or prove a relationship, correlational, or causation.
Effect on standard procedures or normal activities	The evaluation of the mentoring program rarely alters the standard procedures while the mentoring project is ongoing.	An experiment or nonstandard intervention may alter the mentoring program's standard procedures or normal activities.
Funding	The mentoring program may be unfunded, funded by the university, or externally funded by an agency focused on mentoring programmatic activities.	The mentoring program may be unfunded, funded by the university, or externally funded by an agency focused on mentoring research.
Effect on program or practice evaluated	Findings of the evaluation are expected to directly affect the conduct of the program and identify improvements.	Findings of the study are not expected to directly or immediately affect the program, although they may also be used for this purpose.
Dissemination of results	The results of the program evaluation may be published. The intention is to disseminate details of the program's effectiveness and not contribute to generalizable knowledge.	The desire to share the effects of the mentoring program impacts the choice of procedures, design, and analyses to strengthen generalizability and extend the program's findings.

After reviewing Table 14.1, it can be helpful for program coordinators to answer the following questions to help determine if program activities fall within the categories of evaluation or research.

- Is the *intent* to systematically test hypotheses and draw conclusions for the larger academic mentoring field? If yes, the activity is likely research.

- Is the *focus* on human subjects? For example, strategies mentors might utilize. If yes, the activity is likely research.

- Is statistical justification used to determine the methodologically appropriate sample size of the *subject population*? If yes, the activity is likely research.

- Does the *program's design* contribute to the scientific storehouse of knowledge by using comparison groups? If yes, the activity is likely research.

- Does the program's *design* contribute to the scientific storehouse of knowledge by including novel activities in the mentoring field? If yes, the activity is likely research.

- Is the program *designed* to assess relationships, correlations, or causations among variables of interest that contribute to the scientific storehouse of mentoring knowledge? If yes, the activity is likely research.

- Are the *program's standard* procedures altered by an experiment or nonstandard intervention? If yes, the activity is likely research.

- Is the program *funded* by an agency focused on mentoring research? If yes, the activity is likely research.

- Do the *dissemination* goals impact the program's procedures, design, and analyses to strengthen generalizability and extend the program's findings? If yes, the activity is likely research.

Suppose the answer to any of the above questions is yes. This suggests that the program's activities involve human subjects and contribute to generalizable knowledge, falling within the research category. The program coordinator should work with their respective IRB to make this determination and ensure the research is conducted according to IRB standards. The second section of this chapter guides the program coordinator as they navigate their respective IRB.

Navigating the Institutional Review Board

Research with human participants has been a way of acquiring new knowledge since time immemorial. While this tradition has a rich history of gainful, ethical scientific inquiry, there is also a darker side to scientific exploration using human research subjects. Institutional review boards (often called research ethics boards, human research ethics boards, or research review boards in contexts outside of the United States) were developed in response to a fraught history between those conducting

the research and those being researched. Infamous examples abound, such as the Tuskegee syphilis study, the Stanford prison experiment, and more recent ethical blunders like the Facebook contagion study and experimental contributions to the Linux kernel by researchers at the University of Minnesota.

In short, IRBs exist to ensure that research with living people as subjects is conducted according to certain ethical principles. Those principles depend on the context of the research work. In the United States, IRBs adhere to the *Ethical Principles and Guidelines for the Protection of Human Subjects of Research* document created by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. This document is called the *Belmont Report* (so named for the location where the commission met and created this guide in 1979: the Smithsonian Institution's Belmont Conference Center).

You will find an IRB at any institution or organization that accepts federal funding for research with human subjects, as defined in the previous section of this chapter, and even within some institutions or organizations that do not receive funding but wish to ensure that their human subjects research portfolio is being conducted ethically. If an institution does not have its own IRB, it likely contracts with another institution's IRB or an independent IRB for its reviews. Typically housed within an office for research or an office for academic affairs, IRBs are structured to meet the requirements of 45 CFR 46: a chair, a nonscientist member, a scientist member, a person unaffiliated with the institution, and a prisoner representative, if that organization conducts research with incarcerated individuals.

Policies and procedures at each organization define who can determine whether a project is considered research with what is considered human subjects. Most institutions leave the final say to their IRB. Thus, it is prudent to check with your IRB about whether your program activities might constitute research with human subjects, or HSR (human subjects research). Most institutions make a straightforward and fast process available wherein a researcher can obtain official documentation from their IRB that the process is not HSR—typically called an NHSR determination or a request for determination process. Where it is desirable, many institutions' IRB staff will even help faculty reshape their project so that the project falls outside the IRB's jurisdiction. Successfully navigating the IRB begins with understanding what the IRB expects from you.

What Does Your IRB Expect From You?

Each IRB approaches its work in different and distinct ways. As you build your evaluation plan within your team, consider using your institution's IRB application template as a guide. Every IRB application is different, but you can expect to address the following items no matter where you are submitting:

- purpose of the project
- research staff who will contribute to the research program's effort
- whom will the participants be
- how will they be asked to participate
- the procedures for your evaluation activities and research activities
- risks and benefits of the project

- how the research team will manage/protect privacy and confidentiality
- whether and how informed consent will be obtained

Before you ever start to fill in an application (called a *protocol* in the IRB world), if you have thought through and addressed these bulleted items as a team, you will be in excellent shape for submitting your application to your IRB. Once you have outlined your proposal for your evaluation and research efforts, we suggest meeting with someone from your institution's IRB. Request a consultation with the staff who review these submissions and ask them to talk with you about how to make the review process go smoothly. Based on our experience at Utah State University, our IRB office team finds that most common pitfalls in the review and approval process for mentorship projects stem from a lack of clarity between the activities of the program, the activities of evaluation, and the activities of research. As you consult with your IRB staff, make sure they understand these distinctions. If there are new, extra, or experimental things that you are doing to create generalizable knowledge, share these with your IRB consultant. A good IRB staffer will pick up on the nuances between program evaluation and program research and help you shape a protocol that can be reviewed swiftly without too many clarifying questions.

Review Processes and Timelines

The review process you will undergo depends very much on the structure of your evaluation and/ or research efforts. A scenario in which you are collecting readily available information from/about participants, not using comparison groups, working with adults, and evaluating the program at the request of your institution will look very different from a scenario in which you are sorting participants into comparison groups, conducting additional surveys to address specific research questions, or working with children. Both are valid ways to approach evaluation or research efforts, and you should choose the approach that best fits the purpose of your program. These distinctions will help you understand the review and process of the IRB.

Under the first scenario mentioned, you can expect your IRB to declare your research *exempt*. Exempt, in this context, does not mean that you do not have to submit to your IRB; instead, your project will be exempted from most requirements outlined in 45 CFR 46. Note that this would not exempt the project from other requirements, such as those enshrined in the Family Educational Rights and Privacy Act (FERPA) regarding the protection of identifiable student records, as well as any requirements your institution might put in place regarding issues from allowable data access/storage to what email accounts are permitted to be used. Usually, your IRB will inform you of these requirements either in their review process or by using ancillary review processes, which bring in other offices to ensure that the institution has prepared you for a successful and compliant project.

Under the second scenario outlined above, researchers should plan for at least an expedited review process, meaning that it is eligible for a process that is faster than a review by the full board (sometimes called convened IRB review), using a process outlined by the policies and procedures governing the IRB. In some cases, depending on the design of the intervention groups, the review might occur via the full board. Timelines for these processes vary. IRBs accredited by the Association for the Accreditation of Human Research Protection Programs (AAHRPP) will compile, at least annually, timelines for their review processes. Therefore, asking how long a review process will take is perfectly acceptable. The most recent timelines from AAHRPP show that researchers should expect a turnaround time of 20–50 calendar days on their applications.

Researcher Responsibilities Post-Approval

Once the protocol is approved, it would be surprising if everything went exactly as you planned in your initial protocol. The realities of research implementation, working with humans, and the unexpected necessarily mean that changes will occur. Your IRB expects this to be the case and will have policies and procedures outlining when a researcher must file an amendment (or modification) to their protocol. Before implementing the change with your participants, revisions must occur, so plan for adequate lead time! If a change needs to be made before the IRB reviews and approves it, it becomes a reportable event that you must disclose to the IRB. In all cases, researchers must keep a line of communication open with their IRB regarding their project.

Another vital aspect to consider post-approval is informed consent. The process and procedures of obtaining informed consent will be clarified during the review. However, that does not mark the end of the researchers' responsibility to keep participants informed. As changes occur, it is crucial to ensure that your participants remain up-to-date on essential facets of the project. Informed consent is an ongoing process, not a one-time interaction, and researchers remain responsible throughout the project's lifetime for adequately informing their research participants.

Post-approval monitoring is another way researchers might interface with their IRB once initial approval has been obtained. That might be as simple as an email check-in with the research team or as involved as a full audit of study records, depending on your IRB's policies and procedures. In all cases, it is critically important to respond promptly and honestly. Some other important considerations for the life cycle of the protocol include:

- keeping research staff up-to-date

- ensuring all members of the study team maintain adequate training

- knowing where to find necessary documentation, such as approval letters, continuation review letters, amendment approvals, and disapprovals, and any status reports you previously submitted to the IRB

- updating the IRB on the status of your project

Closing a Protocol

Generally speaking, it is time to close your protocol when the interventions with participants are done, analyses complete, and identifying information about participants destroyed. IRBs will have a process for doing this; in some systems, it is as simple as pushing a button in your protocol-management system. A full audit might be appropriate before the project wraps up. Be sure to keep informed-consent documentation for at least 3 years following the closure of the protocol and finalize compliance with any data-management plans you might have submitted previously. If you commit to sharing findings with research participants, ensure this is completed before closing your protocol.

The most important thing to remember is that your IRB supports your research while prioritizing your research participants' perspectives, rights, and welfare. IRB staff and board members are not trying to overregulate, protect the institution's interests, or find wrongdoing, so keeping open lines of

communication and periodically checking in will benefit all parties during the life cycle of your mentorship evaluation project.

The first two sections of this chapter prepare the program coordinator to distinguish between program evaluation and program research and how to successfully navigate the IRB when their mentoring program does include research. The third section of this chapter focuses on how creating a theoretically and methodologically sound program enhances the program's research activities.

Creating a Theoretically and Methodologically Sound Mentoring Program

Chapter 2 of this book describes the essential role of theoretical frameworks in designing mentoring programs. Chapter 13 provides frameworks to guide assessment and evaluation efforts. Finally, thissection of Chapter 14 discusses theoretical frameworks and program methodology pertaining to research. The theoretical framework and methodological principles discussed in this section will improve the program research and overall quality. In reviews of the scientific literature on mentoring programs in higher education (Crisp & Cruz, 2009; Gershenfeld, 2014; Jacobi, 1991; Tinoco-Geraldo et al., 2020), scholars in the field have suggested that research into formal mentoring programs lack much of the theoretical and methodological rigor that is common in other areas. This section guides the reader in strengthening their program's research by connecting it to a sound theoretical framework and rigorous methodology.

Theoretical Frameworks

We continue this discussion on theoretical frameworks in the context of research because methodologically sound research benefits from a solid theoretical foundation. Before proceeding with this section, we encourage readers to skim the four case studies in Chapters 16 through 19, where the mentees are undergraduate students; the two case studies in Chapters 20 and 21, where the mentees are graduate students; the three case studies in Chapters 22 through 24, where the mentees are faculty members; the two case studies in Chapters 25 and 26, were university staff are the mentees; and the one case study in Chapter 28, on networked mentoring.

Suppose you are a program coordinator in your college, and an associate dean asks you to address the high attrition rate of undergraduate students. As you familiarize yourself with the literature on student attrition, you come across Vincent Tinto's (1993) landmark book *Leaving College: Rethinking the Causes and Cures of Student Attrition*. On page 147, you read, "Effective retention programs are committed to the development of supportive social and educational communities in which all students are integrated as competent members." As you reflect on Tinto's comment, you begin to appreciate that a faculty-to-student mentoring program could help develop these supportive social and educational communities, which could lead to higher retention. These relationships are summarized as follows:

Faculty-to-Student Mentoring Program → Student Retention

As you continue to explore the literature on theoretical frameworks for formal mentoring programs, you ask yourself, How does a mentoring program lead to student retention? Through the continued reading of Tinto's social integration theory, key constructs such as a *sense of belonging* and *student*

retention crystalize, and relationships between these constructs begin to take shape. As you continue your exploration of theoretical models, you also are drawn to Kram's *mentor functions* (Kram, 1985) and social learning theory (Bandura, 1977). As you reflect on key theoretical constructs, you start to make connections such as a mentor who provides academic subject knowledge, career guidance, and psychosocial support will become a role model for the mentee. By providing these services, the student feels like they belong to the university family, which will increase retention rates.

Faculty-to-Student Mentoring Program → Sense of Belonging → Student Retention

Developing key constructs that are theory-driven and clearly stating the relationships between these constructs starts to provide a model for how you think your intervention will impact the mentees of your program. This theory-of-change model is essential to developing an effective program and program research. In this chapter, we use the theory of change to connect key constructs from theoretical models to the program's desired outcomes. Chapter 13 also uses the theory of change to describe logic models that explicitly connect resources, activities, outputs, outcomes, and impacts (see Figure 13.1).

Theory of Change

As you continue the exercise above, asking how and why your mentoring program is supposed to lead to your desired outcomes, you will develop a theory of change that can be summarized with a series of if/then statements. First, you need to create a diagram of your theory of change, which can guide you in implementing your program's research. You can find an example of an effective theory-of-change diagram in Appendix A of Chapter 18. An abbreviated[3] version of the if/then statements from that case study are as follows:

- IF mentees **enroll in the mentoring program**, THEN the mentor will provide **academic expertise**, **career guidance**, **psychosocial support**, and **role modeling**.

- IF mentors provide mentees with academic expertise, career guidance, psychosocial support, and role modeling, THEN mentees will **successfully adjust to the university** and **feel like they belong there**.

- IF mentors help mentees successfully adjust to the university and gain a sense of belonging, THEN mentees will **connect to an academic discipline** and **develop goals and a plan to achieve them**.

- IF mentors help mentees develop a plan to achieve their goals, THEN mentees will **increase their persistence**, **retention, grade point average**, and **graduation rates**.

Describing the theoretical links between mentoring and student retention is not just an intellectual exercise; it shifts the focus of what is emphasized. With a theoretical framework, links between mentoring and the dependent variables being researched can be explained. Jacobi (1991) cautioned that mentoring programs might be inadequately developed when models or frameworks of mentoring remain implicant and lack clarity. In summary, to reach the intended outcomes of increased persistence, retention, grade point average, and graduation rates, the mentors in this program will need to provide academic expertise, career guidance, psychosocial support, and role modeling to the mentees. Spending time developing a clear and logical theory-of-change model offers additional

benefits as it guides the creation of an operational definition and clarifies research processes.

Clear Definition of Mentoring

When developing a theory of change, it is essential to begin with a clear definition of mentoring. A lack of a clear conceptual definition is problematic because it limits the ability to measure what constitutes a successful mentoring experience. Furthermore, a lack of clarity about what is being measured also contributed to weak research designs commonly found in the mentoring literature (Crisp & Cruz, 2009; Jacobi, 1991). Lastly, when key constructs are not made clear, it is difficult to replicate the program and program research, hindering the advancement of the science of mentoring.

In Chapter 1 of this book, Garvey describes the challenges of creating a singular definition of mentoring and instead advocates for a straightforward process that program coordinators can follow to develop their definition unique to their context. In addition to Garvey's work in Chapter 1, we find the work of Dominguez (2012) and Dominguez and Kochan (2020) helpful in guiding program coordinators' efforts in developing an operational definition for their mentoring program. Dominguez (2012) analyzed over 457 definitions of mentoring and found one overarching dimension and five elements commonly repeated. The overarching dimension is that mentoring is first and foremost a developmental relationship. The five elements included in most definitions were: (a) qualifier defining the desired qualities of the relationship; (b) defining word(s) specifying the type of relationship; (c) participants providing and receiving mentoring; (d) functions or activities in which participants engage to achieve desired outcomes; and (e) outcomes or achievements the mentor and mentee expect to accomplish. As program coordinators develop the operational definition for their program, they should let this process be informed by the theoretical frameworks used in the program. The purpose of this section is to advocate that operational definitions should be connected to the theoretical frameworks being used. When these connections are apparent, they clarify which constructs will be used and how they will be defined.

To help the reader make these connections, we again highlight the case study in Chapter 18. In this case study, there were three theoretical frameworks used: (a) Kram's mentor functions (Kram, 1985), (b) social learning theory (Bandura, 1977), and (c) social integration theory (Tinto, 1987, 1993). Additionally, the work of Nora and Crisp (2007) and McWilliams (2017) influenced the development of a clear definition of mentoring. New program coordinators may erroneously think they should only choose one theory to base their mentoring program on. However, Gershenfeld (2014) suggests that modern mentoring programs should use multiple guiding theories. Based on these three theories, the emerging constructs of interest were academic expertise, career guidance, psychosocial support, role modeling, successful adjustment to the university, and a sense of belonging or connectedness. With these constructs in mind, Spears, Hales, and Lewis, authors of Chapter 18, developed the following definition of mentoring. We have highlighted how four of Dominguez and Kochan's (2020) five elements factor into this definition. The qualifier element did not cleanly fit into the following definition:

Building a purposeful and personal relationship (defining word) in which a more experienced person (mentor)(participant) provides guidance, feedback, and support (functions or activities) to facilitate the growth and development (outcome) of a less experienced person (mentee) (participant). Operationally,

mentors provide mentees with services such as (functions or activities):

1. *Academic subject knowledge and institutional support*
2. *Education/career exploration and goal setting*
3. *Psychosocial support*
4. *Role modeling.* (Chapter 18)

Examining this definition, we hope the reader can see how this clear definition of mentoring influenced the overall development of the theory of change illustrated in this case study. Now that we have discussed how theory affects the development of the mentoring program, we now turn to the main focus of this section, which is to understand how theory connects to research in mentoring programs.

Theoretical Framework as a Guide for Research

In empirical (research) studies, theory guides a researcher in understanding what is important to measure as part of the research project. Considering the theory of change presented above, properly researching this program will include measuring many variables, including whether the mentor provides academic expertise, career guidance, psychosocial support, and role modeling. We would also want to measure the mentee's adjustment to the university, sense of belonging, academic goals, motivation, and our intended outcomes of persistence, retention, grade point average, and graduation. As noted in their review, Tinoco-Giraldo and colleagues (2020) found that more studies on mentoring programs in higher education have identified a theoretical foundation than was present in previous reviews (Jacobi, 1991; Crisp & Cruz, 2009). However, although more studies identified a theoretical foundation, only some linked theory with methodology. Most studies measured satisfaction with the mentoring relationship and called that enough; however, we need other elements to understand effective mentoring. The most refined theoretical models, such as Kram's mentor functions (Kram, 1985), Hunt and Michael's (1983) model of mentoring, O'Neil and Wrightsman's (2001) sources of variance theory, and Tinto's (1993) social integration theory, have rarely been effectively researched (Johnson et al., 2010).

Beginning with a firm theoretical foundation helps develop a mentoring program and sets up an effective research program. In the next section, we introduce the reader to basic research methodology and how it impacts the research findings.

Methodological Rigor

With an understanding of how critical a theoretical framework is, we can now discuss sound methodological principles and how these lead to an effective program. We recommend that coordinators of mentoring programs in higher education audit a course on research methodology. Such classes can be commonly found in psychology, sociology, and other related departments. These courses will provide a more in-depth look at research methodology, whereas this section is meant to be a primer on the topic. The following information will increase the validity of your research program's findings. When conducting research, it is vital to recognize and address internal and external validity threats.

Internal validity refers to the extent to which your findings can be trusted. For example, suppose in the research of your mentoring program, you conclude that retention increased among your participants. This result may be because of your program. However, it could also be due to some unrelated factor. Sound methodological design will help reduce the threat to the internal validity of your findings so you can be confident in your results.

Research Design. When testing the effectiveness of a mentoring program, a randomized controlled trial (RCT) is considered the gold standard (Webber & Prouse, 2018; if you are interested, you can find a critique of RCTs in Grossman and Mackenzie [2005]). In an RCT, participants are randomly selected from a population and then randomly put into a treatment group or a control group. The treatment group receives the program procedures, while the control group does not. After the duration of the program, researchers compare the two groups on the outcome variables. If we were to use an RTC design with a mentoring program, it would involve randomly selecting students from the entire student body. Half of those students would be chosen randomly to participate in the mentoring program. In contrast, the other half would not participate and instead would be used as a comparison at the end of a specified period, for example, one academic year.

While it is generally considered the best approach for studying programs like these, RTC might not be feasible to research mentoring programs. Because there is support for the positive effects of academic mentoring (Eby et al., 2008; see also Chapter 4 in this collection), we believe it unethical to employ a classical research design such as an RTC with random assignment to the treatment group and control group, thus denying the control group access to the mentoring program. In addition, it would be problematic to deny the program to individuals seeking the additional support associated with a mentoring program and instead randomly choose which students from the student body would be eligible for the program.

A comparison group is still necessary to address threats to the internal validity of the evaluation. For example, imagine that you evaluate your mentoring program and find that students who participated increased their GPA from the previous year. If you had included a comparison group, you might have also found a similar increase in that group. On the other hand, perhaps a year's experience was enough to improve your GPA, and your mentoring program did nothing. Therefore, when considering a research design for mentoring in academia, we recommend using either a waitlist control group or a quasi-experimental propensity-matched control group for comparison purposes.

In the waitlist control group design (see also the "Control Group Comparisons" section of Chapter 13), a group of potential mentees who do not receive the mentoring is put on a waiting list to receive the mentoring intervention after the treatment group receives the intervention. Conceptually similar to a waitlist control group design, a delayed-start design could easily be applied to mentoring programs in higher education. For example, suppose you are tasked with creating a university-wide mentoring program for faculty of color regarding feelings of isolation, lack of representation, and suboptimal retention, as described in Chapter 23. Using a delayed-start design, you could implement the program for one college in year one, another in year two, and so on. This delayed-start design will provide a naturally occurring control group for comparison purposes.

In a quasi-experimental propensity-match control group, the control group consists of matched individuals like the participants in the treatment group. These matches are made from variables of interest, such as GPA, race, first-generation student status, or other demographic variables. This example is the same control group comparison explained in the "Control Group Comparisons" section of Chapter 13. Laura Lunsford, the author of Chapter 13, states that institutional research offices can provide the identity of people similar to the treatment group for comparison purposes. In addition, the "Outcomes of the Program" section of Chapter 18 describes persistence rate comparisons between a treatment group and a propensity-matched control group.

Time Points for Data Collection. Jacobi (1991) found that most empirical research on mentoring relied on retrospective, correlational designs using small samples with data collected at a single time. All of these present a threat to internal validity. Even with a comparison group, it can be challenging to determine if a change has occurred without multiple measurement points. If you gather data on the same participants over some time, this is called a longitudinal study. If you collect data one time on a sample of a population, this is called a cross-sectional study. Crisp and Cruz (2009), Gershenfeld (2014), and Jacobi (1991) stress the need to collect data at multiple time points. Jacobi (1991) further suggests that collecting data at multiple time points is important because it is yet to be determined how long it takes for mentoring effects to emerge.

Additionally, if you reflect on the theory of change presented earlier, it is clear that multiple measurement time points are necessary to test such a model. The process of receiving support from a mentor, feeling connected to the university, developing and then working toward academic goals, and finally accomplishing those goals is unlikely to occur in a single semester or academic year. Therefore, we echo the recommendation to include more than one measurement point in researching mentoring programs.

Mentoring programs in higher education have natural times to collect data, such as the beginning of an academic year, the end of the fall semester, and the end of the winter or spring semester. For example, suppose you are a university staff member and desire to create a mentoring program to empower staff members, similar to the case study in Chapter 26. Universities must be fully staffed at the beginning of an academic year, so the beginning of the fall semester provides an opportune time to collect data on new staff employees. Data can be collected at the end of the fall and spring semesters to gauge staff members' sense of belonging.

Clear Identity of Variables. Identifying the variables is essential for two reasons. First, it helps other researchers replicate future studies using the same constructs, dimensions, indicators, and attributes. Second, and more important, clearly identifying the variables and discussing their connection to the theoretical framework and operational definition make it explicit how the independent and intervening variables are expected to influence the dependent variables.

Threats to External Validity

External validity refers to how well your findings can be generalized to other populations. For example, would you have similar outcomes if you took any case studies in this book and modeled a similar program at your institution? Crisp and Cruz (2009) recommend that potentially extraneous

variables such as institution type, mentee and mentor attitudes, and other characteristics of mentee and mentor—for instance, gender or ethnicity—might affect the external validity of findings. Gershenfeld (2014) points out additional threats to external validity, such as small sample sizes, single geographical locations, and narrowly focused programs. We will begin with a discussion of Gershenfeld's critiques, which focus on samples, and then conclude with a discussion of Crisp and Cruz's comments on variables.

Sampling. Scientists use samples when researching because it is likely impossible to gather data from the entirety of the population of interest. If it were possible, it would represent an enormous financial and logistical burden. Thankfully, a sample from the population can be considered representative of the larger population thanks to the central limit theorem (a statistical principle beyond this chapter's scope). However, a poorly designed sample will limit the findings' external validity.

One thing that is important to consider is the size of the sample. Gershenfeld (2014) notes that more than a small sample size might be needed to find the mentoring program's effect on its participants. We call this a Type I error, when there is an effect but our study has failed to find it (false negative). The solution to this problem is gathering a manageable sample. That might make your statistical tests too sensitive where you commit a Type II error—when there is no effect but your study has found one (false positive). Too small and too large of samples both venture into the realm of unethical because they waste the participant's time and effort for an unscientific outcome (for further reading on this topic, we recommend Martinez-Mesa et al. [2014]).

Another of Gershenfeld's (2014) critiques is when programs use a single geographical location. When feasible, academic institutions should establish the mentoring program at multiple sites. If the academic institution has multiple campuses, this can easily be obtained. If the institution does not have numerous campuses, then program coordinators should strive for implementation beyond one site. For example, suppose that a specific graduate program within the college of education proposed implementing a peer mentoring program in which advanced graduate students mentor new incoming graduate students. To improve external validity, the program coordinator could propose that this program be offered to all incoming graduate students within the college.

Narrowly Focused Program. Gershenfeld's (2014) final critique is that some programs are too narrowly focused. A program like the one described above, with peer-to-peer mentoring among graduate students, may have limited generalizability to other programs, such as one designed for faculty of color. The more general the mentoring program is, the more general its sample will be, contributing to greater external validity. However, not all mentoring programs are going to be general.

Often a mentoring program is designed to address a need of a specific population. In these cases, a solid theoretical foundation, a clear definition of mentoring, and clearly defined and psychometrically sound variables will improve the program's generalizability.

Extraneous Variables. When evaluating a mentoring program, it would be easiest to include only the primary variables of interest in your study. Methodologists call these the independent and dependent variables. The dependent variables are the outcomes you are interested in, and the

independent variables are thought to be associated with these outcomes of interest. As you develop a theory of change, you will find that many variables will be important to study. In Appendix A of Chapter 18, you can see that there is an associated assessment to measure each of the constructs identified by the program coordinators in their theory of change. Sound methodological design will also include additional variables, like those mentioned by Crisp and Cruz (2009): institution type, mentee and mentor attitudes, and other characteristics of mentee and mentor—for instance, gender or ethnicity. While your theory of change might be sound, it is possible that any positive effects found could be the result of one of these extraneous variables. For instance, suppose you fail to include gender as a variable in your evaluation. You find that the program overall is effective; however, if you had included gender as a variable, you might have seen a significant improvement for female mentees with female mentors and little to no effect for any other group.

Institution Type. Gershenfeld's (2014) recommendation for methodological rigor requires identifying the type of institution performing the research. For example, is the institution a community college or a four-year university? Do faculty at the institution have as their primary role teaching or research? Is the institution primarily a residential campus or a commuter campus? Is the institution located in one city or are satellite campuses spread throughout the state? Students attending these different types of institutions will have some baseline differences, and not disclosing that information creates a substantial threat to external validity. However, as mentioned above about narrowly focused programs, a robust theoretical foundation will help to minimize this threat to external validity.

Mentee and Mentor Attitudes. Program coordinators should gather attitudinal information to see how it impacts the mentoring program's outcomes. Examples of attitudinal information could be satisfaction with the mentoring relationship, perceived effectiveness of the mentoring program, satisfaction with the mentoring program, and mentoring program understanding. It might be that the level of understanding a mentee has of the program itself —such as the procedures or what is expected of the mentee and mentor —is associated with the mentee's persistence through the program. Remember that research aims to increase the general knowledge of the topic, and nuances like this would be valuable to other programs.

Other internal attitudes, such as motivation to participate in the program, could also impact desired outcomes. Motivation is crucial to persistence (Ryan & Deci, 2000) and is especially so in higher education (Müller, 2008; Simon et al., 2015).

Characteristics of Mentors and Mentees. The last extraneous variable identified by Crisp and Cruz (2009) and supported by Tinoco-Giralso et al. (2020) was the characteristics of mentors and mentees. Most programs will gather data on demographic characteristics such as gender, age, and race. However, if the needs assessment described in Chapter 5 identifies other factors critical to the study, these characteristics should be collected. For example, as a program coordinator, you were tasked to develop a faculty-to-student mentoring program to address student attrition. As part of the needs assessment, you discovered that the most vulnerable students for not returning to the university were students who had not picked a major or had an undeclared major. If this was the case, this characteristic should be gathered and assessed.

A final note to our discussion of research methodology is that Tinoco-Giralso et al. (2020) also

recommended that measurements used to assess the mentoring relationship quality be validated. Using valid measures is essential for all of the variables under investigation. The last section of this chapter addresses the issue of valid measurement.

Measurements for Academic Mentoring Programs

Assessment is integral to any research and scientific endeavor to improve a project's quality and outcomes while gaining insight into the question(s) under examination. Unfortunately, assessments supporting mentoring programs have long suffered the same inconsistencies as the definition of mentoring faces, often lacking agreement on the essential functions of the relationship and criteria for evaluating its effectiveness (Berk et al., 2005). Noe (1988) indicated that mentoring lacks quantitative measures for the functions mentors provide to their mentees in the assessment field. There are commercially available assessments, especially for career mentoring programs; however, a disconnect exists between research-based mentoring scales and the instruments that practitioners use in several of these products (Gilbreath et al., 2008). Many of the tools available are designed to evaluate specific programs only, measuring the value of the mentoring functions or the frequency of mentoring. Jacobi (1991), Crisp and Cruz (2009), and Gershenfeld (2014) have all indicated that programs lack rigorous and valid instruments to measure their intended effect and outcomes.

Existing Tested Constructs for Program Assessment

As mentioned earlier in this chapter, the work of Scandura (1992), Noe (1988), Ragins and McFarlin (1990), Allen and Eby (2003), Allen et al. (2006), Hurtado et al. (2007), Ragins and Scandura (1999), and Crisp (2009) give a foundation for mentoring practitioners and researchers to use psychometrically sound assessments for both mentors and mentees. Their collective work provides assessment items supporting several constructs, including psychological and emotional support, degree and career support, academic subject knowledge support, the existence of a role model, satisfaction with the mentoring relationship, perceived program effectiveness through benefits for mentors, psychosocial support, sense of belonging, and success at managing the academic environment. These constructs, their associated research, and descriptions of the instruments are reviewed next. When different studies explore similar constructs, they are grouped together.

Crisp (2009) provides research on the constructs of *psychological and emotional support*, *degree and career support*, *academic subject knowledge support*, and *the existence of a role model* by examining the validity of the college student mentoring scales (CSMS) (Crisp, 2009). This instrument uses eight items to measure psychological and emotional support, six items to assess degree and career support, five items pertaining to academic subject knowledge support, and six items for the existence of a role model. All 25 items in Crisp's CSMA use a five-point Likert-type scale of *strongly disagree* to *strongly agree*.

Allen and Eby (2003) explore the construct of *satisfaction with the mentoring relationship through mentor effectiveness* by focusing on relationship learning and quality. They used two mentorship quality items developed earlier by Noe (1988) and Ensher and Murphy (1997). Their survey collected demographic information such as age, race, gender, education, institutional longevity, and occupation from professional mentors. It includes five items related to relationship learning and five items measuring relationship quality using a five-point Likert-type scale of *strongly disagree* to *strongly agree*.

Two constructs, *satisfaction with the mentoring program* and *perceived program effectiveness through program understanding and training*, are supported by the work of Allen et al. (2006). Their 17-question survey included seven items on perceived program effectiveness, four items on mentor commitment, four items on program understanding, and two items on program characteristics. A five-point Likert-type scale is used for all items, with the exception of the two for program characteristics. These included a yes/no and a four-indicator response for how much input mentors/protégés had on whom they were matched with.

Benefits for mentors come from Ragins and Scandura (1999), who examined the costs and benefits of being a mentor specifically for executives in a nonformalized mentoring setting. Their instrument uses a seven-point Likert-type scale ranging from *strongly disagree* to *strongly agree*, with 17 cost items and 24 benefit items. Five factors emerged for the cost items: more trouble than it is worth, dysfunctional relationship, nepotism, bad reflection, and energy drain. Five factors also appeared for the 24 benefit items: rewarding experiences, improved job performance, loyal support base, recognition by others, and generativity.

Psychosocial support benefits of participating in a mentoring program come from multiple studies. Dreher and Ash (1990) developed an 18-item instrument using a five-point Likert-type scale from *not at all* to *to a very large extent* by examining a number of the career and psychosocial functions that Kram identified in 1985. Their work considered mentoring relationships in a professional environment, surveying business program alums from two universities. Tenenbaum et al. (2001), building off the work of Dreher and Ash, developed a five-part survey measuring the satisfaction of graduate students' advisor–advisee relationships. Part one of this instrument includes 19 items measuring three factors: psychosocial, instrumental, and networking support of their graduate advisors.

Sense of belonging and *success in managing the academic environment* constructs comes from Hurtado et al. (2007). Their instrument's questions were developed to investigate critical factors impacting first-year college transition for underrepresented minority students in biomedical and behavioral sciences programs. The instrument's questions can be part of the ongoing monitoring of students' transition experiences and as part of a university's climate studies (Hurtado et al., 2007). Their five-item sense of belonging construct uses a three-point Likert-type scale from *unsuccessful* to *completely successful*. Successfully managing the academic environment construct is three items using a four-point scale of *strongly disagree* to *strongly agree*.

Existing Assessments Supporting Higher Education Mentoring Programs

In addition to the instruments mentioned above, which allow programs to evaluate certain construct areas, packaged evaluative tools are available, some of which are commercially available. A sampling of existing assessments and their descriptions are included in the following discussion.

Mentoring programs developed specifically for students participating in the medical field have several assessment tools available. The Mentorship Profile Questionnaire and Mentorship Effectiveness Scale were developed at Johns Hopkins University School of Nursing (Berk et al., 2005). The questionnaire contains four open-ended questions that allow mentees to describe their

relationship with their mentors and the outcomes of the relationship. The effectiveness scale consists of 12 items, assessing the relationship using a seven-point Likert-type scale. The Munich Evaluation of Mentoring Questionnaire (MEMeQ) is based on Berk's work and is designed for student mentees in the latter part of their medical training and examines the personal and content aspects of the mentoring relationship (Schäfer et al., 2015). The Mentoring Competency Assessment is a 26-item skills inventory evaluating the communication, expectations, understanding, diversity, independence, and professional development designed for clinical research mentors and mentees (Fleming et al., 2013). Finally, the Mentoring Evaluation Tool (MET) is a 13-item assessment instrument measuring the effectiveness of faculty mentors in one-to-one mentoring health science programs (Yukawa et al., 2020). The tool was developed at the University of California San Francisco's Schools of Dentistry, Medicine, Nursing, and Pharmacy. MET evaluates the effectiveness of mentors through five domains: meeting and communication, expectations and feedback, research support, career development, and psychosocial support using a seven-point scale from *strongly disagree* to *strongly agree*.

Previously discussed above in the construct section of this chapter, Crisp's (2009) College Student Mentoring Scale, a 25-item assessment measuring the psychological and emotional support, degree and career support, academic subject knowledge support, and role of a role model of the mentor by the mentee. In 2009, Gilbreath, Rose, and Dietrich assessed four commercially available mentoring assessments: the Allman Mentoring Activities Questionnaire (AMAQ), Mentoring in the Moment (MITM), Mentoring Skills Assessment (MSA), and Principles of Adults Mentoring Inventory (PAMI). PAMI is designed for career adults in academia mentoring adult learners. AMAQ, MITM, and MSA are for business settings; their findings showed that PAMI's content was valid, though they could not evaluate the instrument's reliability or validity of its construct criteria. However, PAMI may be helpful if mentors seek feedback to improve their practice and in training situations. The National Mentoring Resource Center provides a clearinghouse of handbooks, program manuals, and assessments. All of the assessment instruments featured by the National Mentoring Resource Center have a theoretical basis and have evidence of reliability and validity (National Mentoring Resource Center, 2016). Though their primary audience is youth mentoring programs, a handful of the assessments available are appropriate for mentees 18–25 years old. These include:

- Mentoring Processes Scale: A 26-item assessment using a seven-point Likert scale assessing mentor–mentee engagement designed for ages up to 21.

- Youth Strength of Relationship (YSoR) and Mentor Strength of Relationship (MSoR): A 10-item assessment for mentees and 14 items for mentors using a five-point scale, measuring both participants' experience perceptions of the mentoring relationship. They are designed for ages up to 21.

- Mentoring-Youth Alliance Scale (MYAS): A 10-item assessment using a four-point scale measuring the mentees' feelings regarding their mentoring experience. The MYAS is designed for ages up to 19.

- Problem-Solving Ability: A four-item, five-point scale assessment determining the mentee's problem-solving ability. This assessment is designed for ages up to 21.

- Career Exploration: A five-item assessment using a five-point scale to explore career fields. This assessment is designed for ages up to 25.

There are several published valid and reliable measurements to support mentoring programs in higher education. When determining what measurements to use for assessment, program evaluation, and program research, program managers and researchers must match measurements to their theory of change, with emphasis on the intended goals and outcomes of the mentoring program. Multiple measurements will need to be used to capture the nuances of the program's theory of change.

Conclusion

Chapter 14 uniquely contributes to this handbook by exploring the differences and similarities between program evaluation and program research. If choosing to do program research, this chapter guides the program coordinator as they navigate their university's institutional review board. Sound research methodology is enhanced when the theory of change is made explicit, connecting the theoretical framework, operational definition, and research methodology. Lastly, Chapter 14 provides examples of measurements that can be used for research, with some of these measurements also being appropriate for evaluation.

Lunsford, in Chapter 13, emphasizes that international standards for mentoring programs require assessment and evaluation as markers of an effective mentoring program. In Chapter 15, Castañeda-Kessel gives guidance for funding mentoring programs in academia. Some funding opportunities require mentoring programs to contain research and program evaluation. We conclude Chapter 14 by recommending to program coordinators and university leaders that their respective mentoring program includes research. One of the mentoring field's respected authors, Lillian Eby (2019), espoused conducting research in addition to the program's overall evaluation plan. In a workshop one of the authors attended, Eby trained program coordinators to include a research program. Eby's suggestions overlap with much of this chapter's content. Eby first advocates that program coordinators know the mentoring literature well enough to develop novel projects that advance the science of mentoring. Second, Eby advocates utilizing theory to inform evidence-based practices. Third, Eby explores how research design can be used systematically to test hypotheses and answer research questions. Fourth, Eby advocates for the use of psychometrically sound measures. Lastly, Eby described how to draw scientifically meaningful conclusions from the data.

After reading this chapter, we hope program coordinators and university leaders will consider adding a research component to their mentoring program. Adding a research component is not as daunting as it may seem. Coordinators are already carrying out many of the processes needed for research. Program coordinators can contribute to the science of mentoring with little additional effort by thoughtfully building a research program into their program's overall design.

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Notes

1.   45 CFR 46 102.d (https://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html)

2.   https://irb.ufl.edu

3.   The theory of change found in Appendix A of Case Study 3 in Chapter 16 includes proposed outcomes for the mentors as well as the mentees. For the sake of simplicity in illustrating methodological rigor in this section, we have omitted mentor outcomes from these if/then statements.

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FUNDING THE MENTORING PROGRAM

Monica Castañeda-Kessel

Abstract

Chapter 15, *Funding the Mentoring Program*, provides essential resources for allies who want to implement or enhance their existing mentoring programs. Contextually, the discussion of funding opportunities is framed within the formal and informal mentoring language with one caveat. Informal mentoring program funding does not mean that the funding is easy to acquire or not rigorous to implement. Informal mentoring has strategic advantages for developing employee expertise and other desirable skills. Formal mentoring is the most prevalent type and had organizational advantages of scale. This chapter is composed of four sections. First, a brief overview of the theoretical and methodological frameworks. Second, the chapter guides decision-makers through six steps for identifying mentoring program funding. The six steps of mentoring program funding include,

Step 1: Identify the goals of the mentoring program or mentor and mentee relationship

Step 2: Match goal and mentoring funding organization program

Step 3: Assess the levels of commitment required

Step 4: Align the mentoring plan with organizational goals

Step 5: Identify and apply for mentoring program funding

Step 6: Implement the mentoring plan in stages for funding

Examples of how this may occur are provided to identify a range of contexts where mentoring program funding can propel programming outcomes. Third, a modified rapid review is included for mentoring program funding opportunities between 2017 and 2021. The rapid review demonstrates *significant* federal and nonprofit funding available for mentoring that can be leveraged for students,

faculty, and staff. The fourth and final section concludes the chapter and focuses on future directions in mentoring program funding.

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Mentoring is a dynamic process that can be life-changing for both mentors and mentees. Mentoring programs offer opportunities for students to improve goal-setting and self-reflection, for staff to develop their self-confidence and technical skills, and for faculty to strengthen their cross-organizational knowledge and network-enabling capabilities. Organizations of all types have vested interests in supporting mentoring as a proactive "best practice" because the outstanding outcomes, professional development, student scholarship support, internships, and opportunities to conduct research in unique facilities can be costly. These factors or the lack thereof can create a type of deficit thinking about the potential funding available for mentors/mentees and the opportunities for engaging with the larger research and development ecosystem.

While I am not advocating that program coordinators and other stakeholders partake in every funding opportunity, there has been a need to make stakeholders, program coordinators, mentors, and mentees aware of the possibilities. I have mentally connected the analogy that Ruiz (1999), in   the *Mastery of Love: A Practical Guide to the Art of Relationship*, used to describe emotional resources in interpersonal relationships and funding development approaches. There were similarities in how higher education approached development. Expectations have been problematic or helpful, depending on one's perspective. Suppose someone did not know there was a potential buffet of opportunities, and they only ever thought there was pepperoni pizza or a single type of opportunity. In this case, what they sought, they found. It was through this lens that they looked for funding during their search. The same has been true for academic resources. For many, the glass has been perceptually and perennially half empty in academia.

Similarly, this singular way of looking at opportunities has been true in fundraising and development. If one only thought that there were a few grants per year from a couple of federal agencies and foundations, then that is all one would find for mentoring programs. The seeker might be anxious or discouraged by their fund rates or areas of interest. Many people recognize that federal funding is highly competitive and typically takes several months (i.e., 6 to 9 months) to hear back on the award. Others turn to private sources but are unsure where to look, whom to connect with, or how to get connected. Without guidance, the program coordinators, other vested faculty, and staff can quickly become discouraged when seeking program funding. In this chapter I aim to share with allies and potential stakeholders how grants from a variety of organizations could potentially fund mentoring programs and to share information about the landscape for funding.

In addition, I want to share the magnitude of public and private support for mentoring program funding in STEM and non-STEM areas. I am actively encouraging decision-makers such as program coordinators, administrators, and other stakeholders to expand their internally funded programs or plan to start one using a combination of hard and soft funding. Hard funding refers to institutional monies, and soft funding is comprised of grants. This chapter has been segmented into four parts: (a) theoretical frameworks, (b) describing the six steps for identifying mentoring program funding, (c) providing a rapid review of public and private mentoring program funding opportunities from 2017 to 2021 to help readers understand the breadth of what is available, and (d) a conclusion and reflection on what the future directions in mentoring program funding might be.

Theoretically, the chapter has been framed using systems theory and ecological systems theory (EST). The rapid review is based on genre theory. Grant funding has genre-related conventions and nuances. My goal is to shift thinking about mentoring programs systemically from incremental parts to a holistic vision by elucidating the unknown or unarticulated elements of the academic research development ecological system (ARDES; i.e., types of funding possibilities in the system) (Castañeda-Kessel, 2021) for mentoring programs. Tricco et al. (2018) indicated that scoping reviews are used for various purposes, including examining the "size, variety, characteristics, and the potential for undertaking a larger investigation" (p. 467). I used a rapid review to examine the potential mentoring program funding available in STEM and non-STEM areas at the scoping review level of granularity. I used a balanced approach in my review because funding mentoring programs has been an essential area to explore for all students, staff, and faculty. Everyone has the potential to benefit from mentoring.

Theoretical Frameworks

Three theories guide this chapter theoretically and methodologically. The first is systems theory (ST), a cross-disciplinary theory that allows individuals to look across multiple systems to place themselves in context. It enables potential users of the chapter to begin to understand and examine elements and "dynamics of . . . systems to interpret problems and develop balanced intervention strategies to enhance 'goodness of fit' between individuals and their environments" (Friedman & Neuman Allen, 2011, p. 3). This theoretical framework allows individuality and context for the mentoring funding need as people discussed developing their mentoring funding plans. In addition, it allows decision-makers to look across a university to identify potential clusters of mentoring and mentoring supports.

Brofenbrenner (1979, 1986) and Bluteau et al. (2017) described ecological systems theory (EST) levels of macrosystem, mesosystem, microsystem, exosystem, and the chronosystem as critical scaffolds for examining the mentoring funding opportunities that affect the developing individual. Castañeda-Kessel (2021) articulated the ARDES elements in academia based on the EST. They will be utilized to discuss the identification of mentoring funding resources for mentors and mentees. Organizationally, stakeholders could decide to leverage internal support with external funding toward collective mentoring supports or mentoring programs to benefit a particular group of major-specific or underserved students.

Finally, genre theory guided the rationale for conducting a mentoring funding opportunity rapid review. "Notably, grant proposals are not limited to academic institutions; the analyses of 'rhetorical moves' have been studied in both academic settings and non-profit arenas" (Christensen, 2011; Connor & Mauranen, 1999; Swales, 1981; Swales, 1990, as cited by Castañeda-Kessel, 2021, p. 152).

## Six Steps for Identifying Mentoring Program Funding

Mentoring program funding is considered elusive in academia despite the high efficacy of mentoring in various fields. Six steps are described for identifying mentoring program funding opportunities within context to help proactively address the need to implement and support critical mentoring programming. Naturally, some mentoring programs that were already implemented will have different strategies. Throughout the cycles, I provide examples of formal mentoring or program-based strategies to support program coordinators and other decision-makers seeking pragmatic recommendations. I

also provide informal mentoring examples directed at individual personnel attempting to support students or other academic members mentoring as allies.

The six steps for identifying mentor funding can be used by anyone who wants to engage in a mentor/mentee relationship. Although the process is universal, the outcomes will not be due to each mentor's and mentee's unique goals. Other factors that might impact the mentoring program funding plan might be variables such as their strategies for seeking funding, time of year, location, funding support mechanism, embeddedness in a more extensive project or center, and the topic areas in which they seek funding. However, overall, the process has been envisioned as cyclical. Figure 15.1 provides an overview of the six steps.

Figure 15.1
Six Steps of Mentoring Program Funding
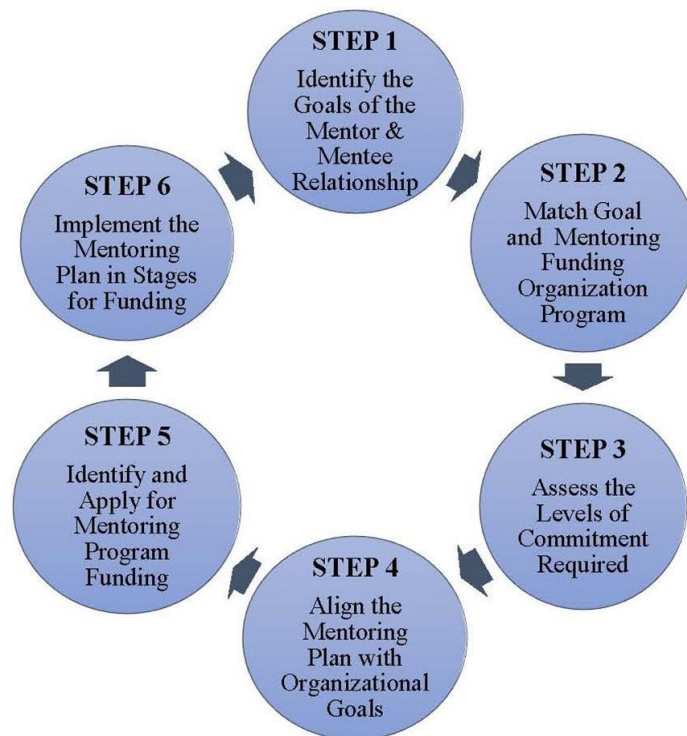
Step 1: Identify the Goals of the Mentoring Program or Mentor & Mentee Relationship

As an example of formal mentoring, nonprofit funding organizations like Northwest Area Foundation (NWAF) sought to build mentoring and overall capacity from the grassroots. Since 2012, NWAF has committed to allocating 40% of its annual giving to Native-led organizations to reduce economic poverty in six states. NWAF routinely met and often exceeded its goal. To date, it has given over $63.4 million to this single topic area (Walker, 2022). Their mission is accomplished through organizational mentoring tools like grantee data and feedback, culturally anchored models, supporting good jobs and financial capabilities, and collaboration with tribal governments and state and federal agencies (Walker, 2022). Native communities often mentor and share replication strategies with other native communities

as part of NWAF's grassroots models. It might be the perfect organization for Native American administrators, students, and stakeholders seeking to connect and be mentored by other Native American communities.

While this step might have seemed obvious, it was critical to identify potential topics or targets for seeking mentoring program funding. The reality was that mentors and mentees come from diverse backgrounds and have a variety of values and perspectives. Unsurprisingly, individuals bring their unique expectations to the mentor/mentee relationship. Importantly, Bozeman and Feeney (2008) suggest that one might strongly have considered "goodness of fit," in which there were both "optimal and minimal conditions" (p. 471). The mentor/mentee relationship has built capacity and interest for both parties by doing this thoughtfully. Some broad questions that might be helpful to ask are:

> Why did you select me to be your mentor/mentee?
> What are your greatest strengths? Weaknesses?
> Who have you learned the most from outside of your family and school?
> If you were an animated cartoon, who would you be? Why?

Informal mentoring has also been highly effective for graduate students and employees developing specialized expertise. One suggested area of focus was where there was an overlap of multiple interests that one wanted to develop. Once the areas of interest are identified, prioritize them to develop your top five target areas. These will become the initial search topics. For example, an aerospace engineering mentor I knew had two mentees that wanted to apply for external funding. They were different people (i.e., backgrounds, genders, abilities, skills) and had different interests and career goals. He discussed with each of them his area of expertise, his background, his network that he could leverage, and the amount of time he was willing to commit to developing their skills in their targeted areas. They, in turn, shared with him the areas of expertise within aerospace engineering that they hoped to develop individually. These resulted in vastly different priority lists and two different funding searches.

Step 2: Match Goal and Mentoring Funding Organization Program

Once program coordinators or mentors/mentees have identified an area of interest or ideally have prioritized targets, many people begin their search. Some use federal agencies without regard to winning rates or agency priorities. This tactic is inherently problematic because it does not account for the numerous variables influencing funding, particularly time and energy. In any case, one could examine prior awards and areas of interest.

Searching for funding has been a question that looms in many people's minds. Some have sought funding from federal agencies, while others seek funding from private foundations. Regardless, one may use free databases such as grants.gov or paid ones such as Grantforward to identify potential funding opportunities. There are many more, and the ones identified above are well known in academia and the nonprofit world. However, sometimes it may be helpful to step back and look at the overall funding for the area by an agency (i.e., awards or secondary data) to prioritize the efforts, particularly since many agencies and organizations have a variety of programs.

Then, using the information and the agency's program descriptions, a decision can be made about the program fit for the field and area of interest. If it does not fit, keep looking. If it does fit, then use the information to develop a one-page description of the idea for the mentor/mentee project within the project guidelines and contact the program officer if it is allowed. Most agencies and organizations encourage this because they could have told the applicant quickly if they were within the parameters of their priorities or the programmatic goals. Program officers often provide helpful and insightful advice. Unfortunately, some funders do not allow this, so check first.

An example of how an individual might match their student for informal mentoring program funding is to know their identified goals. Many agencies, such as the National Institutes of Health, require specific types of mentors. Others, such as the National Science Foundation (NSF), may ask the student to articulate why they want to be mentored in a specific field or how the university will help grow their career pathway. Many nonprofit foundations want to support a student through a process to serve in a specific field as a graduate or postdoctoral student (see Appendix Table 15.3). These all are considerations to juggle when discussing individual applications.

Organizationally, several universities, including the University of New Mexico and the University of Colorado, Boulder, overtly support the strategic applications of their students by holding workshops for significant national awards such as the National Science Foundation Graduate Research Fellowship Program (GRFP), which is awarded to 2,000 students nationally (NSF, 2022). A description of how the graduate student will benefit from being mentored by the principal investigator is required. Similarly, at the postdoctoral level, the NSF Earth Sciences Postdoctoral Fellowship (EAR-PF) is awarded to 12 students (NSF, 2021b). A postdoctoral mentoring plan is a required document. Both grants are awards taught by many universities that mentor their students through the application process. The University of New Mexico and the University of Colorado, Boulder, have both created YouTube videos to support graduate students applying for GRFP and other graduate funding (UNM, 2017; CU Boulder Life, 2020). Video is a replicable tactic that an institution may consider as a scaling strategy.

These are examples of organizational mentoring at scale, implemented by sharing with graduate students how to apply for the grants and potential strategies for making their applications more fundable. Why? Not only do the students benefit, but the universities and colleges do too. For every graduate or postdoctoral student funded, the institution potentially provides funding to another or accelerates their faculty's research. These efforts translate into headcount and innovation. Student workshop development intentionally delineates creating inclusive mechanisms versus gatekeeping of teaching and learning.

Step 3: Assess the Levels of Commitment Required

If one is looking for broad-based, strategic commitment related to formal mentoring, look at Cal-Bridge. This PhD STEM model has students who are 67% first-generation, 45% female, and 64% underrepresented minorities. The Cal-Bridge network has successfully engaged eight cohorts of students (Cal Poly Pomona, n.d. para. 1); Calpoly Pomona Fast Facts, 2021). Cal-Bridge is a statewide network of California State University, the University of California system, and community college campuses working collaboratively for students interested in "PhDs in physics, astronomy, computer science, computer engineering, or related fields" (Cal Poly Pomona, n.d). Underrepresented students

are selected from groups who "display strong socio-emotional competencies and academic potential and provide the support to matriculate" (Cal Poly Pomona, n.d. para. 1). Students accepted into the program sign a contract. Cal-Bridge Scholars receive intensive financial aid application support of up to $10,000 per year, joint CSU and UC faculty mentoring, professional development workshops, and summer research opportunities. The Cal-Bridge has been funded through various programs in the state of California and the National Science Foundation (ID#DUE-1741863; ID #AST-1636646; ID #AST-1836019; Cal Poly Pomona, n.d.). If you are interested, I encourage you to check out their forms and required deliverables on the website.

As the mentor/mentee considers their time and energy commitments over a future period of performance, they may encounter times when there are overlaps with other large projects. Before applying for mentoring program funding, it is essential to consider these items that might require travel, extensive authoring, training, or other onsite internships. Students and others sometimes have commitments such as proposal defenses, major campaign launches, or conferences that impact their workflow. These are helpful considerations prior to applying for mentoring program funding.

At times funders will acknowledge an anticipated fund date, or one might look at prior history. In either case, considerations of the volume and scope of the anticipated workflow between the mentor/mentee will be helpful as individual life events might impact them. Appropriate items and projects could be selected for these times of uncertainty. For example, one of the mentor/mentee goals is to publish more journal articles. A shared document can be created where both could check in and contribute, and if one were to become ill, the other could continue working while the other was rehabilitating. Both would know *a priori* what the goal of the literature review would be so progress could be made while one of them was rehabilitating. This also helps both have a shared purpose and reason to communicate when the world becomes disconnected.

Step 4: Align the Mentoring Plan with Organizational Goals

In Chapter 16, the AWARES program case study provides an example of how an organization has decided to formally mentor female science and engineering undergraduate students on essential skills they will need to succeed in their career pathway and the university. Sometimes, for people who have lived and worked in academia for several years, there has been a tendency to forget the machinations of the system that we operate. The AWARES program goals help students to (a) prepare women with the necessary career management skills to succeed and advance in engineering and science, (b) build the self-efficacy and confidence of women engineers and scientists to encourage perseverance in the workforce, and (c) provide opportunities for women to discover the value of mentorship and networking.

While this step might sound like Step 2, it is different; this is where the mentor and mentee go beyond matching their goals to a funder's program to writing an integrated plan. These will look different for every organization that it is applied to, and one should stick to their guidance. However, the applicant will generally need to describe the need or problem statement, work plan, timeline, outcomes, and why they are uniquely qualified for the funding. It may be helpful to put these snapshots in a shared folder so that items can be clarified and updated for each iteration. Organizationally, descriptions of major

equipment and facilities on campus can be helpful to early-career faculty. These may be housed in a centralized catalog of grant-writing resources for faculty and staff.

Step 5: Apply for the Mentoring Program Funding

Applying for mentoring program funding has been depicted in many ways. The Colorado School for Public Health (n.d.) has depicted the pre- and post-award process in a graphic on their website along with their Grant Management 101 Tool Kit. While many organizations have unique processes and software, the elements in Figure 15.2 are essential elements in the mentoring program funding submission process to discuss in either informal or formal mentoring and other grant development and management. These components will become the stepping stones for applying for and implementing mentoring program funding.

Figure 15.2
Grant Writing Process Pre- and Post-Award Elements
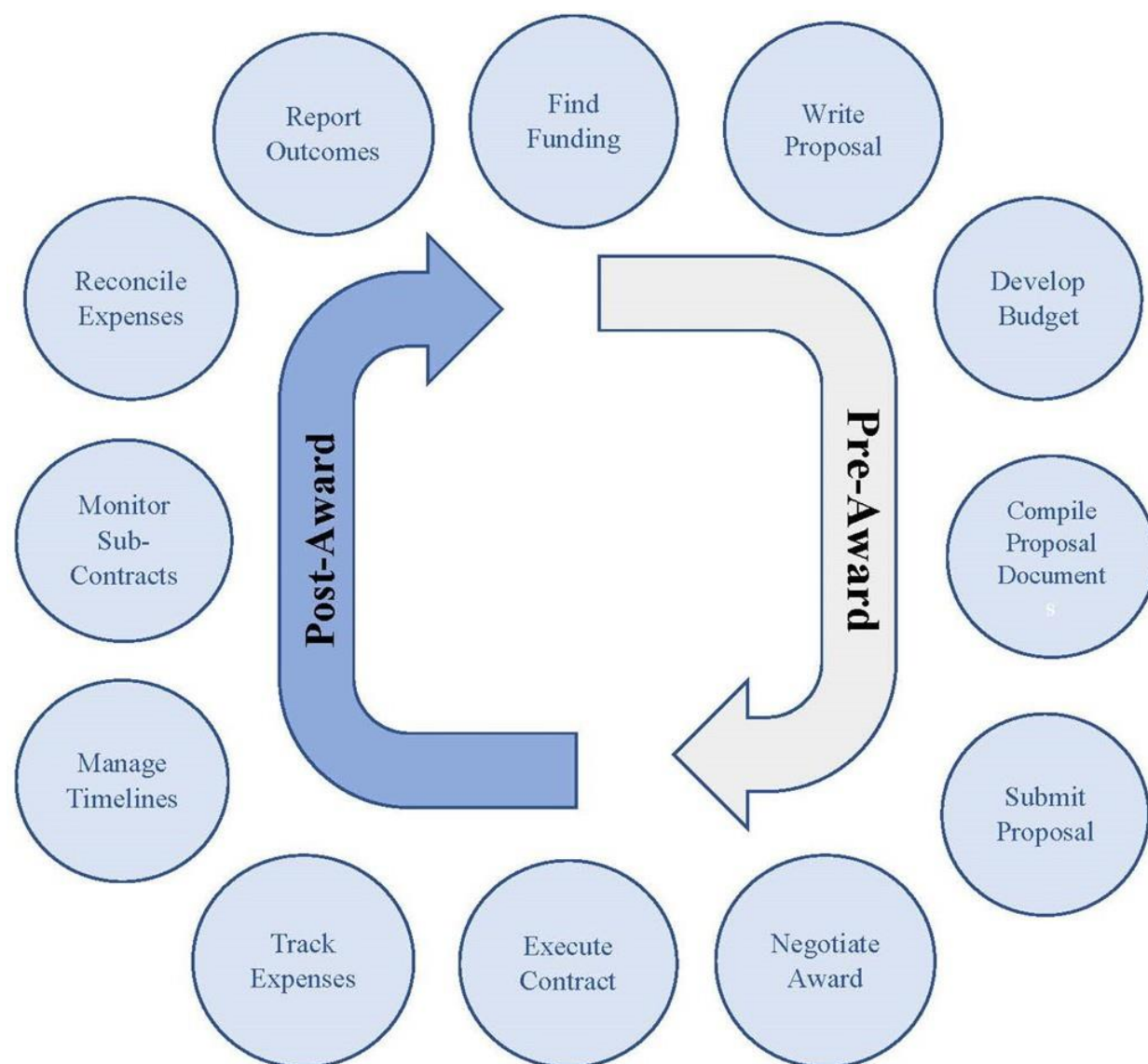
*Note Graphic adapted from the Colorado School of Public Health

Grant writing and management are multifaceted. This step focuses exclusively on pre-award or items before the grant is funded. Notably, this includes searching for relevant funding and applying, which are critical. There are many elements, so one needs to be strategic and proactively schedule a time to write. Applying, depending on the organization's internal protocols and policies, might be another layer of unanticipated work that should be accounted for by the mentor/mentee. It could be a training opportunity for the mentee who might not have imagined the number of internal controls an organization like a university has to ensure that a funding request is submitted on time and within budget. The ecosystem of research and development will come into play with each submission. It will be an excellent opportunity to learn those processes, players, and workflow nuances.

Step 6: Implement the Mentoring Plan in Stages for Funding

Planning and applying can be aligned with program priorities. For example, several years ago, I worked with the College of Southern Idaho's English as a Second Language (ESL) Family Literacy program with 28 sites over multiple rural counties. The program received state funding for teaching the adults English from one agency and TANF funding for work-readiness and parental engagement with K–12. Most of the mentoring activities were funded by a grant. In addition, the program also applied to another small nonprofit grant that purchased books for the children since many of them did not have books of their own in their homes. The diversified strategies reflected the programmatic goals at the time.

The ESL instructors for the adults and the children's teachers pre- and post-tested the participating adults and children each semester. The programs occurred primarily in the evenings. They openly acknowledged that their primary goals were (a) to increase family literacy to support the children in school, (b) to improve adult English at work, and (c) to increase literacy by reading basic materials from school. In other words, parents were given a menu of three items being served or service delivery lines and asked if they were willing to participate. These were the goals, and the how-tos began from there. The formal mentoring included many programmatic-level items involving time, resources, and personnel, but the goals were disclosed up-front. The goals were communicated for both the college and the participants' benefit because mentoring and teaching are intensive and require active participation to be successful.

The mentoring plan allows the mentor/mentee to identify potential areas or targets for funding, but they do not have to be applied all at once. Create a timeline for implementing the mentoring plan and developing the relationship in general. A helpful strategy is to create a calendar of the various agencies' opportunities mentors and mentees are interested in applying to and when they have open solicitations or applications. Sometimes there is one time per year, and other times there are more opportunities. One thing to note is that federal grants could take 6 to 9 months to be reviewed. This has impacted mentoring timelines. Nonprofits often have fewer opportunities open, but there are more nonprofits and private organizations, so weigh the priorities depending on your field.

Sustainability

People often have asked, how do we keep the money coming? This is an anchoring post-award discussion. Typically, one of the main ways one could get more money is by doing an excellent job

on the original project, reporting on time (i.e., doing the quarterly and final reports), disseminating findings, and communicating with the program officer. Sometimes people have fallen in love with their way of doing things and curricula. There is nothing wrong with this, but it has not been grant-fundable unless project leaders will try it out on a new population, at a new time, or using a different delivery method (i.e., online). In the case of COVID-19 and other social justice challenges, they have created new barriers. When people have tried to fund something that already exists without altering it in some way, this has fallen into *supplanting*—accountants shutter at the word.

There are at least two ways to successfully position the project for getting and renewing funding: demonstrate outstanding participant growth or need and demonstrate change in regional/national needs. Positioning for sustainability can be accomplished by following the data from the student populations and acquiring regional data. It is also why an evaluation needs to be done well, and it can be incredibly valuable if they have included both formative qualitative and quantitative data. Cohorts of students will be different, but the *how* and the *why* will make all the difference. Documentation is essential. Show the funding agency the data, the pictures and the need. If the current funding agency has decided to shutter the program despite the need, move to another funding source. You have the data to document the need and proof that you can impact the population.

It also helps to frame the overarching goal as an immense problem, as the Cal-Bridge program did. Nationally, there is a shortage of underrepresented people in STEM, and there is likely to be a shortage for several years unless every state gets on board. Similarly, Northwest Area Foundation said it would commit 40% of its targeted funding to Native-led projects because of the poverty. These educational health disparities require solutions, including Native-led models and approaches. "Nothing about us without us" is true for all underserved populations. Sustainable programs have sustainable problems to work on, and they use a variety of funding strategies to do it.

Rapid Review of Mentoring Program Funding

In this rapid review, the purpose is to begin to explore the answer to the question:

How do federal agencies and nonprofit/private organizations fund mentoring for students, staff, and/or faculty?

This rapid review briefly summarizes existing federal and private funding and some common themes in the preliminary data. Notably, this is an evolving dataset, but the review intends to identify potential areas of opportunity for those seeking to implement mentoring programs at scale or within their labs. A total of 14,657 potential mentoring program funding opportunities were identified and screened. Subsequently, 4,827 duplicates or excluded items were eliminated. These were drawn from a combined total of 1,625; federal agencies and their bureaus ($n = 88$) and nonprofits and private organizations ($n = 1,537$) that had mentoring opportunities. The mentoring program funding opportunities were posted between 2017 and 2021 and were identified as open, closed, or forecasted from public and private sources. Items from Grantforward were pulled from those periods, but the dates were not provided to me in agreement with Grantforward. Figure 15.3 includes a diagram of the study flow. The screening criteria were established *a priori* as outlined in the protocol. All the screening was performed using the protocol.

Figure 15.3

*Protocol for Mentoring Program Funding Rapid Review*
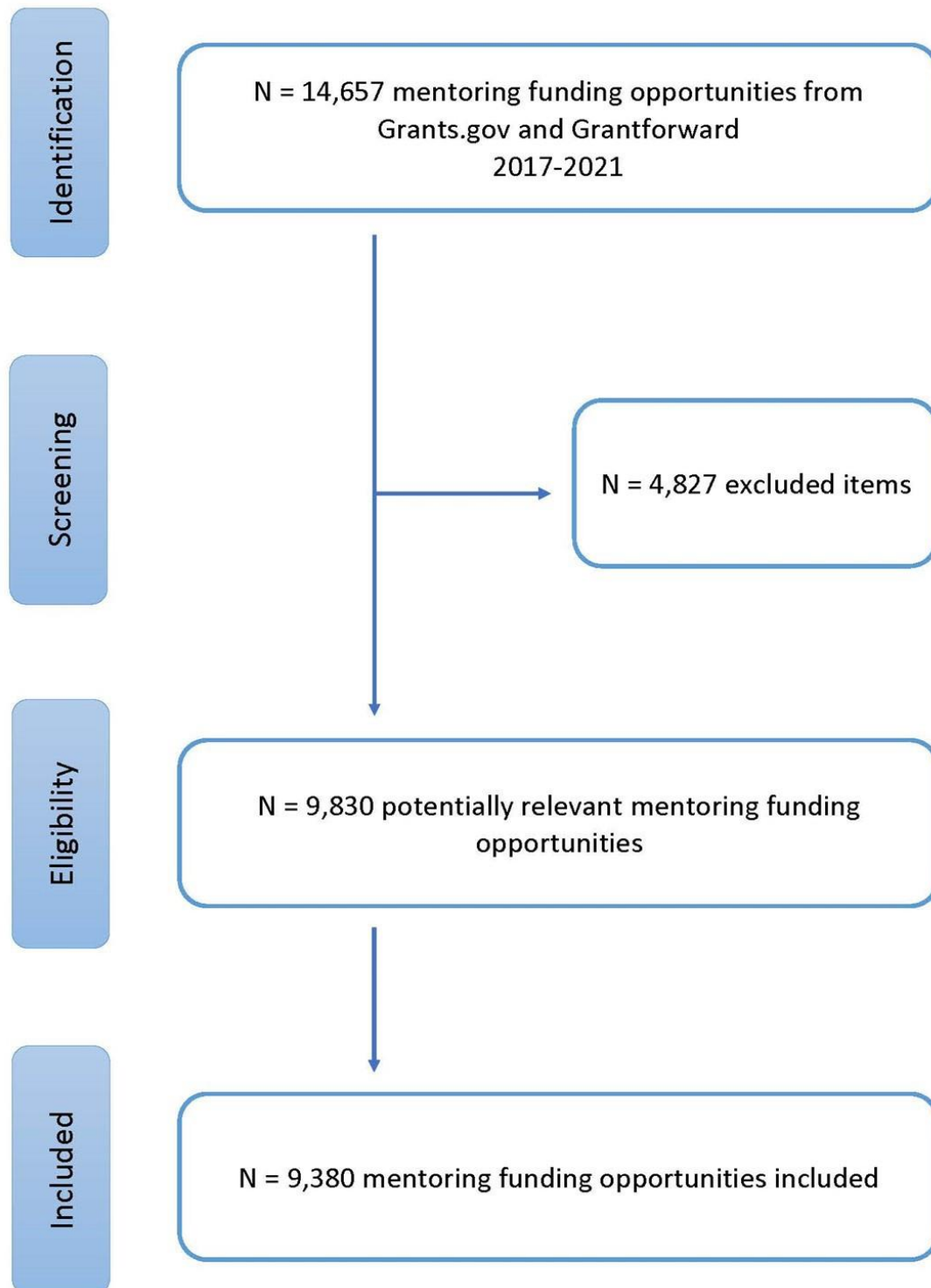
Method

The rapid review methods are briefly described in Table 15.1, with additional details and deviations noted. I have placed the traditional tables for a rapid review in the appendices, but I have generated visualizations for the discussions about the actualities of funding for mentoring programs. Each visualization for the rapid review is explained under the visualization instead of in the results and discussion section to support programmatic staff efforts to accomplish Step 5, apply for the mentoring program funding.

Table 15.1

Rapid Review Methods

| Project Stage	Method Description
Eligibility criteria	Published federal funding opportunities
	Published private funding opportunities
	Published between 2017–2021
	Written in English (for feasibility)
Searching for studies	Developed by an experienced research development professional with input from mentoring experts reviewing the chapter
	Peer-reviewed using the rapid review literature (Tricco et al., 2015; Khangura et al., 2012)
	Searches December 2020–January 2021: grants.gov and Grantforward
	Search strategies not restricted by language or location
Study selection	Performed in grants.gov, Grantforward, and Microsoft Excel
	Piloted title/abstract ($N = 14{,}657$) and full text screening ($N = 9{,}380$), conflicts resolved by discussion
Data charting	Performed in Excel
	Piloted extractions ($N = 5$), conflicts resolved by discussion
	One reviewer extracted studies, editors reviewed, and conflicts resolved through discussion
Data synthesis	Mentoring characteristics and studies' references
	Identified potential for PRISMA-ScR for future work

Figure 15.4

Incidence of Mentoring Program Funding Opportunities 2017–2021*

*38 multi-year offerings
*9830 offerings with data not provided
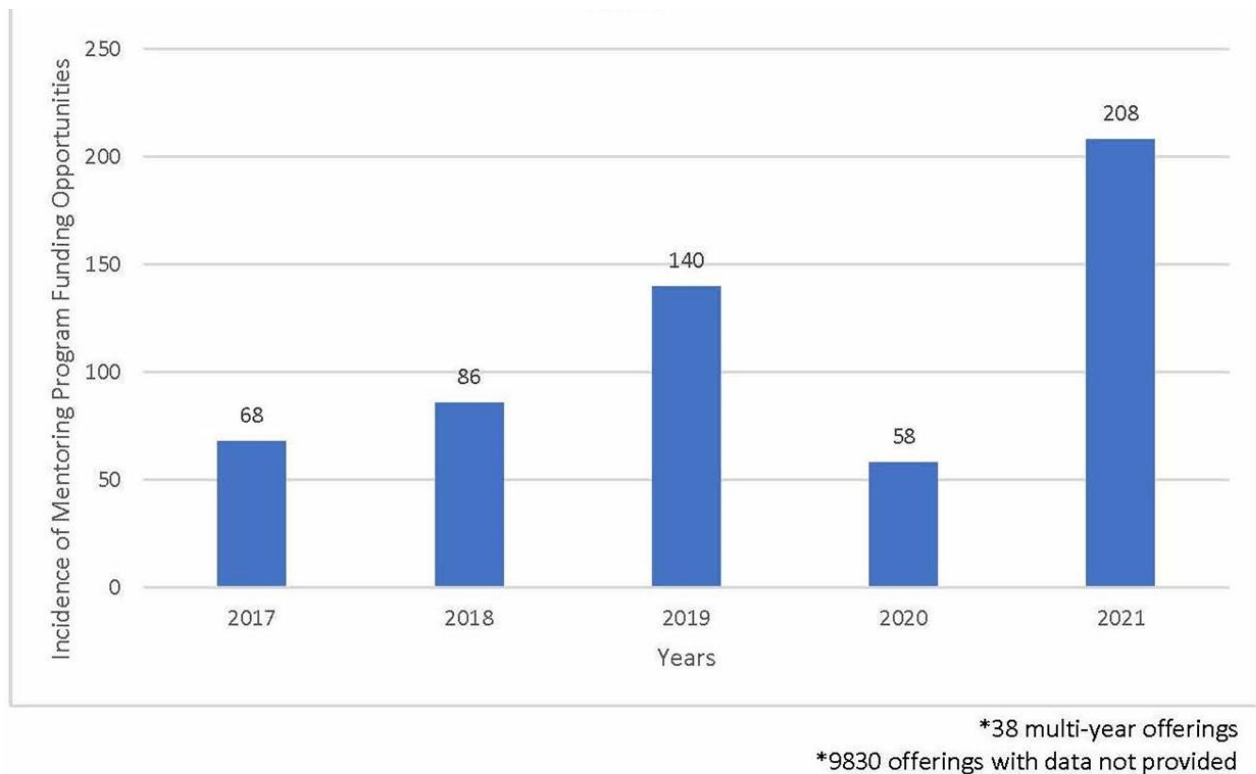
The incidence of mentoring program funding opportunities between 2017 and 2021 was consistent in both databases. The diversity of the mentoring program funding in Figure 15.4 demonstrates the staying power of mentoring strategies across agencies and administrations. Federal agencies (public) have long recognized mentoring as an effective practice. Its prevalence in titles and abstracts of funding opportunities between 2017 and 2021 was valued at over $5 billion in awards (grants.gov, n.d.). There was only one year when the funding opportunities were less than 68, which was 2020, during the COVID-19 pandemic. Between 2017 and 2021 over 38 funding opportunities had multiyear offerings that referenced mentoring in the title or abstract. The academic question was, if mentoring was an organizational priority, how many funding opportunities does it take annually to support mentoring capacity building? One place to look for the answers has been in the existing programmatic data and regional student enrollment projections.

Going into the initial search there were many federal opportunities, but a surprising number of opportunities were outside of the federal realm. Hundreds of nonprofits and private organizations had mentoring-related activities based on their titles and abstracts. While the preliminary data indicates that not all career pathways or majors are represented equally in the nonprofit sponsorship of mentoring activities, many were community building, family connecting, and grassroots. The efficacy of mentoring practice made it a "best practice" for federal and nonprofit investment, which must be made broadly because it invests in connection and people learning from each other. Figure 15.5 bears further discussion related to this because it reflects the diverse strategies used to get funding and support to potential applicants.

Figure 15.5

Types of Mentoring Program Funding Mechanisms Awarded*
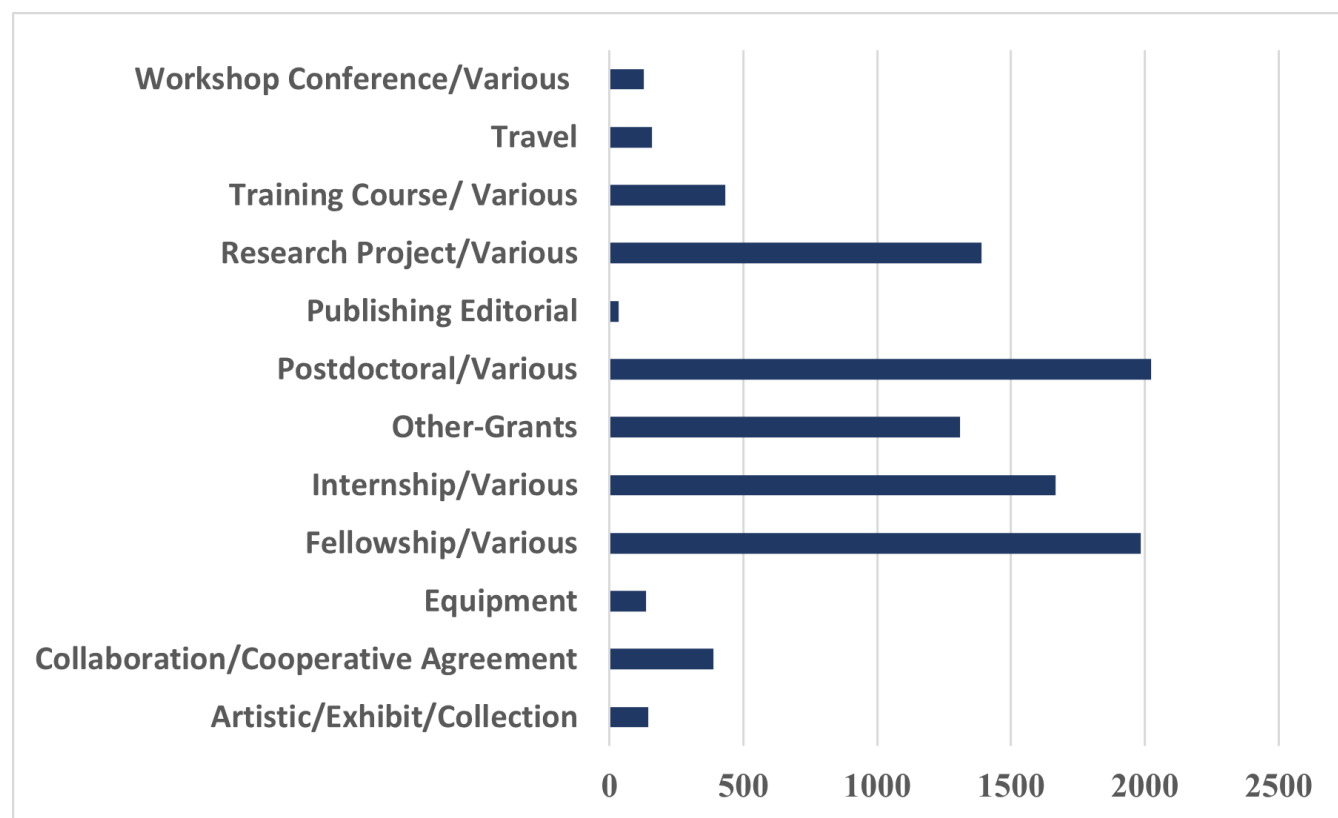
*See Table 15.3 in Appendices

Figure 15.5 was developed from Table 15.3 data because I often hear faculty, staff, and students *categorically* discuss informal and formal mentoring program opportunities. As I conducted the rapid review, I wondered if the incidence of categorical types of mentoring program mechanisms were awarded. I thought it might be a discussion point for mentor(s) and mentee(s) or for decision-makers who wanted to discuss potential possibilities and priorities at scale. There was a surprising variety of mentoring program funding mechanisms awarded.

Fellowship/scholarship/dissertation and postdoctoral awards were particularly strong. For a research grant professional who sees budgets and grants routinely, these were high-ticket items depending on your field. Sometimes applicants cannot afford to include them in the projects, but they can often be game-changers in advancing the work. It was a welcome surprise to find several opportunities in the nonprofit/private sector. Organizationally it may be worth asking, do we actively encourage our graduates and postdoctoral students to apply for funding?

The high incidence of diverse types of internships/work-study yielded more than 1,500 mentoring opportunities; intuitively and professionally, there were more. Most people believe that they must work with employers directly first, but there are grant mechanisms that will sponsor the costs of those opportunities. Typically, using these has created a win-win situation for everyone. Although many employers enjoy sponsoring internships as a mechanism of early recruitment, many universities and other organizations have worked with them directly to create opportunities for various workforce

needs. Other organizations do extraordinary work that cannot absorb the integration of another person on the fly. These mechanisms have helped create opportunities for people to partner with them too. In addition, some postsecondary organizations and K–12s have industry liaisons and counselors or work closely with local workforce development offices to connect people with employers and potential internships.

Another helpful data point in the rapid review was the number of mechanisms for travel, which were more than 160 opportunities when combined with other items. Travel for many departments and stakeholders is a luxury. It would require advance planning to apply for a grant for travel to a conference or special event, but if the applicant won, it would help the mentee(s) understand that there are times one has to adjust their plans and be fabulous! Another wonderful item in the data was the number of nonprofit/private foundations that are sponsoring art, particularly the development of artistic exhibits and collections. Finally, the support for research training was strong, with just slightly fewer than 1,400 items.

Figure 15.6
Funding Activity Locations by Continent*

Figure 15.6 data reveals that North America and Europe led the overall funded activity locations. This is parallel to the geographic locations of many of the wealthiest first-world countries. These regions naturally develop or reward philanthropic behaviors because of their increased disposable- income levels. Figure 15.6 presents the same information in more detail and may be more useful for those seeking to develop projects in particular regions of the world. Specific country locations are in over 3,573 US locations and numerous countries all over the world. Significantly, mentoring program funding opportunities are fundable in many locations worldwide. Nearly half of the total items reviewed were in the United States.

Limitations

Through the rapid review, I identified that over $5 billion was available for mentoring program

funding in STEM and non-STEM areas. These funding opportunities are by both public and private entities between 2017 and 2021 within two databases that are not comprehensive. $3 billion was directed toward activities that were K–12 or postsecondary. The rapid review revealed more mentoring program funding opportunities through various organizations than previously thought in preliminary discussions. Grantforward provided proprietary data that did not include the year but were within the 2017–2021 period and included the word "mentor" in the title or abstract. If the word "mentor" did not appear in the title or the abstract, it was not counted among the potentially viable funding sources as this was a rapid review.

Conclusion and Future Directions

Mentoring is an opportunity to share the best parts of our professional lives and the challenges. It builds deep skills that will propel individuals to excellence and build organizational capacity. It is not one-sided but, like all healthy relationships, it blossoms and thrives when cared for, valued, and supported. Fundamentally, as organizations, it is about engaging faculty and staff in ways that acknowledge and cultivate their expertise. Then, mentoring asks that we pay it forward by sharing with someone else. If we are honest, we have all been "newbies" at one time or another. Some people helped us evolve. This chapter provides an overview for allies who want to implement or enhance their existing mentoring programs. Chapters 16–26 provide in-depth case studies as examples for those seeking to implement. Formal mentoring has been the most prevalent type and has organizational advantages of scale.

As previously indicated, this chapter has been segmented into four parts: (a) theoretical frameworks, (b) describing the six steps for identifying mentoring program funding, (c) providing a rapid review of public and private mentoring program funding opportunities from 2017 to 2021 to help readers understand the breadth of what is available, and (d) reflecting on what the future directions in mentoring program funding might be. The final segment below is a brief sampling of the many potential future directions for mentoring funding, depending on your area of interest

In the future, a more detailed PRISMA scoping review (PRISMA-ScR) might help future seekers and mentors/mentees embark on their audacious development of informal and formal mentoring programs. The prevalence of mentoring as a strategy in the research and development ecosystem would suggest that it works in various environments since it is used far beyond academia for nation rebuilding, combatting human trafficking, and developing rural communities. Mentoring is certainly more than a lab or classroom cloning strategy; it has evolved into a critical tool in the portfolio of strategic enrollment management and employee professional development. It is a best practice that has been replicated worldwide. A part of the power of mentoring is the ability of mentors and mentees to connect and share knowledge in a way that has been lost in many settings in the modern world. Formal mentoring through the organization of critical program coordinators, administrators, and key community stakeholders is an essential part of successful student learning, employee engagement, and faculty innovation.

My future personal directions for research are a minimum of threefold going forward. First, I want to identify the areas where nonprofits/private foundations have prioritized funding for mentoring. Second, I would like to identify potential connections between funded and unfunded mentoring areas

in academia. Third, I would like to identify the potential for a formal mentoring program to leverage federal mentoring program funding opportunities as a collective.

Does this information mean that all K–12s and postsecondary institutions should suddenly halt internal funding for their current mentoring programs? No! If the organization plans to build capacity, it will need to utilize a combination of hard and soft funding to build the mentoring and mentoring support in various programs or for specific underserved populations. The rapid review demonstrated an ecosystem of mentoring program funding, both public and private, that is accessible if allies know where to look.

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Table 15.2

Incidence of Mentoring Funding Opportunities 2017–2021

Incidence of mentoring funding opportunities 2017–2021	Items
Years offered	
2017	68
2018	86
2019	140
2020	58
2021	208
Multiple Years	38
Dates not provided	9830*

*Due to Agreement for the Data from Grantforward

Table 15.3

Types of Mentoring Funding Mechanisms Awarded

Funding Mechanism Type(s)	Items
• Artistic/exhibit/collection	145
• Collaboration/cooperative agreement	389
• Equipment/facilities/organization	137
• Fellowship/scholarship/dissertation	1818
• Fellowship/scholarship/dissertation/postdoctoral	76
• Fellowship/scholarship/dissertation/research project	28
• Fellowship/scholarship/dissertation/training course	39
• Fellowship/scholarship/dissertation/travel	17
• Fellowship/scholarship/dissertation/travel/workshop conference	6
• Internship/work-study	1524

• Internship/work-study/fellowship/scholarship/dissertation	12
• Internship/work-study/postdoctoral	82
• Internship/work-study/research project	23
• Internship/work-study/training course	20
• Internship/work-study/travel	5
• Other	1311
• Postdoctoral	1529
• Postdoctoral/collaboration/cooperative agreement	50
• Postdoctoral/collaboration/cooperative agreement/other	8
• Postdoctoral/equipment/facility/organization	89
• Postdoctoral/fellowship/scholarship/dissertation	205
• Postdoctoral/work-Study	118
• Postdoctoral/training course	12
• Postdoctoral/travel	3
• Postdoctoral/workshop conference	10
• Publishing editorial/various	34
• Research project/various	1389
• Training course	289
• Training course/artistic exhibit/collection	3
• Training course/collaboration/cooperative agreement	5

• Training course/fellowship/scholarship/dissertation	43
• Training course/various	92
• Travel/various	160
• Workshop conference/various	128

Table 15.4

Funded Activity Locations by Continent	**Items**
Africa	32
Asia	72
Europe	319
North America	3573
Oceania	6
South America	28
Unrestricted	74
Not Indicated	3990

PART III

MENTORING CASE STUDIES

Part III includes case studies of the different academic populations, such as undergraduate students, graduate students, faculty, and staff, providing 11 case studies. Chapters 16 through 19 include four case studies focused on undergraduate students. Chapters 20 and 21 describe two programs focused on mentoring graduate students. Chapters 22 through 24 explore three case studies in which the mentees are faculty, and Chapters 25 and 26 are case studies for staff. This book contains one more case study in Part IV, Chapter 28. We placed this last case study in Part IV because it is an example of a networked approach to mentoring.

The authors for Part III were given the same organizational outline for their cases, and they were encouraged to follow it where possible. If authors did not have specific content for a topic, they did not include the related heading. This guidance encouraged the authors to cover relevant themes presented in Part I and Part II of this book, such as providing their theoretical frameworks or describing their matching process. This approach created uniformity, improved clarity, and enabled easy study comparisons. The organizational outline also allows the reader to quickly skim the case study and find the content most pertinent to them. For example, the operational definition of the program is at the beginning of the case study. The following is the organizational outline recommended to the authors. This outline also served as an overview of the development, implementation, evaluation, and funding process. Note that this outline loosely corresponds to Figure 7.1.

1. Mentoring Context and Program Development

- The Need for This Program (Chapter 5)
- Purpose and Objects of Program (Chapter 8)
- Organizational Setting and Population Served (Chapters 5 and 6)

- Organizational Support for Mentoring Program and Infrastructure (Chapter 6)
- Operational Definition (Chapter 1)
- Theoretical Framework (Chapter 2)
- Typology of Program (Chapters 3, 27)

2. Mentoring Inputs and Resources

- Curriculum Description (Chapter 10)
- Funding (Chapter 15)

3. Mentoring Activities

- Recruitment Activities (Chapter 9)
- Selection Activities (Chapter 9)
- Matching Activities (Chapter 9)
- Training Activities (Chapters 10 and 11)
- Strategies to Monitor and Support Relationships (Chapters 10, 11, and 12)
- Formative and Summative Evaluation (Chapter 13)

4. Mentoring Outputs

- Number of Mentors, Number Mentees, Ratio Mentor/Mentee (Chapter 13)

5. Mentoring Outcomes and Lessons Learned

- Outcomes of the Program (Chapters 4, 8, and 13)
- Sustaining the Program (Chapters 7, 13, and 15)
- Lessons Learned
- Recommendations for Future Designers and Stakeholders of Academic Mentoring Programs

Case Studies

Chapters 16 through 19, Case Studies for Undergraduate Students as Mentees

The case study in Chapter 16 takes place at The Ohio State University. In this case study, Yu, Black, and Kaletunc describe the Aspiration for Women's Advancement and Retention in Engineering and Sciences (AWARES) program and how the program empowers women graduating from engineering and science majors. Women students are paired with professional women engineers working in the industry for one-on-one mentoring.

The case study in Chapter 17, by Schroeder, Hackel, and Sawyer, occurs at the University of New Mexico (UNM). At UNM, the Science, Technology, Engineering, and Math (STEM) Collaborative Center staff recruit entry-level undergraduate students. These students are paired with engineers and scientists from the nearby Air Force Research Laboratory and Sandia National Laboratory.

In Chapter 18, Spears, Hales, and Lewis describe a hierarchical one-to-one faculty-to-student mentoring program offered throughout the statewide campus system to all undergraduate students at Utah State University. This program has increased undergraduate student retention rates, a sense of belonging, and improved academic performance management.

The case study in Chapter 19 also takes place at Utah State University. In this case study, Grewe and Kleiner describe the first-year-experience Connections program. This program plays a critical role in retention efforts. In addition, Grewe and Kleiner recently added a yearlong mentoring component to provide the social support and guidance many students need to succeed in the academy.

Chapters 20 and 21, Case Studies for Graduate Students as Mentees

In Chapter 20, Cowin uses co-mentoring circles for graduate students at Washington State University who are veteran teachers, instructional coaches, or deans of students who are transitioning to their new role in a K–12 principal certification program. Co-mentoring circles are facilitated peer groups and can provide ready access to co-mentors without waiting for one expert mentor to be available.

Chapter 21, authored by Flores, Shenberger-Trujillo, and Montes, focuses on high-impact mentoring practices for graduate STEM students. The authors make a case for inclusive and asset/strengths- based mentoring to increase doctoral degrees awarded to historically underrepresented minorities. In addition, this case study highlights the National Science Foundation Bridge to the Doctorate and a Regional Collaborative Alliance to diversify STEM faculty.

Chapters 22 through 24, Case Studies for Faculty as Mentees

In Chapter 22, Clabaugh focuses on adjunct faculty at Pacific Oaks College. Clabaugh describes how and why autonomy-supportive instruction (ASI) is embedded in all elements of the program structures. Mentee-mentor pairs, as defined by Clabaugh, engage in and apply ASI in their mentoring relationship, teaching, peer observations, and reflective practice conversations.

Chapter 23, authored by Romero-Leggott, Myers, Sussman, and Hartley, describes the mentoring program Advancing Institutional Mentoring Excellence (AIME) pilot project created at the University of New Mexico Health Sciences Center. AIME fosters an institutional culture of belonging and rigorously evaluates best practices for mentoring faculty of color toward promotion and tenure.

Recognizing that mentored faculty are more likely to navigate the tenure process successfully and become engaged in the academy, Marshall, in Chapter 24, highlights a mentoring program at Central Michigan University's College of Education and Human Services. This comprehensive, research-based program includes summer support, orientation, faculty mentorship, professional development, and peer interactions for tenure-track faculty.

Chapters 25 and 26, Case Studies for Staff as Mentees

As editors, we are keenly aware that an often-overlooked—yet vital to the university's mission and operations—academy population is staff employees. The author of Chapter 25, Amy Hawkins, eloquently states, "In higher education, staff sometimes feel like the third wheel, the step-child, the forgotten ones sitting on the sidelines as students and faculty bask in the warm glow of academia." Therefore, we include two case studies in which the mentees are staff members with the goal of staff empowerment.

In Chapter 25, Hawkins describes the University of New Mexico's Staff Council Mentorship Program.

The Staff Council was created to offer recommendations to the university regarding staff development, morale, needs, pay, and benefits. The Staff Council Mentoring Program matches more experienced staff members with elected councilors to help guide ideas, projects, and initiatives.

Arizona State University's (ASU) Commission on the Status of Women has developed an extensive university-wide staff mentoring and development program. In Chapter 26, Engler describes how this program pairs staff mentees with mentors, allowing mentees to identify their strengths and consider their long-term career trajectory at ASU. In addition, Engler details the program's structure and development, operational management, and the financial investment needed to support this opportunity for staff.

BECOMING AWARES: MENTORING UNDERGRADUATE WOMEN IN ENGINEERING AND SCIENCES

Shirley L. Yu; Arianna Black; and Gönül Kaletunç

Abstract

The Aspiration for Women's Advancement and Retention in Engineering and Sciences (AWARES) mentorship program was designed to support women in science, technology, engineering, and mathematics (STEM) majors as they transition from their undergraduate degree programs to the workforce. The AWARES program was structured around topics relevant to women in STEM careers, including but not limited to interviewing and job offer negotiation, career development, navigating social dynamics in the workplace, and establishing and growing a professional network. Based in tenets of social cognitive theory, AWARES aims to use expert and group mentorship to increase young women's self-efficacy for career-related soft skills that are associated with retention in STEM professions. We examined quantitative and qualitative outcomes for both mentors and mentees and found that women graduate the program with high levels of self-efficacy and that mentors also feel highly efficacious in their mentorship roles. In addition to mentee and mentor outcomes, quantitative and qualitative evaluation of the program was conducted so that participant feedback can be considered for future iterations of AWARES. Finally, program design, sustainability, and lessons learned are also discussed.

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Purpose and Objectives of the AWARES Program

In engineering, gender disparity is a long-standing issue (Fouad et al., 2011). Only 23% of students graduating with an undergraduate engineering degree in 2020 were women (American Society for Engineering Education, 2021). Of these women, a critical mass leaves engineering careers, resulting in women comprising only 16% of the field's workforce (National Science Foundation, 2021). The absence of supportive networks and lack of guidance by mentors have been found to negatively impact job satisfaction and one's career trajectory (Fouad et al., 2012). Indeed, many women engineers lack the support of a mentor. Women who did have a mentor remained working in the engineering field and reported higher levels of career satisfaction and less inclination to leave than those without a mentor. Mentorship and networking are essential elements for women engineers to have successful careers. This is especially true for young women in male-dominated academic and professional fields. A good starting point for discovering the value of mentoring and networking and developing career management skills is at the undergraduate level. The Aspiration for Women's Advancement and Retention in Engineering and Sciences (AWARES) program empowers women graduating from engineering and science majors with professional skills necessary for a smooth transition from college/ university to the workplace and a successful career. The AWARES program has three primary goals:

1. Prepare women with the necessary career management skills to succeed and advance in engineering and science fields.

2. Build the self-efficacy and confidence of women engineers and scientists to encourage perseverance in the workforce.

3. Provide opportunities for women to discover the value of mentorship and networking.

Mentoring Context and Program Development

AWARES was created by Dr. Gönül Kaletunç, professor of food engineering. She attended the Executive Leadership in Academic Technology, Engineering and Science (ELATES) program at Drexel University, a national leadership development program for women faculty committed to increasing the number of women in STEM. Participants in ELATES create an institutional action project, and Dr. Kaletunç developed the AWARES program accordingly. She focused on creating a program uniquely structured to be long enough to establish a relationship between mentor-mentee dyads, to include a curriculum of topics highly relevant to women's navigation of professional careers, and to provide opportunities for mentees to be part of group mentoring by sharing the knowledge learned from mentors with their peers. Dr. Kaletunç started the program as a pilot with 13 mentor-mentee dyads in 2016 and, as of 2022, has served nearly 200 women students.

The AWARES program features several elements that distinguish it from traditional mentoring programs. Women students are paired with professional women engineers working in the industry for one-on-one mentoring. The program is designed around a structured curriculum, including peer discussions in larger groups. The program also entails a two-semester commitment to provide time for developing relationships. Discussion topics focus on developing career management skills that are not included in engineering curricula (Kaletunç, 2017; Kaletunç & Yu, 2018).

Infrastructure and Institutional Support

AWARES is a cocurricular program offered through the Department of Food, Agricultural, and Biological Engineering (FABE) at The Ohio State University (OSU). It is open to women majoring in STEM disciplines at OSU. With the use of video conferencing tools, students at other universities and mentors working in states other than Ohio have also participated.

The curriculum is designed to focus on career management skills. Mentor-mentee pairs discuss specific topics of curriculum during biweekly meetings. In intervening weeks, groups of mentees meet for facilitated peer discussions in a learning community (LC). Mentees share their reflections from their conversations with their mentors and are exposed to more viewpoints. The LCs are a form of group mentoring, and they simulate professional networks and aid mentees in recognizing the value of networks and the opportunities they may bring.

Throughout the program, prior to mentor-mentee meetings, participants receive resources and talking points to guide their conversation about the curriculum topic. The curriculum includes career goal identification, interview skills, job offer selection and negotiation, conflict resolution, emotional intelligence, diversity, imposter syndrome, implicit bias, microaggressions, career management and advancement, and leadership.

The program lasts 25 weeks over the fall and spring semesters. Each topic in the curriculum is discussed over 2 weeks, first within the mentor-mentee meetings and then within the LC meeting. This format is intended to expand knowledge about the topic and to build confidence in the mentees.

At the end of the program, mentees and their mentors attend a graduation ceremony. This ceremony is either held on campus in the evening and includes a shared meal, or it occurs online due to the participation of some mentees and mentors from other states. During the ceremony, the director and university administrators greet and provide congratulatory remarks. Next, a keynote speaker addresses the students with an educational and inspirational talk, typically with a message focused on encouraging women to persist in their engineering careers. The keynote speakers have included successful women engineers, social scientists, and university administrators. The ceremony ends with recognition and celebration of mentees with certificates of achievement and of mentors with certificates of appreciation.

To support its activities, the program has received internal and external funding. Financial support has been provided by the department, college, and university. Specifically, funding sources have included the Department of FABE, the College of Food, Agricultural and Environmental Sciences, the College of Engineering, and the Office of Diversity and Inclusion at the OSU. Program administrators also sought and were awarded external grant funding from the Engineering Information Foundation. Finally, funding is also sustained through a gift account, where donors and other participating universities can contribute.

Operational Definition of Mentoring

AWARES is a formal, structured mentorship program that includes expert and group mentorship components. Stemming from social cognitive theory, both expert and group mentorship provide

opportunities for observational/vicarious learning through models and through social persuasion, which are instrumental for supporting participants' ability beliefs; in particular, AWARES targets an individual's self-efficacy or one's belief in her ability to execute goal-directed behaviors (Bandura, 1977; Schunk & Mullen, 2013; Zeldin & Pajares, 2000; Zimmerman, 2000).

In AWARES, expert mentorship is defined as a hierarchical, developmental relationship whereby a mentor from the engineering industry provides career-related psychosocial/socioemotional guidance to the mentee to guide them in their decision-making and to foster their professional success (e.g., Downing et al., 2005; Kram, 1983). The group mentorship component gives mentees opportunities to share reflections from conversations with mentors and to discuss their experiences, leading to expansion and strengthening of knowledge on curriculum topics. There is no expert–novice hierarchy between peers, except for any naturally occurring grade-level differences. Therefore, group mentorship is classified as a developmental relationship whereby mentees can discuss their mentorship experiences and exchange career-related psychosocial/socioemotional advice with a group of their peers in the program. By providing mentees with competent and relevant models, their self-efficacy beliefs are expected to increase (Bandura, 1977) over the 25-week-long program (e.g., Kaletunç & Yu, 2018).

Recruitment, Selection, and Matching Strategies

Participant recruitment begins each year during the spring semester through announcements emailed by academic advisors in the College of Engineering. Advertisements are also distributed through university news channels. In some cases, graduates of the program volunteer to recruit mentees in subsequent years. The AWARES website (https://awares.osu.edu/) includes the application, which contains several questions to determine eligibility. The application process continues through summer and the beginning of the fall semester. Once applicants' commitments are confirmed, mentor recruitment efforts start. The program has built a mentor database of approximately 150 women engineers and scientists practicing in the industry. Mentors are identified and contacted about their willingness to participate in the upcoming program year, with mentor-mentee pairs formed primarily on matching majors of study.

Training and Educational Opportunities

Training and educational opportunities exist for both mentors and mentees. Mentors meet with the program director and other mentors prior to the start of the program. The program director sends emails biweekly to the mentors with announcements and notes on the topic. The mentor-mentee conversations are followed by further discussion on the curriculum topics in the LC meetings. This helps mentors know that they are not expected to have all the answers on the topic but instead to provide insight from their perspective and experience.

Both mentors and mentees receive resource materials on the curriculum topics, including articles, links to websites, case studies, and self-guided career modules. During the weekly mentor-mentee meetings, the mentees receive one-on-one mentoring. They learn about the week's topic and their mentor's experience and perspectives, and they ask questions and discuss issues. The following week,

they share what they learned with their peers, and additional engagement with the topic takes place through facilitated discussion by LC advisors and the program director. Mentees share the reflections from their conversations with mentors in the group so that all mentees can indirectly learn from other mentors.

The curriculum is highly structured around biweekly topics, with specific learning objectives. For example, for the topic of conflict resolution and emotional intelligence, the learning objectives include the following: Mentees will be able to (a) name reasons for conflict in the workplace, (b) apply collaborative negotiation principles to resolve conflict, and (c) engage in self-awareness, control, and expression of one's own emotions; and understand and empathize with others' emotions to manage relationships. An overarching learning objective for the program is for mentees to embrace the value of having a mentor and a network so that they will plan to identify and request a mentor and build a network once they are in their careers.

Strategies to Monitor and Support Relationships

Several strategies are in place to monitor and support relationships. The schedule and organization of the program provides a structure that supports the need for mentors and mentees to meet biweekly. In alternating weeks, the LC meetings provide mentees a space to share and reflect on their conversations with their mentors. All mentees are encouraged to actively participate in the LC group conversations that are facilitated by an LC advisor. LC advisors commented that as the mentees' comfort level in the group and confidence in their knowledge increased, their participation in group conversation naturally improved.

Formative and Summative Evaluation

The evaluation and assessment of AWARES is comprehensive. Quantitative and qualitative data are collected at three timepoints (baseline, mid-program, and end of program) to assess self-efficacy outcomes and changes. Mentors and mentees complete online surveys assessing self-efficacy for the career skills addressed in the curriculum, as well as program perceptions. For example, to assess self-efficacy for career goals, participants are asked a series of questions about their confidence pertaining to aspects of goal-setting, including being able to set career goals for the next 5 years, persisting toward their goals, being involved in meaningful work, and understanding the employment outlook and salary trends in their field. Survey findings consistently demonstrate that mentees experience growth in their self-efficacy over the course of the AWARES program (Table 16.1), and that they have high levels of self-efficacy at the end of the program and prior to the workplace transition.

A unique aspect of AWARES is the evaluation of mentors' self-efficacy for their role. Similar to the mentees, the mentors are asked to rate their confidence in the various topics the AWARES curriculum addresses, but rather than their own confidence in those areas, they respond based on how confident they feel supporting their mentees. Importantly, all mentors began and ended the 2019–2020 AWARES program with high self-efficacy (i.e., means above 4.00 on a 5.00 scale), with no statistically significant changes across the year. This is crucial, as the perceived competence of a social model is a major factor in whether the model is effective for the learner (e.g., Schunk & Zimmerman, 1997). Thus, evaluating mentors' self-perceptions is a recommended aspect of mentorship programs.

Finally, qualitative evaluation of open-ended responses using thematic analysis (Braun & Clarke, 2006) yields more nuance about which aspects of the program are effective and why. Furthermore, focus groups are conducted with mentors for formative evaluation halfway through the program. This qualitative information adds depth to quantitative responses and helps guide program improvement (Table 16.2). For instance, one qualitative finding that offers a rich opportunity for future exploration is that mentors have often reported what skills they gain by participating in the AWARES program. Further exploration of how mentors perceive their experiences can provide useful insights for the mentorship literature. Overall, the evaluation of AWARES also contributes to its sustainability and continued effectiveness by identifying participants' perceptions, needs, and outcomes.

Sustaining the Mentoring Program

Factors influencing the sustainability of AWARES include financial support, a regenerative mentor pool, technology use, long-term program goals, and evaluation of the program. First, funding helps support participants' overall experience by providing meals during group meetings, honoraria for guest speakers, and a graduation ceremony. Second, the mentor pool has grown over time, with many previous student mentees becoming mentors after graduation, and mentors aiding in recruitment. In 2019–2020, 90% of outgoing mentees expressed interest in becoming a mentor in the future, with 73% interested in mentoring for AWARES specifically. Similarly, 57% of mentors were previous AWARES mentors, and 93% indicated an interest in continuing in the future. This mentorship network is supported and promoted through its website and social media channels, encouraging connection between participants and program personnel. Technology (e.g., video conferencing) also sustains and allows expansion of the program to other universities and mentors beyond the local area, including mentors from nine states outside Ohio. Finally, program goals also contribute to its sustainability: One prominent goal is to support graduates by giving them the skills to identify their own mentors in the workplace. Accordingly, mentorship extends beyond the program itself. In addition, the program is designed to sustain mentorship in a cyclical fashion, through the goal that mentees will not only *have* mentors in their careers but also will *become* mentors in the future.

Outcomes, Lessons Learned, and Future Directions

As of 2022, AWARES is in its seventh year and has impacted the lives of nearly 200 undergraduate women pursuing engineering and science degrees and careers. Several patterns of outcomes have emerged, lessons have been learned, and directions for future research have been identified.

Outcomes

Evaluation consistently demonstrates that mentees complete the program with high self-efficacy for significant career-related nontechnical skills. Having high self-efficacy at a time of transition may be necessary for retention (Dennehy & Dasgupta, 2017) and is thus a crucial program outcome. Mentees also strongly believe that their participation in AWARES will positively impact their careers. Similarly, mentors report high self-efficacy for the mentorship role, a strong belief in the importance of the program, and value for participation as mentors.

Furthermore, the program length allows meaningful relationships to develop between mentees and

mentors. Dyads often continue to communicate even after mentees complete the program and begin their careers.

Lessons Learned

Sustaining the mentorship program financially has required creativity and the utilization of multiple resources. AWARES has been sponsored by two colleges within the university, the university's Office of Diversity and Inclusion, and a foundation grant. Seeking and utilizing multiple sources of funding has helped support the program over many years.

Furthermore, mentors serve as a critical component of AWARES, and their belief in the necessity of the program is one powerful facet of its growth and success. Mentors also routinely report that the program structure and provision of content/topic resources are part of its appeal for them. In return, they have spread their testimonies about AWARES to other women in STEM careers, growing the mentor pool considerably.

Future Directions

Future directions regarding program evaluation may focus on several elements. Longitudinal follow-up with mentees can provide information on actual career satisfaction and retention. Further, additional research examining the mentors' program participation as well as longitudinal follow-up may add a unique perspective on the program's value. Specifically, mentors' statements that the program would have positive impacts on their own careers suggest an opportunity for understanding what mentors gain from their participation in the program. Finally, the inclusion of a comparison group of undergraduate women who do not participate in the program can provide a stronger basis for causal claims.

In conclusion, the AWARES program provides a unique opportunity for women engineering and science undergraduates to be mentored by women working in the industry on career management skills and networking. The documented outcomes to date for both mentors and mentees indicate that the program is a successful approach to preparing future women engineers for their careers, which in turn can work toward addressing gender disparities in the field.

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Table 16.1

Mentee Self-Efficacy Growth (2019–2020)

Curriculum topic	Time 1 N = 30			Time 2 N = 38			Time 3 N = 27			Sample item
	M	*SD*	◈	*M*	*SD*	◈	*M*	*SD*	◈	*I have confidence that I can…*
Career goals	3.66	0.68	.70	4.18	0.46	.53	4.39	0.69	.88	…Make a plan of my career goals for the next five years
Skill development	3.97	0.73	.72	4.33	0.61	.75	—	—	—	…Identify transferable skills gained outside of the classroom
Job search	3.47	0.74	.76	3.95	0.73	.83	4.25	0.71	.76	…Make the most of a career fair
Interview skills	2.91	0.80	.87	3.82	0.75	.90	4.35	0.59	.88	…Successfully negotiate my future job salary and benefits
Workplace transition	3.83	0.58	.86	4.23	0.52	.83	4.54	0.45	.87	…Work well within the culture of my workplace
Diversity	3.89	0.64	.77	4.30	0.64	.91	4.57	0.44	.76	…Guard against implicit bias affecting my decision-making
Career advancement	3.32	0.74	.82	4.10	0.68	.86	4.44	0.54	.90	…Recognize the opportunities for advancement in my career
Career management	3.41	0.65	.70	3.96	0.71	.82	4.33	0.61	.89	…Effectively deal with microaggression in the workplace
Overall *M* & *SD*	3.49	0.50	*n/a*	4.08	0.52	*n/a*	4.41	0.47	*n/a*	

Notes. — indicates missing datapoint. *M* = mean. *SD* = standard deviation. ◈ = Cronbach alpha. *n/a* = not applicable.

Table 16.2

Sample Qualitative Survey Items and Selected Responses from Mentors and Mentees

Item	Selected responses
How is this program different from other mentoring programs or outreach opportunities with which you have been involved?	**Mentor**: *I have been involved with both formal and informal mentoring within my company for many years. What I appreciate about this program is the topics for discussion offered as conversation starters. This helps focus in for each meeting! Much appreciated! Additionally, the specific time frame is appreciated . . . a clear start and end date are good!* **Mentee:** *I think that it is more structured in a way to be educational and kind of like working through a program for like professional development. I think it also was so great in building up confidence and helping to establish a community of resources for times when we struggle with how male-dominated our fields are.*
Please provide any additional comments or testimonials about the program	**Mentor:** *I always enjoy getting to know my mentee, giving her tools & advice to use as she works on developing her desired career path. I am hopeful that I have been a positive influence/ role model for my mentee and in some way I have helped set her up to be successful in the workplace.* **Mentee:** *AWARES gave me the confidence to keep working towards my engineering degree and the drive to know it is worth it.*

MENTORING REDESIGNED TO ATTRACT ENTRY-LEVEL STUDENTS

Timothy Schroeder; Tara S. Hackel; and Yadéeh E. Sawyer

Abstract

Competitive and highly structured mentoring relationships between undergraduate students and professional researchers are often life-changing. However, such mentoring programs often have rigid qualifications and attract students who are already advanced in their educational and professional planning. The University of New Mexico (UNM) developed a program to shift the paradigm to attract entry-level students for whom "professional research" was still a new and daunting concept. By pairing these students with engineers and scientists at the Air Force Research Laboratory and Sandia National Laboratory, UNM was able to engage students in structured, low-stakes mentoring that helped shape their current understanding of research, and illuminated career pathways and opportunities in their chosen academic disciplines. The Science, Technology, Engineering, and Math (STEM) Collaborative Center staff recruited entry-level UNM students as mentees and recruited engineers and scientists as mentors. UNM then matched mentor-mentee pairs using an interest form, hosted introductory events for pairs to meet on campus, and followed up with mentors and mentees to provide support and promote ongoing conversations. Students who participated in this program were more likely than their peers to persist at UNM.

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Mentoring Context and Program Development

The Need for This Program

The University of New Mexico (UNM) serves a student population rich in diversity, with Hispanic students accounting for 50% of enrolled students, Black students accounting for 3%, and American Indian students accounting for 6%. However, UNM also serves a low-income population, with 47% of first-time, full-time, degree-seeking students receiving Pell Grants. As a result, many UNM students rely on part-time and full-time off-campus employment. In addition, nearly 40% of entering students are first-generation. This creates a need for highly flexible mentoring programs that can accommodate busy schedules while still empowering new students to ease into academic engagement programs.

Purpose and Objectives of the Program

A defining characteristic of the UNM STEM Mentoring program is ease of entry. The student participation application form is short and does not require references or a formal essay. Acceptance is noncompetitive, and neither GPA nor citizenship status are collected or considered for participation. While competitive mentoring programs are important, and often provide more comprehensive support, they often serve smaller populations and focus resources on students with strong academic track records. The UNM STEM Mentoring program instead focuses on introducing students to research pathways gradually without considering prior academic performance. In turn, an important goal of the program is to prepare students to participate in deeper and more competitive programs later.

Organizational Setting and Population Served

UNM is situated in a state rich in diversity but encompassing extremes in socioeconomic status and educational attainment. Among all US states, New Mexico has the second-highest percentage of persons living in poverty (Shrider et al., 2021) and the third-highest high school drop-out rate (McFarland et al., 2020). However, New Mexico is also home to two of eighteen national laboratories and one federal military research laboratory. Of these three, two are located in close proximity to UNM: Sandia National Laboratories (Sandia) and Airforce National Research Laboratory (AFRL). Sandia alone employs more than 14,000 individuals who have collectively earned 2,664 bachelor's degrees, 4,891 master's degrees, and 2,205 doctorates (Sandia National Laboratories, 2021).

Through the UNM STEM Mentoring program, we leverage this easily accessible workforce of engineers and scientists to mentor undergraduates, including many students from first-generation families and underfunded rural public-school systems. Of particular focus in the creation of this program were first- and second-year college students, students who had little to no prior exposure to professional researchers, and students from high schools with limited science, technology, or engineering course options. Accordingly, we designed a mentoring program that is noncompetitive, low-stakes, easily accessible, and that allows students to vary their engagements to fit substantial off-campus employment schedules.

Organization Support for Mentoring Program and Infrastructure

The UNM STEM Collaborative Center (STCC) grant was not originally written to fund a mentoring program. During the first year of the grant, to find collaborators for other STCC projects, we met with the AFRL Women's Forum. This group, consisting of women engineers and scientists, requested the creation of the STEM Mentoring program. They mentioned that AFRL regularly hires undergrads for summer internships but that UNM students are rarely competitive in the national applicant pool. UNM students needed more experience and connections to compete for the AFRL summer internships. As a result of this conversation, we launched the UNM STEM Mentoring program, and Women's Forum members formed the first mentor pool (Duncan, 2016; Dailey, 2017).

Eventually, these AFRL mentors suggested we contact Sandia researchers and engineers, who also wanted to participate as mentors. This led to a conversation between UNM and the Sandia Women in Science and Engineering (WISE) employee resource group. These employee resource groups (ERGs) are often dedicated to mentoring people from their identity groups, including women, LGBTQ people, and professionals from various ethnicities. ERGs make a great pool to recruit from for finding underrepresented STEM professionals. Shortly after meeting with WISE, Sandia personnel joined the UNM STEM Mentoring program as mentors. As word of the program spread, engineers and scientists from other organizations reached out to us to volunteer to serve as mentors, further expanding the number of matched mentoring pairs. The majority of mentor and mentee participants are from engineering and computing fields, with the occasional pairing within mathematics, physics, astronomy, chemistry, biochemistry, and biology.

Operational Definition

In developing this program, we operationalized mentoring as "Mentoring occurs when a senior person or mentor provides information, advice, and emotional support to a junior person or student over a period of time" (Lev et al., 2010). Through these mentoring relationships, we seek to shape student understanding of research and illuminate career pathways and opportunities in their chosen academic disciplines. The UNM STEM Mentoring program also helps students reflect on the value of mentoring, helping to establish the expectation that mentoring would form a crucial component of their lifelong education.

The majority of mentoring occurred through traditional academic mentoring relationships, where individual student participants were paired one-to-one with experienced scientists and engineers. However, as the program progressed, additional mentoring relationships were established utilizing a one-to-one peer mentoring approach. For these relationships, we most often paired juniors and seniors with freshman and sophomore students.

Mentoring Inputs and Resources

Funding

The first 4 years of the STEM Mentoring program were sponsored by the STCC, with funding provided by the US Department of Education. Coordination was provided as part of the duties of one full-time

staff member and required an average of 10 hours per week throughout the semester.

After the conclusion of the STCC's nonrenewable grant, the UNM STEM Mentoring program was transferred to the School of Engineering's Engineering Student Success Center (ESS).

Mentoring Activities

Recruitment Activities

Each semester, we recruit entry-level UNM students as mentees through both general advertising and direct emails to the target population. This process includes outreach to academic advisors and campus-based ethnic centers, who work closely with entry-level students and can help identify those who would most benefit from participation. We recruit STEM professionals (engineers and scientists) as mentors through direct contacts with current mentors, word of mouth, and requests for marketing with key contacts within AFRL and Sandia.

Matching Activities

Each interested mentor and mentee participant is asked to complete an interest form (Appendices A and B) that includes basic contact and foundational information (for instance, academic discipline) but later evolved to include optional preference questions to better match mentees and mentors. Additionally, mentors are asked about their personal, educational, and professional backgrounds and what they believe the role of a mentor to be.

This latter question is of particular importance in pairing mentor and mentee. As the program targets early students, it would be unwise to pair students who are still developing their professionalism with mentors who expect students to have already mastered professional engagement behaviors.

Students are asked why they were interested in the program; their academic, professional, and personal interests or backgrounds; and their preferred mentor characteristics. Initially, the matching forms did not include demographic information or schedule availability for mentors or mentees. However, based on recurring requests, scheduling conflicts, and feedback on the process, these were later included on the forms as optional fields. Students can prioritize mentors with identities that are not typically found on mentor interest forms (Appendix A), such as Spanish-speaker, parent, LGBTQ+, and so on. This allows students to be matched with mentors who might be able to relate to their cultural backgrounds as they navigate STEM.

Once the semester deadline to join the program passes, the program coordinator pools and reviews all forms, and then matches mentors and mentees based on the best fit, prioritizing first- and second-year undergraduate students.

Training Activities

Once accepted, students are required to attend a 1-hour orientation session, which focuses on

program expectations and tips for success. Students learn what mentoring is and what it takes to make that relationship effective. During the semester, there are no required events or documentation the student or pair must complete, but we encourage a 1-hour-per-week face-to-face commitment, one semester at a time. The orientation also addresses the logistics of communication, stresses the importance of sticking to commitments, teaches how to write a professional email, and encourages the development of a verbal or written memo of understanding with their mentor. The final portion of the orientation is focused on setting goals for the relationship within the scope of the program. We also provide mentees with a mentee questionnaire that we encourage them to complete and share with their mentor in their introductory email. This helps to get the conversation started and guides the mentor on the type of support the student is looking for.

There are no formal trainings or requirements for the mentors beyond the interest form, but we provide mentors with a handbook to help guide them on their roles and responsibilities, program expectations, and campus resources (for instance, the UNM Women's Resource Center). The handbook also provides mentors with tips on how to move into meaningful conversations and a list of potential meeting topics in case the mentee did not come with a list of them.

Strategies to Monitor and Support Relationships

To ensure a smooth mentor/mentee pairing, each semester begins with a STEM mixer event. All program participants are encouraged to join the event as an easy opportunity to meet their match, and to meet other students and mentors in the program, as well as potential participants to get a preview of the program.

After this mixer, program staff reach out to all mentors and mentees approximately three times per semester to check in and open the communication dialogue, but they encourage more frequent communications as needed.

Throughout the semester, one-on-one mentoring meetings most often occur at coffee shops or on campus, and occasionally at the mentor's place of employment. The program asks for a commitment of one semester at a time from mentors and mentees, as the needs of both the students and mentors are fluid and highly tied to the demands of any given semester's courses (students) and workload (students and mentors). At the end of each semester, both parties are given the opportunity to stay in the program as a pair, stay in the program, be assigned a new match, step away from the program, or be co-mentors. As the program grew and mentees remained with the same mentor for multiple semesters, they would sometimes team up to co-mentor a new student. This provided the original mentee the opportunity to see the mentoring relationship from the other side while maintaining the connection and opportunity for guidance from their mentor.

Mentoring Outputs

During the first 4 years, we served more than 200 matched pairs. The program now has mentors from over 14 organizations and companies, including all three national labs within New Mexico (AFRL, Sandia, and Los Alamos National Lab). Between fall 2019 and spring 2021, we served more than 250 mentoring pairs through ESS.

Mentoring Outcomes and Lessons Learned

Outcomes

During the fourth and final year of the Title V grant, we conducted our most comprehensive analysis of impact on student academic performance. Table 17.1 compares the diversity and academic performance of STCC mentoring participants to other UNM STEM undergraduate students. Despite including more freshmen and sophomores and students from low-income families (populations with traditionally lower college-persistence rates), STCC mentoring participants were retained at higher rates than their peers.

Table 17.1
Participant Demographics and Outcomes

	STCC mentoring participants	All UNM STEM undergraduates
Number of students in population	64	11,046
Percent American Indian, Black, or Hispanic	59%	55%
Percent from low-income families, spring semester	37%	32%
Percent freshmen and sophomores	59%	37%
Next-semester retention for students at all academic levels	97%	89%
Next-year retention for freshmen students	82%	74%

Sustaining the Program

The staff coordinator position for the UNM STEM Mentoring program is now funded through a budget line item with the ESS Center within the School of Engineering. The duties associated with running the program account for a portion of the staff duties.

Lessons Learned

Throughout the UNM STEM Mentoring program, the staff made several key discoveries. Early on in the program, there were more mentees than mentors available, and some students were turned away. However, as the program grew, the tables turned, and the program now consistently has more mentors than students. The general recruitment efforts attract fewer mentees than direct emails with the opportunities. Staff continue to seek new methods for attracting students, especially first- and second-year students from underserved populations.

In addition, most interactions, feedback, and commentary through the semester from both mentors and mentees result from the regular check-ins from program staff, rather than either mentor or mentee initiating the communications. This suggests these regular check-ins are vital to helping those who have questions about resources, meeting topics or goals, or have unresponsive matches.

We also learned the value of being responsive to expert guidance. For example, we did not originally plan to create a mentoring program, but after listening to local professionals, we ended up serving 40–60 students per semester with a truly meaningful experience. The same goes for the co-mentoring. This approach was suggested by one of the AFRL mentors. As a result, we piloted the approach and found it to be impactful. The resulting program change significantly improved the experience for mentors and mentees alike.

Keeping the program informal without competitive entry barriers, time requirements, or documents to submit allowed mentors and mentees to engage with each other at a level that was accessible for them. Some matches only met a few times, while others met weekly. If we had mandated weekly meetings, the lower-engagement students would not have a mentor.

Finally, the local STEM industry makes it easy to find mentors and recruit mentors through word of mouth. Once you recruit one mentor from a large organization, it is easy to recruit more. Further, these organizations tend to run formal internship programs for undergraduate students. STEM students who have heard about the importance of internships are motivated to build connections with employees at these organizations to improve their ability to obtain internships. Then, once employed as interns, these students are more likely to be hired on after graduation. Many UNM students want to stay near family locally after graduation. This mentoring program helps support the internship-to-job pipeline for local students at these competitive STEM laboratories and other local companies and organizations.

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Appendix A

Mentor Interest Form Fields

General Information (information WILL be shared with the match)

- Name (please include ranking or appropriate prefix/suffix when applicable)
- Company/organization
- UNM School of Engineering department/field affiliation
- Preferred phone number
- Preferred email
- Additional contact information (i.e., personal phone or email)
- Degree
- Field(s) of interest

Demographic Information (information will NOT be shared with the match and are for internal matching only)

- Race/ethnicity
- Gender
- What pronouns should we use when referring to you?
- Age
- Religious/spiritual affiliation
- Family status/caregiver status
- Are you a first-generation student?
- Military service
- Languages spoken
- Schedule availability
- Under non-pandemic conditions, does your student match need access to their own transportation off-campus?

Mentoring- and Matching-Related Questions (information will NOT be shared with the match and are for internal matching only)

- Are you open to fully virtual interactions until COVID-19 concerns are no longer a factor in social interactions?
- Under non-pandemic conditions, are you open to fully virtual interactions?
- Are you a UNM SoE alumnus?
- Please briefly describe your personal (extra-curricular), educational, and professional

background/interests to help us match you with a student.

- What do you believe is the role of a mentor in a mentoring relationship between an undergraduate student and a professional scientist or engineer?
- What type of student do you feel MOST comfortable mentoring?
- What type of student do you feel LEAST comfortable mentoring?

Additional Information (information will NOT be shared with the match and are for internal matching only)

- What is something you learned in undergrad that you want to share with the students? This can include a key to success or a failure you learned from.
- Please provide any other information that can help us match you with a student.
- If you can accommodate a student who is not a US citizen, please indicate this here.

Appendix B

Student Interest Form Fields

General Information (information WILL be shared with the match)

- Name

- UNM ID number

- Email

- Phone

- Are you OK with us sharing your phone number with your assigned mentor?

- Current major/field of interest/undecided

- What academic level student are you (i.e., freshman, sophomore, junior, senior)?

STEM Mentoring program orientation

- Which STEM-Mentoring program orientation date will you attend?

- Do you plan to attend your orientation session live (in-person) or virtual (via Zoom)?

Citizenship Acknowledgement (information will NOT be shared with the match and are for internal matching only)

- You must be a US citizen to receive a mentor from Air Force Research Laboratory or Sandia National Laboratories in the UNM STEM Mentoring program. Mentors outside of these organizations generally do not require US citizenship.

  - o I understand that the UNM STEM Mentoring program requires US citizenship to be matched with a mentor from AFRL or SNL, and I am open to a mentor from these organizations.

  - o I am only open to mentors from organizations outside of AFRL and SNL.

Demographic Information (information will NOT be shared with the match and are for internal matching only)

- Race/ethnicity

- Gender

- What pronouns should we use when referring to you?

- Age

- Religious/spiritual affiliation

- Family status/caregiver status

- Are you a first-generation student?

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- Military service

- Languages spoken

- Schedule availability

- What form of transportation do you have access to?

Mentoring and Matching Related Questions (information will NOT be shared with the match and are for internal matching only)

- Are you open to fully virtual interactions until COVID-19 concerns are no longer a factor in social interactions?

- Under non-pandemic conditions, are you open to fully virtual interactions?

- Why are you interested in the UNM STEM mentoring program?

- What are two or three things you want your mentor to know about your academic, professional, and personal (extra-curricular) interests/background?

- Rank your three most preferred mentor characteristics.

Additional Information (information will NOT be shared with the match and are for internal matching only)

- Please provide any other information that can help us match you with a mentor.

- I understand that the UNM Student Code of Conduct applies to me during all activities associated with the program. I understand that UNM has the right to enforce the Student Code of Conduct and that sanctions may be imposed for violations, up to and including dismissal from the program and expulsion from UNM. I acknowledge that there are risks and dangers associated with this program and that all risks cannot be prevented. The risks and hazards of this program can result in injury to me, death, and/or property damage. Knowing the risks and hazards, I hereby waive, release, and discharge any and all claims for damage, death, personal injury, and/or property damage against UNM, its officers, employees, or agents, which I may have, or which may hereafter occur to me as a result of my participation in the program.

- I understand that there will be photos taken throughout this program.

18.

CASE STUDY OF THE STATEWIDE FACULTY-TO-STUDENT MENTORING PROGRAM AT UTAH STATE UNIVERSITY

Jeff Spears; Kim Hales; and Hannah M. Lewis

Abstract

The purpose of this article is to examine an undergraduate mentorship program through Utah State University (USU). The creation of the Faculty-to-Student Mentorship Program originated in an attempt to increase both retention and graduation rates throughout the statewide system. In the first year, a steering committee was formed, and the mentorship program was piloted on one statewide campus—Uintah Basin. During the next year, the program was expanded to all eight statewide campuses. The steering committee examined available literature regarding existing mentorship programs and identified three shortcomings: lack of theoretical framework, operational definition, and methodological rigor. This article discusses the program design for the mentorship program in addressing these shortcomings while providing a step-by-step approach to mentorship. This includes purpose, funding, recruitment, mentoring objectives, and description of measurement instruments. The article concludes with a discussion of lessons learned and recommendations for future mentoring programs.

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Mentoring Context and Program Development

Purpose

The purpose of this case study is to examine the faculty-to-student mentoring program of the statewide campus system at Utah State University (USU). In 2017, the Student Success Committee from the Uintah Basin campus developed a needs assessment to examine retention efforts targeting undeclared majors. Based on the results from students and faculty, the committee created the very first formal mentorship program at USU. In the first year, the mentorship program included 24 faculty members and 88 students solely on the Uintah Basin campus. The following academic year, the program was expanded to eight statewide campuses as part of the USU strategic enrollment management planning (SEMP) initiative. The expansion focused on the retention and graduation numbers throughout the statewide system. In Logan, fall-to-fall persistence rates were 78%, while only 54% in the statewide system for 2017. Regarding graduation rates, Logan was at 59%, and the statewide rate was 38% (Law, 2019).

In developing the mentorship program, the committee considered the best-practice approaches for faculty-to-student mentorship. As discussed by Law et al. (2020), the shortcomings of undergraduate mentoring programs include a lack of theoretical framework (Jacobi, 1991), operational definition (Gershenfeld, 2014), and methodological rigor (Jacobi, 1991; Law et al., 2020, Gershenfeld, 2014). The faculty-to-student-mentoring program aimed to build upon the existing mentorship literature while addressing these shortcomings in the programmatic design.

Mentoring Context

Utah State University is a land-grant university specializing in research endeavors and student-centered retention efforts. As of 2020, the enrollment for USU was 27,601, with 6,352 students enrolled in the statewide campuses. USU utilizes eight statewide campuses and 23 statewide education centers throughout Utah. Faculty are located throughout various departments on eight statewide campuses, with distance-education options available to the other campuses throughout Utah (Busenbark, 2020).

Infrastructure

The vice president and vice provost for statewide campuses provide oversight and funding for the faculty-to-student mentoring program. The steering committee (see Figure 18.1) for the faculty-to-student-mentoring program is comprised of a mentoring program coordinator and data manager. The rest of the committee is comprised of three regional supervisors and one faculty chair from each of the eight statewide campuses. The steering committee implements the overall focus and program requirements, while each statewide campus retains some latitude for implementation. The chair recruits, trains, and oversees the program at their respective campus. Each chair also oversees their respective student success committee. The steering committee meets once a month to discuss program issues and successes, and each committee convenes several times per semester to develop a strategic recruitment plan to increase retention and mentor undergraduate students. The importance of securing institutional support for mentorship programs can be reviewed more in Chapter 8.

Figure 18.1

Organizational Structure of the USU Faculty-to-Student Mentoring Program
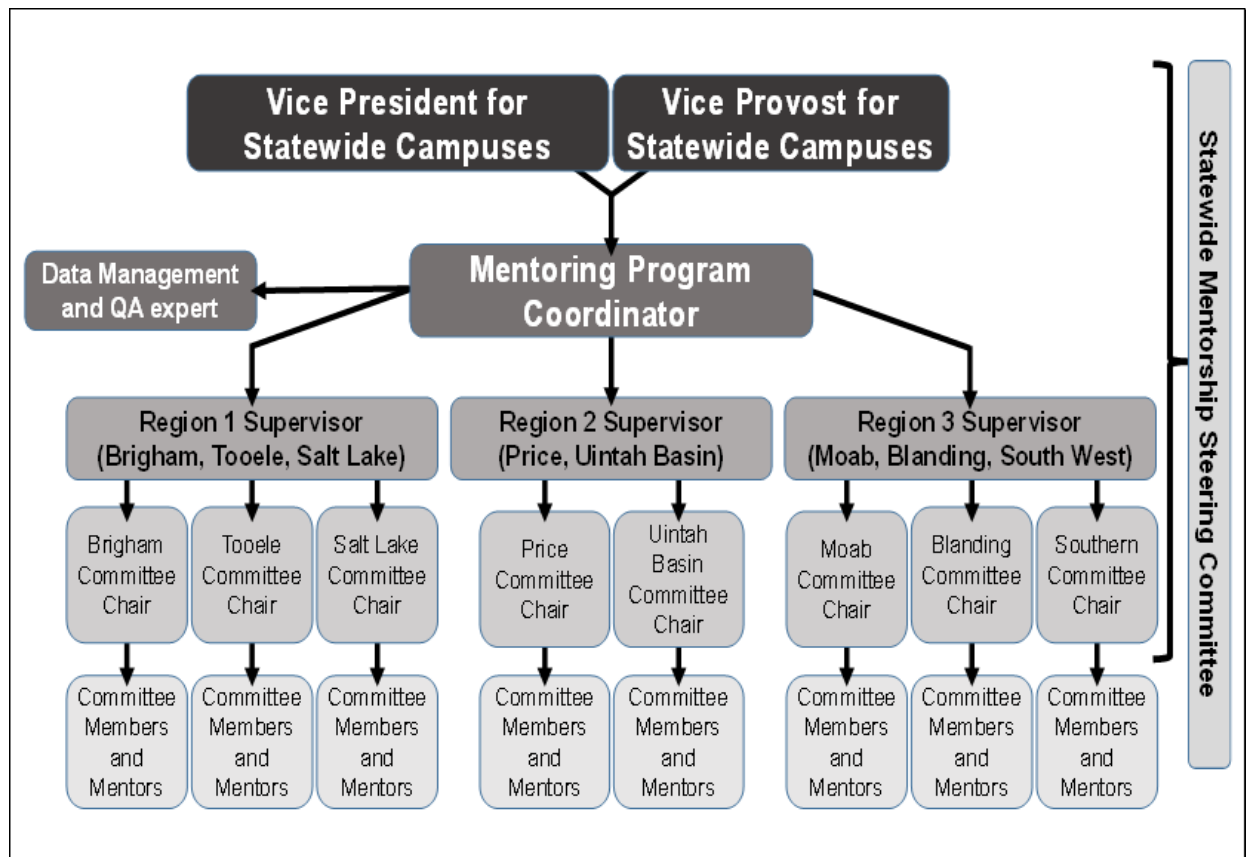
Operational Definition

Prior to establishing the program, the steering committee was tasked with developing an operational definition of mentorship. The literature lacked a consistent definition for mentoring, with over 65 varying definitions (Law et al., 2020). A literature review conducted by Gershenfeld (2014) acknowledged the importance of certain aspects of mentorship and recommended the definition developed by Nora and Crisp (2007) as providing psychological/emotional support, goal setting, career path guidance, academic subject knowledge support, and role modeling. In conjunction with Gershenfeld (2014), the steering committee also decided on the operational definition from McWilliams (2017), a leading expert in the field from Wake Forest University. McWilliams defined mentoring as "building a purposeful and personal relationship in which a more experienced person (mentor) provides guidance, feedback, and wisdom to facilitate the growth and development of a less experienced person (mentee)" (2017, p. 70). The committee decided to follow the definition of mentoring by McWilliams (2017) with the operational components of mentoring from Nora and Crisp (2007) for measurement purposes. The following definition encompasses the important aspects of the key definitions from previous literature.

At Utah State University, we define mentoring as *building a purposeful and personal relationship in which a more experienced person (mentor) provides guidance, feedback, and support to facilitate the*

growth and development of a less experienced person (mentee). Operationally, mentors provide mentees with services such as:

· *Academic subject knowledge and institutional support*
· *Education/career exploration and goal setting*
· *Psychosocial support*
· *Role modeling*

Theoretical Framework and Methodological Rigor

About 30% of mentoring programs lack a theoretical framework in a collegiate setting (Gershenfeld, 2014; Johnson et al., 2010). Theoretical frameworks are essential for explaining the connection between mentoring and academic success and for concentrating on what is being emphasized in the mentoring programs (Law et al., 2020). Adopting the recommendations of Gershenfeld (2014), the statewide steering committee chose three different and unique theories: (a) Kram's mentor functions (Arthur & Kram, 1985); (b) social learning theory (Bandura, 1977); and (c) social integration theory (Tinto, 1987, 1993). Based on these theoretical constructs, the outcomes and measurement instruments were documented in the logic model, discussed more in-depth later in this case study and the Appendix.

Typology of Program

The program has a traditional 1:1 hierarchical model. This design creates a relationship where a more senior or knowledgeable individual uses their influence and experience to help with the advancement of the mentee. (Kram, 1988). The Statewide Mentoring Committee chose this model because it best facilitates the program's goals for students to (a) successfully adjust to university life, (b) feel like they are a valued member of the university, (c) have a clear sense of purpose, and (d) achieve their educational goals. While some group interactions may occur, the design is primarily meant for the mentee to have an individual relationship with their mentor that allows for specialized guidance.

Mentoring Funding

As a component of the SEMP, the faculty-to-student-mentoring program has been supported by the Provost's Office and funded through the statewide system to increase graduation and retention rates.

Mentoring Activities

Formative and Summative Evaluations

Formative and summative evaluation is discussed in detail in Chapter 13. For the USU program, mentors are evaluated on job satisfaction and fulfillment through providing mentorship. Mentee experience is measured on objective assessments, including persistence rates, grade point average, and graduation status. To meet the program's objectives, students also completed assessments for subjective data purposes: sense of belonging, adjusting to the university, and satisfaction with the mentoring relationship. This objective data is gathered from USU's Registrar's Office and the Office of Analysis, Assessment, and Accreditation. Student and mentor evaluations are analyzed each month and

disseminated to the local committee chairs for follow-up and quality assurance. The local chairs meet once a month to discuss the program. Key summative evaluation findings show that (a) mentors find mentoring to be a rewarding experience, (b) mentors report mixed results on whether mentoring improves their job performance and if they receive recognition for mentoring, and (c) mentors and mentees are satisfied with their mentoring relationships, feel that the program is effective, and understand their responsibilities (Law, 2022).

Recruitment, Selection, Training, and Matching Strategies

The steering committee oversaw the recruitment of students and faculty on the statewide campuses with strategies implemented by each chair and their committee of faculty. Each campus developed a campus-specific strategic recruitment plan. Strategies included in-person recruitment booths, emails from advisors, announcements in the classroom via Canvas, calling campaigns, and pamphlets in the residence halls. Mentors were recruited by a personal email sent by the vice provost encouraging the faculty members to attend a virtual workshop in August. The mentors were selected based on characteristics reflective of the program's goals.

Mentors attend a training session to discuss the program's purpose, expectations, and evaluation tools. Each statewide committee organizes training for faculty at their individual campus. Gershenfeld (2014) suggests a coordinated effort in training to ensure each mentor understands their responsibilities in the program. The steering committee released a mentoring guidebook indicating best practices for mentorship as well as possible issues. The guidebook provides academic, health and wellness, crisis, financial, and career resources. Mentees are not required to participate in formal training or instruction but have access to the mentee guidebook, which provides suggestions and resources.

Mentors are matched with mentees based on "positive personality characteristics . . . and behavioral characteristics" (Law et al., 2020, p. 31). Each statewide campus committee considers the major of each student and the expertise of the faculty member. For students without a declared major, prior class history is reviewed, and recommendations are provided. The committee reviews the pairings each academic year.

Each mentor is responsible for meeting with their assigned mentee once a month, and once a month the mentor and mentee evaluate the experience and complete a final evaluation at the end of the academic year. The mentoring matching strategies are a formal process that includes expectations of participants, third-party mindful matching, and university support for time, space, and activities (Cornelius et al., 2016). Additional training is left up to each individual statewide campus as warranted. The setting for the mentorship is at the discretion of the mentor and mentee. Face-to-face meetings are encouraged, but pandemic pivots saw telecommunication modalities including Zoom, telephone, and Skype utilized. Sessions typically last 1 hour, focusing on academics, social/emotional/professional well-being, and questions from the student.

Strategies for Follow-Up

The strategies for follow-up include individual consultations from the committee chair and faculty

chair from each statewide campus with faculty and students when necessary. These consultations include unsatisfactory mentoring relationships, mentees not responding to emails, and problems arising outside the scope of the mentor's expertise. The results from each mentoring evaluation are sent to two data managers for research and monitoring. If a problem arises, the committee chair or faculty chair initiates a consultation. Each faculty/student dyad receives an evaluation each month to measure the success in meeting the outlined objectives.

During the steering committee monthly meeting, chairs are invited to give updates and discuss concerns. The steering committee offers feedback or provides suggestions.

Sustaining the Mentorship Program

The steering committee meets once a month during the academic year. The faculty chairs provide updates and ideas related to increasing the number of mentors and mentees. Each spring, individual campus committees revise and implement a recruitment, training, and mentoring timeline for the next academic year. The committee chair will also update the USU SEMP committee and other stakeholders on retention and graduate numbers and new research findings. The program coordinator meets annually with the vice president, vice provost, and eight campus associated vice presidents to report on the data, answer questions, and foster positive relations for continued support of the program.

Mentoring Outputs

In the first 2 years of data collection, the mentorship program increased the total number of mentees and retained mentors at a successful rate. In the fall of 2020, the mentorship program started with 74 mentors and finished the 2022 spring semester with 73 mentors. The program started with 83 students in the fall of 2020 and concluded with 152 mentees in the spring of 2022. The highest number of students served by the program in a semester was 157 in the fall of 2021. Statewide campus student numbers for spring 2022 included: Uintah Basin, 58; USU Eastern, 31; Blanding, 17; Southwest, 11; Tooele, 11; Salt Lake, 11; Moab, 4; Brigham City, 9.

Outcomes of the Program

During the 2021–2022 academic year, the first summative evaluation of USU's program was conducted by the Mentoring Program Coordinator, David Law (Law, 2022). Key outcomes from that evaluation depict the following:

1.   Students in the mentoring program had a persistence rate from fall 2021 to fall 2022 of 78.57%, compared to 65.22% for the statewide control group and 61.36% for the propensity-matched control group. Because our research design included this propensity-matched control group, we have more confidence that this 17.21% increase in persistence rates for the treatment group compared to the propensity-matched control group is attributed to students participating in the mentoring program.

2.   From the beginning of the year to the end of the year, students in the mentoring program significantly increased their sense of belonging at USU and their success at managing the academic environment.

These outcomes support our theory of change logic model in the Appendix. This model describes that when mentors provide their mentees with academic expertise, career guidance, psychosocial support,

and role modeling, this will lead to the mentee feeling like they belong to the USU academic family and that they are successfully adjusting to university life, which will help them persist as they reenroll at the university.

Lessons Learned

Undergraduate mentorship programs across the country seem to lack three specific requirements for success: a theoretical framework (Jacobi, 1991), operational definition (Gershenfeld, 2014), and methodological rigor (Jacobi, 1991; Law et al., 2020; Gershenfeld, 2014). This case study is one example in which a mentoring program attempted to address these concerns. Based on the pilot program and the first year of the statewide launch, the steering committee learned some lessons.

First, all three components are vital to the success and sustainability of the mentoring program. Theoretical guidance is essential to crafting an operational definition of mentoring, and an operational definition is necessary to bridge the connection to academic success.

Once the theoretical framework and definition of mentorship were established, the last component included describing and measuring the mentorship program's independent, intervening, and dependent variables. The independent variables included academic expertise, career guidance, psychosocial support, and role modeling, while the dependent variables consisted of job satisfaction and fulfillment for faculty. The mentees had objective assessments gathered, including persistence rates, GPA, and graduation status. The monthly surveys were crucial in identifying problems with mentorship pairing and providing real-time feedback on the mentorship process.

Second, the steering committee utilized the theory of change logic model (see Appendix) to explain how the mentoring program aids the educational trajectory of the students. Through a series of "if/then" statements, the committee explicitly stated how mentoring helps retain and graduate students. As Jacobi (1991) contends, models and frameworks must have measurable outcomes and not be designed on subjective goals. Chapter 8 discusses the importance of measurable goals. The steering committee spent a considerable amount of time developing the logic model to guide the creation of the mentoring program while establishing a robust methodological approach for evaluation.

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Theory of Change Logic Model of how Faculty-to-Student Mentoring Contributes to Culture of Student Success and Faculty Engagement: Constructs, Theoretical Frameworks, and Assessments USU Statewide Faculty-to-Student Mentoring Program—Revised 12 11 2019
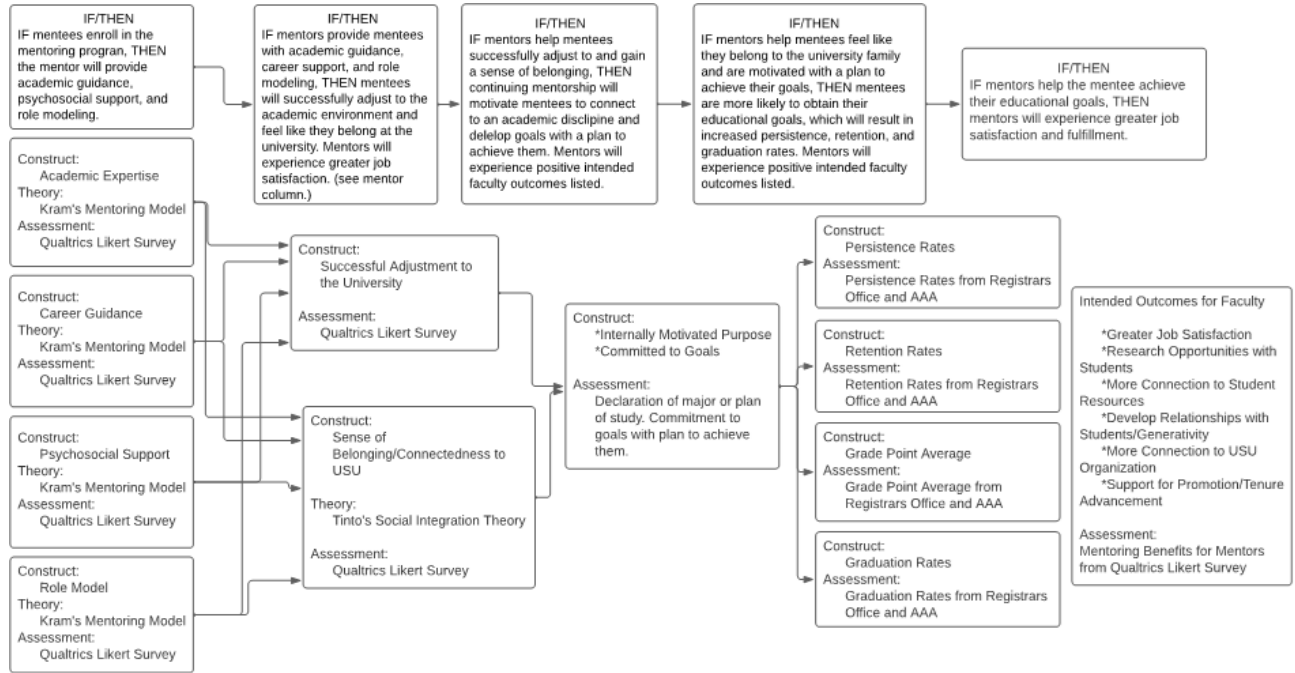
THE CONNECTIONS PROGRAM: INTEGRATING MENTORING INTO THE FIRST-YEAR EXPERIENCE

Jennifer Grewe and Harrison Kleiner

Abstract

In this chapter, we will offer a model of successful integration of evidence-based mentorship practices within a robust first-year experience program at Utah State University. The mentoring aspect of the program was built to address the problem of attrition rates of first-year students transitioning to the second year. This approach provides faculty mentoring for *every student* in the program and addresses how it can be scaled to a large student population. We will discuss how the most at-risk students receive extra focus within this model to help students who lack the educational and social capital to gain mentorship experiences on their own with faculty. We will discuss the use of assessment data to maintain the rigor of the program and triage our most vulnerable students' needs so that they receive the most high-touch mentoring experiences. This chapter will provide an evidence-based model that could be easily adapted for successful use at other universities.

Mentoring Context and Program Development

Purpose and Objectives of the Program

One of the most important indicators of student success in higher education is the retention rate since it is both an indicator of progress to degree completion and an important driver of tuition and revenue. First-year experience courses have been found to be impactful in retaining students within higher education by providing a sense of belonging to the students and may lead to better academic performance and retention from year one to year two (Kilgo et al., 2014; Soria et al., 2013).

Connections is a first-year experience course that plays a critical role in retention efforts at Utah State University (USU). While USU's retention rates have been improving, retention from year one to year two remained a growth area for our institution. A full year-long mentoring component was added to Connections in fall 2020 to address that issue. A formal mentoring experience within the first year can help to provide the social support and guidance that many students need to be successful within higher education (Wilcox et al., 2005; Nora & Crisp, 2007).

Organizational Setting and Population Served

Connections serves approximately 2,800 incoming undergraduate students every year, including those at higher risk for retention issues such as first-generation and other minoritized students. In 2021, the program was introduced to two statewide residential campuses (Blanding and USU Eastern), which provided evidence that the model could be replicated successfully at other locations with nontraditional, diverse, and sometimes less academically prepared populations.

Organizational Support for Mentoring Program and Infrastructure

A faculty director and staff administrator's time have been necessary to complete tasks and provide oversight and direction for the program. A faculty committee is the main governing body for the program and owns the curriculum. The Connections program reports to the Provost's Office and is supported by staff within that office as well as staff in New Student Orientation and Retention and Completion. They assist with data collection, analyzing data, technological and online support, logistics, and student wellness and behavioral support.

Theoretical Framework

We define mentoring in the context of our Connections program as a relationship that creates a sense of belonging, allows for meaningful guidance, and enhances the efficacy of other student support resources on campus. One critique of previous mentoring models has been the lack of a clearly defined concept of mentoring rooted in a theoretical background (Law et al., 2020). The Connections mentoring program worked to address shortcomings from previous models by reviewing literature to identify best practices.

Previous literature has indicated that faculty-to-student mentoring can be impactful for students

(McKinsey, 2016; Shanahan et al., 2015). We condensed the themes identified from previous literature into three core values that Connections mentors are expected to utilize in all their interactions with the students. The first is to build and maintain a relationship so the students have a sense of belonging and that someone at USU cares about them. A sense of belonging is an important part of developing a sense of student identity within higher education (Tinto, 2017). This first core value is critical and must be established before the next two values can be successful. The second core value is to guide students identified as "at-risk" for persistence (semester to semester) or retention (year to year) by having meaningful conversations with them about their challenges and providing support and guidance to assist them in successfully completing their academic goals. This can include a variety of behaviors, including having conversations about short- and long-term goals or providing best-practices information regarding overcoming challenges. The third core value is that instructor-mentors should serve as brokers between students and their learning community to connect them with the resources they need to be successful. Due to both the feasibility and positive outcomes noted in the literature, a group mentoring approach (see Chapter 3 on mentoring types) is taken within this program. This group mentoring, one-to-many typology (see Chapter 3), does also involve a hierarchical structure as the instructor-mentor is obviously more experienced and knowledgeable about the higher education landscape.

Mentoring Inputs and Resources: Funding

Since the Connections program serves students across all colleges within the university, it is funded through the Provost's Office. Instructor-mentors receive a lump sum after the initial component of the class and then receive smaller payments distributed throughout the year. A stipend helps to support the work of the program director both by compensating their time and by providing funds to their department so that the director has the time to focus on the program.

Mentoring Activities

Recruitment Activities

All instructor-mentors reapply every year to teach Connections and go through a competitive selection process. The instructor-mentors are recruited by various methods, including word of mouth, targeted emails, communication from central administration, teaching-focused events/presentations, and question-and-answer sessions. Feedback from the student evaluation survey is utilized to inform the selection process and to identify instructor-mentors who need to be reinterviewed.

Instructor-mentors are selected to teach a 3-day, full-day course (90% of the courses are offered this way) or a 7-week, twice-a-week course (10%) and continue to mentor students throughout the remainder of the academic year. Most instructor-mentors are faculty members and represent a wide range of disciplines from across the university.

Selection Activities

All candidate applications are reviewed, but candidates who have taught within the last year and received above-average student evaluations automatically qualify for rehire. A hiring committee

consisting of faculty from the different colleges reviews candidates using a rubric. Potential candidates are interviewed by the hiring committee, which then makes hiring recommendations to the Connections program director.

Matching Activities

Although most instructor-mentors are not selectively placed with specific students, there are some exceptions, including a few specific populations like students with specific intellectual disabilities, athletes, and honors students. In the application process, candidates are asked about their interest in teaching these particular groups of students. Those names are shared with stakeholders of each of the programs that assist these students within their education to gain their feedback, after which the Connections program director makes placement decisions.

Training Activities

There are several required trainings held for instructor-mentors. In addition to these trainings, mentoring training for instructors includes online resources, videos, and a Canvas course. Within the Canvas course are descriptions of curriculum and assignments, including objectives, how that specific curriculum ties to the bigger ideas of the course, supplemental curriculum content (videos, podcasts, articles), and delivery of content ideas. The entire training process starts 4 to 5 months from when the instructors begin teaching. Although many topics are introduced and framed for instructors every year, the focus of some of the training often differs based on feedback received via the mentoring assessment survey.

Strategies to Monitor and Support Relationships

Connections instructor-mentors are supported by related Connections staff throughout the year of mentoring. The program has developed a library of "nudges" via email that provide just-in-time reminders for students to engage in transactional activities (registering) as well as reminding them of the big values of the Connections experience and connecting those to timely events on campus. The expectation is that students will be more responsive to a nudge from a trusted faculty mentor rather than from an anonymous office on campus. Language for an email is provided to instructor- mentors, although they are encouraged to modify and personalize the template before sending it to their students. In addition, we support instructor-mentors in their student-specific outreach. Analytics and engagement data are used by the Office of Retention and Completion to identify students who may be at risk of not persisting or retaining. The reason for the student being higher risk is not shared, but the need to engage with the student along with some template language is provided to the instructor-mentor. The goal is to get the student to engage with the instructor-mentor so they can resolve their issue or be brokered to the best resource to help them.

Monitoring these relationships has proved challenging. We can track engagement and communication to/from faculty and students so long as that engagement is occurring within our learning management software (Canvas). However, we know that a lot of meaningful mentoring discussions are happening off of Canvas—in-person, over email, and in other ways. Rather than trying to track all of those communications, we are instead relying on two campus forms—Student of Concern

and Student Academic Achievement Alert. When an instructor-mentor has a discussion with a mentee where they have some concerns, we ask that they submit one of these forms so these issues can be tracked. On the other hand, when we have reports submitted for students—but not from their Connections instructor-mentor—we can not only leverage the instructor-mentor but also inquire as to whether they were engaging with that student.

Formative and Summative Evaluation

Custom-built course and mentoring evaluations done by students allow the program to engage in data-driven evaluation of program impact and success. Our assessment focus is formative—using what we learn from the data and feedback to improve the structure of the curriculum as well as the hiring and training of mentors. But we also use this information, along with evidence of a level of faculty engagement, as part of a summative assessment of instructor-mentors to inform future hiring decisions.

The program also has reporting obligations to the institution requiring summative evaluations of program impact on broader institutional goals. That summative retention data also becomes formative for us. If, despite success on internal markers described above, we were not making an impact on institutional retention rates, that would be cause for reevaluation.

Mentoring Outputs: Number of Mentors, Number of Mentees, Mentor/Mentee Ratio

Approximately 110 instructor-mentors are hired for the academic year. Each section consists of about 28 students with whom the instructor-mentor is charged with building a mentor relationship that will then lead to successful guiding and brokering students to the appropriate resources. We predicted, and experience has shown, that most students only need the beginning of the semester mentorship along with regular email check-ins throughout the year, as they do not face challenges that require utilizing student supports. In most cases, faculty-mentors will have around three students over the course of the year who require higher-touch mentoring in the form of guiding and brokering work.

Mentoring Outcomes and Lessons Learned

Outcomes of Program

In the year prior to adding mentoring, students who engaged in Connections were retained at 75.85%, which was fairly consistent from years prior. The fall 2020 cohort was the first to have mentoring, and the students in that cohort who engaged in Connections were retained at 78.10%. The Connections students were retained much higher than the overall cohort (78.10% vs. 72.61%). It is worth noting that our underrepresented students who engaged in Connections were retained at an even higher rate (80.47%) than the overall retention rate for engaged Connections students. And for the fall 2021 cohort, already 79.72% of those who engaged in Connections are registered for fall 2022, so we are trending to have a Connections-mentoring retention rate of over 80%. Given national enrollment challenges due to the pandemic and economy, these increases are even more remarkable.

Sustaining the Program

The positive impact that the Connections mentoring program has had on student retention and completion has led to ongoing funding by the Office of the President. Stakeholders are being communicated with at various points in the process, including the president of the university to state legislature in yearly addresses, communication to faculty during training events, and the program director's communication to various members of central administration.

Lessons Learned

Our feedback loop is informed by the various ways in which we gather feedback from students, instructor-mentors, campus data analytics partners, and other stakeholders. This feedback loop facilitates a continual improvement process: We receive feedback, make decisions based on our available information and feedback, implement these changes, and then assess outcomes again. A few of the more critical lessons learned will be outlined below.

Clearly defined roles can help with the implementation of the program by identifying those responsible for different tasks and helping to eliminate redundancy. It became helpful to create a role responsibility diagram or tree, which helps to identify each person's responsibilities and contributions. Along with this diagram, it is helpful to have subcommittee working groups that are active contributors on tasks. Various working groups help to create and revise online content and course curriculum and are involved in the hiring process. A program director has been an important component in keeping all working groups on task and accomplishing responsibilities by deadlines.

One interesting effect of trying to improve flexibility for our instructor-mentors is that we had some issues with fidelity in training and implementation. We moved many of our training materials to videos that could be watched at one's leisure. However, some instructor-mentors were not fully engaging with that online content. This year the program will return to having face-to-face training along with asynchronous training.

We also learned the importance of engaging with student-facing employees, from advisors to financial aid officers, to ensure they are knowledgeable about the program and supportive, as many will be in direct contact with the students.

Recommendations for Future Designers and Stakeholders of Academic Mentoring Programs

Successfully launching a new initiative of any kind on a campus requires a team of people dedicated to the task and willing to work. Ensuring you have the right team with the right connections to important decision-makers from around the institution is the first step. A relatively small core team is sufficient, no more than a half dozen or so, which then does outreach with a much broader group of stakeholders. For a mentoring program focusing on first-year students, that broader group of stakeholders will need to include both decision-makers and "in the trenches" staff across the student experience: student affairs, residential life, mental and physical wellness centers, recruitment and orientation services, as well as the academic side of the university. In our experience, it was not necessary to have representatives from every one of these groups on the core team, but certainly the

academic side should be well represented along with your retention office and then the logistics staff from new-student orientation offices.

Aligning your mentoring program goals with broader institutional goals is all but necessary for success. Using other campus models and experience, including USU's, as evidence of the kinds of impacts a mentoring program can have, but then translating that to your institution and what it might mean for your retention figures is likely the best step. Moving the needle on retention is the most measurable and tangible—in the form of increased tuition dollars—impact you can offer upper administration. Setting significant but achievable goals is the best approach.

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FACILITATING LEADERSHIP LEARNING USING CO-MENTORING CIRCLES

Kathleen M. Cowin

Abstract

Time for mentoring aspiring school leaders moving from their roles as veteran teachers, instructional coaches, or deans of students to their new role as K–12 principal certification interns is in short supply in today's complex schools. Over the past 7 years, 76 interns have participated in co-mentoring circles. Co-mentoring circles offer educators a safe, supportive community in which to learn with others who are uniquely situated to understand the challenges present in today's K–12 schools. Co-mentoring circles can provide a ready group of co-mentors one can call on without waiting for a specific mentor to be available. These circles are usually comprised of fewer than 12 participants. The focus is to create trusting and supportive developmental relationships among co-mentoring circle members. The initial processes in the circle's formation and development are highlighted in this chapter: using group agreements; holding confidentiality; developing trust; self-assessment of one's communication styles and skills; giving and receiving feedback; reflection and reflective practice; activities called "hopes and concerns," "professional timeline," and "the self-portrait;" and assessment of the circle's work. Once group agreements, confidentiality, and effective communication are established, trust can begin to grow among the members. Co-mentoring circle participants are overwhelmingly positive in their assessment of the mentorship provided in co-mentoring circles.

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Mentoring Context and Program Development

The co-mentoring circle was developed for aspiring K–12 school leaders seeking to become K–12 school principals or school district leaders.

Need for This Program

Principal interns have unique needs in their internship, with a number of tensions built into their relationship with their school district-assigned principal internship mentor (PIM). The PIM is usually the intern's principal in the intern's other role in the school as teacher, instructional coach, dean of students, or school counselor.

One tension interns expressed is they do not want their PIM to view them as not knowing how to do something they have been assigned, needing additional support for completing an internship task, or looking ill-prepared for leadership. Another tension interns described is when they disagree with how their PIM wants a particular action handled. Even when the outcome of the assigned internship task seemed successful, if the task was performed differently than how the PIM wanted, the PIM might call their performance into question. Interns have also expressed that the PIM's evaluation of their internship performance may have affected the way their PIM, who is also their principal, viewed their work in their other role in the school as a teacher, instructional coach, dean of students, or school counselor.

Yet another tension held throughout the internship is that the PIM also serves as a gatekeeper to an intern's future employment as an administrator, as the PIM is a key recommendation writer and reference. An intern's ability to work collaboratively and collegially with their PIM can be key to future employment. Tension can also come from the quality of feedback interns receive. Often PIMs assign interns tasks so the PIM can move on to another task. If the PIM is not present to personally observe how the intern completes the task, feedback from others may be used to evaluate the intern's work. Interns say it would be helpful if their PIM could personally observe their work as interns and provide timely feedback.

Purpose and Objectives of the Program

As the university-based mentor, I wanted to create a safe space to address these tensions, so I created the co-mentoring circle process and have been refining the process over the past 7 years. The co-mentoring circle provides a space where interns can receive feedback and support for their unique work as interns from other interns.

Organizational Setting and Population Served

Circle participants are university graduate students/interns completing a K–12 Principal Certification Program while already serving in roles such as teachers, instructional coaches, or deans of students. Co-mentoring circles are developed within the Principal Certification Internship Seminar course, held once a month on Saturdays. Ninety minutes of each required five-hour seminar is used for

co-mentoring circle activities. It takes several circle sessions, with participants working through the 10 components, to form a functioning co-mentoring circle. Once the circle is formed, the 90 minutes of circle time are devoted to an agenda of interns' suggested topics.

Organization Support and Infrastructure

As a required component of their certification program, interns attend the internship seminar once a month on Saturdays. There is no organizational or financial support for the co-mentoring circle beyond using 90 minutes of the monthly internship seminar for the co-mentoring circle. There is no recruitment of participants for the co-mentoring circle, as they are already students in the Principal Certification Program, attending the required monthly internship seminar. There is no matching as the interns participate as co-mentors to each other within the circle. Communication about the structure of the co-mentoring circle is completed during the first several seminars.

Operational Definition

The definition of co-mentoring used in the formation of the co-mentoring circles draws on the work of Kochan and Trimble (2000) and Mullen (2005). Mullen (2005) defines co-mentorship as when "individuals or groups proactively engage in reciprocal teaching and learning and transform power structures to honor egalitarianism" (2005, p. 25). Mullen's call for an examination of the power structures inherent in the mentoring relationship is foundational to the work in forming the co-mentoring circle, as is Kochan and Trimble's examination of the idea of "collaboration, shared decision-making, and systems thinking" (2000, p. 20). The co-mentoring circle is a form of peer group co-mentoring.

Theoretical Framework and Typology

The author's foundational view of mentoring draws from the work of Fletcher and Ragins (2007) and relational cultural theory (RCT). RCT has three tenets: interdependent self-in-relation, growth-fostering interactions, and systemic power. The three tenets of RCT were considered in the formation of the co-mentoring circle. The co-mentoring circle draws on the tenets of both RCT and the definitions of co-mentoring (Kochan & Trimble, 2000) and co-mentorship (Mullen, 2005). The co- mentoring participants meet as a group of usually fewer than 12 participants. The typology of this mentoring is a facilitated peer group (see Chapter 3 on diverse forms of mentoring relationships).

Mentoring Inputs and Resources

Co-mentoring circles are described in the first seminar, and the 10 components used to form the co-mentoring circles are incorporated into the seminar coursework.

Curriculum Description
This section will highlight each component in the formation and assessment of co-mentoring circles (see Figure 20.1).

Figure 20.1

Ten Components Used to Form the Co-Mentoring Circle
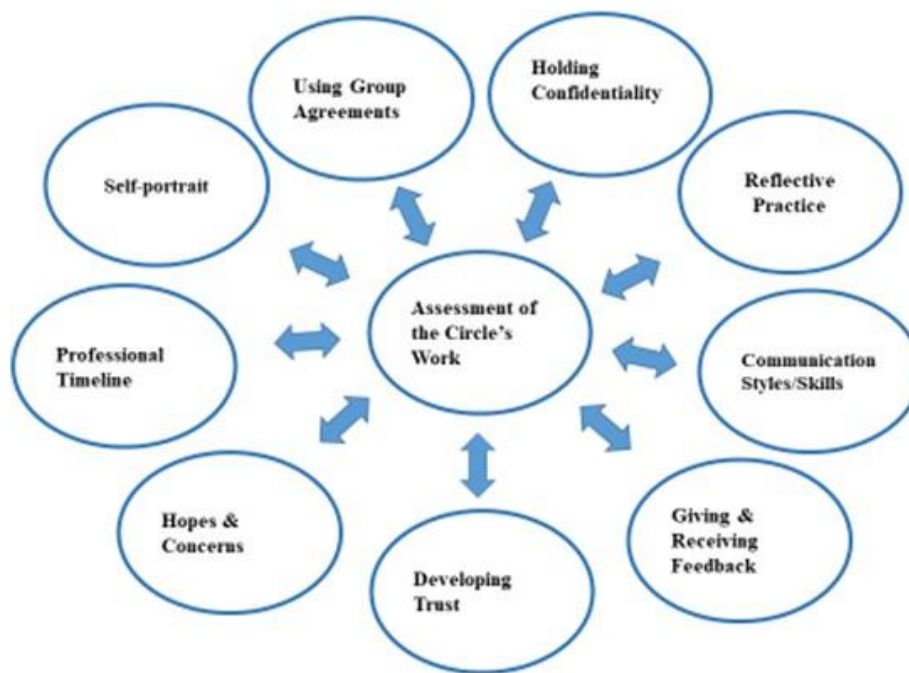
The group agreements, attentive listening, appreciation, no put-downs, mutual respect, and the right to pass (Gibbs, 2006, p. 71) are offered to circle participants as a starting point to discuss how we will treat each other. We discuss the agreements by acting out how they might look and sound. The agreements are reaffirmed each time we meet, and if there were to be a concern about upholding the agreements, as the facilitator, I would discuss this within our circle until it was resolved.

Holding confidentiality is the standard for circle participation. We conduct self-checks on whether confidentiality is holding before each circle begins. We practice a form of deep confidentiality from The Courage to Lead©, called "double confidentiality" (Center for Courage & Renewal, 2017). In double confidentiality, only the person who brought up a specific topic may bring it up again.

I teach the practice of reflection during the co-mentoring circles (see Arredondo-Rucinski, 2005; Dewey, 1938; Rodgers, 2002). Time is reserved at each circle for silence and written reflection. I read the reflections, and I respond to each writer.

Communication styles and skills are studied (Alessandra & O'Connor, 2017, 2018) along with Zachary and Fischler's (2014) model for mentoring conversations. We seek to have conversations at a level that Zachary and Fischler call "collaborative engagement" (2014, p. 168), in which participants strive to be vulnerable, sharing concerns or fears with each other. This level of conversation can happen if there is trust in the relationships. While not all co-mentoring conversations achieve this level of engagement, we strive to be open and transparent. Participants have commented that having conversations at this level builds trust, is helpful in working through concerns, and provides a safe, supportive place to work with others who understand the unique role of an intern.

Giving and receiving feedback is key to the daily practice of a school leader (Sullivan & Glanz, 2013). School leaders give feedback on lessons and on actions taken by staff and students, and they must know how to give feedback in a manner that neither inhibits the receiver from engaging with the feedback nor unnecessarily engenders anger or hurt. We practice the skills of giving and receiving feedback in the co-mentoring circle as we offer support to one another for the issues brought to the circle. We also study giving and receiving feedback from the non-evaluative perspective of a "critical friend," where the aim is to elevate the work we do (Costa & Kallick, 1993) and not to offer judgments unless requested.

Developing trust comes from study, reflection, and our work together. In forming the circle, we do not make assumptions about trust. Participants study and discuss the work of Tschannen-Moran (2007, 2014) and an article by Combs et al. (2015), which encourages us to examine trust-building practices. Discussions and activities during the formation of the circle give us opportunities to deepen trust with each other.

The "hopes and concerns" activity seeks to build trust among the circle participants. Participants anonymously list a hope and a concern they have for their principal internship on a Post-it Note, or on a Google Doc for classes held over Zoom. After the notes are posted, we review the notes. A volunteer moves the notes, putting similar notes together. When participants see that there are similar notes, this builds a deeper sense of camaraderie.

In the "professional timeline" activity, participants share a visually displayed timeline. Sharing these timelines, posted to our electronic classroom platform, provides opportunities to highlight areas of expertise. For example, if you know a fellow circle participant has special education experience and you have a question in that area, you have a ready-made co-mentoring expert.

The "self-portrait" activity is completed after trust, confidentiality, and our group agreements are well established. I conceived the self-portrait activity based on the qualitative methodology of portraiture (Lawrence-Lightfoot & Davis, 1997). Participants express that they feel a closeness or connection with their fellow circle members after the activity.

One circle member's self-portrait focused on when her father was critically burned in an accident that destroyed their family business. Her father was airlifted to a trauma center located hours away. During the months of her father's recovery, her mother stayed near the hospital. The memories of what happened during those months she was caring for her sister have influenced her philosophy of leadership. Here is a self-portrait snippet from this participant:

> For the rest of my life, I will carry in my heart all of the kind things that people did for our family during such a difficult time for us. Unfortunately, I will also always remember the teacher who sent home a poor progress report for my sister with a note written in red ink, "Return with parent signature." I was furious when she showed it to me. I thought that everyone knew that my Mom was sitting by my Dad's bedside . . . while he recovered. This teacher even had to turn past the spot where my Dad's shop had been to get home each day. As I have worked with families experiencing trials and tragedies over the years, I have remembered how this felt and have done my very best to help them feel cared for and supported. Whether through tragedy or triumph,

every student and family should feel wholly cared for and supported by the school.

Formative assessment of the circle's work occurs at the conclusion of each circle as time is given for oral and written reflection and assessment. Circle participants complete a written reflection and assessment of the circle's work after each circle concludes. After each circle ends, I take time to reflect and record field notes. Each semester new interns enter our Principal Certification Program. This continual onboarding of interns new to the program provides an opportunity for returning interns to provide information about their experiences to help answer new interns' questions.

After the components establishing the co-mentoring circle have been completed, the circle continues to meet once a month for 90 minutes. The circle participants send topics they want to discuss, and we finalize the topics for that day's circle together. Topics have included: handling substitute teacher shortages, responding to TikTok challenges, communicating about master schedule changes, managing quarantine of students who test positive for COVID-19, complying with mask- wearing requirements, classroom walk-through protocols and recording forms, and supporting staff through grief and loss. We begin each circle with a reaffirmation of our group agreements and our code of confidentiality.

Funding

No funding is specifically allocated for the circle as it occurs within the required coursework.

Mentoring Activities

There is no selection or recruitment of participants for the co-mentoring circle as the interns are already students in the Principal Certification Program, attending the required monthly internship seminar where the co-mentoring circle is held. There is no matching because the interns participate as co-mentors to each other within the circle. The training activities and strategies to monitor and support relationships are documented in the 10 components of the circle formation (Figure 20.1) and through checking in on the group agreements, confidentiality code, and communication styles and skills each time the circle meets, and through oral and written reflection. Formative evaluation is conducted both orally and in writing following each circle session, and summative evaluation is completed at the end of each semester and when interns complete the program.

Mentoring Outputs

There have been 76 participants in co-mentoring circles over the past 7 academic years. Table 20.1 shows the number of participants per academic year.

Table 20.1

Co-Mentoring Circle Participant Totals by Academic Year

Academic year	Participant total
2014-2015	8
2015-2016	6
2016-2017	14
2017-2018	10
2018-2019	13
2019-2020	15
2020-2021	10

Note. Total of 76 participants

Mentoring Outcomes and Lessons Learned

Over the past 7 years, I have refined the co-mentoring circle process based on assessment by co-mentoring circle participants, my continued study of other mentoring programs, and scholarship. I have presented my co-mentoring circle process at conferences and received helpful feedback. I have a constellation of mentors who have given me opportunities to speak and write about the development of the process and encouraged my continued work. Formative assessment is completed by interns, orally and in writing, after each circle, and summative assessment at the end of each semester and as interns complete the program.

Outcomes of Program

During the past 7 academic years, there have been 56 assessment opportunities, both in oral discussion and written assessments, that have been completed by the 76 circle participants. Overwhelmingly, in both oral and written assessments, co-mentoring circle participants have expressed how helpful co-mentoring circles were. Here are a few samples of assessment data:

- "I need to be with others who really understand the work I do every day and won't judge me."

- "I'm so thankful for my co-mentoring connections."

- "After you have shared a really personal part of who you are, and what it meant to you, you feel like you have a bond within our circle. That you have others who 'get' you and you can share other problems without worrying about what they might think of you."

This continued positive assessment by circle participants, interwoven with continued opportunities to speak, write, and study about co-mentoring circles, continues to buoy my work in the continued refinement of co-mentoring circles.

Sustaining the Program

Through the participants' reflections and assessments, along with presenting at conferences,

publishing about the process, and discussing it within my department, I continue to receive feedback that helps refine future co-mentoring circles.

Lessons Learned

Start first with the development of group agreements and confidentiality among all participants, and then continue to assess the group processes such as communication styles and skills and giving and receiving feedback to affirm that trust is growing. I have found that taking the time to focus on these components provides rewards of deeply supportive, long-lasting co-mentoring relationships.

Recommendations for Future Designers and Stakeholders of Academic Mentoring Programs

Co-mentoring circles can be used in a variety of settings in which participants are involved in internships, residencies, or as in-service practitioners. I have used this process with aspiring school leaders and assistant principals with success and have discussed using it with medical practitioners.

My recommendation for future mentoring program designers is to consider a co-mentoring circle approach, starting first with the development of trust and confidentiality among all participants and then continuing to assess the group processes and outcomes.

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MENTORING GRADUATE UNDERREPRESENTED MINORITIES IN STEM

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Abstract

In this chapter, we discuss high-impact mentoring practices for graduate students in science, technology, engineering, and mathematics (STEM). We make a case for *inclusive* and assets/strengths-based mentoring approaches as a strategy for increasing the number of doctoral degrees awarded to historically underrepresented minorities (i.e., Hispanics, African Americans, Native Americans, Alaska Natives, and Pacific Islanders); improving their levels of satisfaction with doctoral programs and reducing the notoriously extended time to the PhD that they endure. We offer two examples of national programs committed to promoting graduate student success through professional development and mentoring strategies in which instrumental support, sponsorship, psychological support, and access to funding play key roles. We also summarize relevant aspects of assessing a mentorship project and highlight the culture of an institution with sustainable mentoring practices. We conclude with recommendations and provide additional perspective on the need for scaling up the replication of evidence-based practices through effective activities such as mentorship workshops for faculty.

Mentoring Context and Program Development

There is ample evidence that in many academic disciplines, including STEM, mentoring is at the heart of the development of students as researchers and specialists (Hensel, 2012). Historically underrepresented minority (URM) students may benefit significantly from mentoring (Committee on Underrepresented Groups, 2011), particularly at the doctoral level, where a strong and equitable relationship with their dissertation advisor is paramount for their academic progress and timely degree completion (Sowell, 2009; Clewell, 2006). Similarly, mentorship training for faculty, with significant opportunities for self-reflection on skills and issues, is essential (Hensel, 2012). Programs that emphasize inclusiveness through mentorship training may apply to all student populations, but mentoring approaches that do not challenge a priori assumptions may prove to be less effective for URM students.

Federal agencies such as the National Science Foundation (NSF) and the National Institutes of Health (NIH) promote and finance the implementation of mentoring projects through the development of Alliances for Graduate Education and the Professoriate (AGEP), the Louis Stokes Alliances for Minority Participation (LSAMP), Alliances for the Inclusion Across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (INCLUDES), and the Louis Stokes Bridges to the Doctorate (BD). Most local or regional projects funded by these national agencies involve stakeholders from one or more institutions and professional organizations that work on developing sustainable URM student mentoring projects. Examples include the University of Texas at El Paso BD (Clewell, 2006; Gorbett et al., 2020; Arciero & Knaust, 2018), the Aspire Alliance Regional Collaboratives (NSF INCLUDES, 2020; Flores et al., 2020), and the Hispanic AGEP (American Physical Society, 2021; Velez-Reyes et al., 2021), which implement formal mentoring approaches that rely on one or more strategies depending on the professional development goals of the project:

- Mentor protégé dyads and triads in which one or two graduate students are matched to a faculty mentor, typically on the basis of an academic discipline.
- Small groups of protégés that include a postdoctoral fellow and graduate students in different stages of study.
- Cohorts of graduate protégés who are mentored by a small team of faculty members and professionals.

Mentoring

At the national level, the operational definition of mentoring in NSF- and NIH-funded projects is similar to that provided by the National Academies (National Academies of Sciences, Engineering, and Medicine, 2019), which is that "mentorship is a professional, working alliance in which individuals work together over time to support the personal and professional growth, development, and success of the relational partners through the provision of career and psychosocial support" (p. 2). This definition is remarkable in that it focuses on a professional relationship and much-needed support. Yet, it does not address the dimensions of diversity, equity, and inclusion.

The activities associated with mentoring are developing and maintaining trust, providing supporting

functions and space, setting expectations, creating times for self-reflection, and pursuing a deeper understanding (education) of roles. Recent research suggests that URM STEM students not only seek to do research and develop an identity as researchers but also value professional relationships and socialinteraction with their mentors (Griffin et al., 2020). Through our work, we have found it necessary to redefine mentoring in a holistic, aspirational manner that incorporates equity, diversity, and inclusion. The mentoring projects described below subscribe to an extended, operational definition of mentoring that we developed to emphasize the need for inclusiveness:

Inclusive mentoring is a multifaceted reciprocal relationship in which a mentor engages a protégé or group of protégés from diverse backgrounds to advance their goals and to learn from their professional development experiences. In addition to guiding the discovery of intellectual passions, providing advice and access to resources, and advocating for their protégés, inclusive mentors readily acknowledge their protégés' identity, validate their backgrounds and accomplishments, and provide supportive environments to prevent isolation by promoting cultural awareness and sensitivity. Mentors and protégés work together toward a better future by engaging in a virtuous cycle of learning and growth of the individual as a whole through effective practices.

Mentoring Resources

Mentoring projects may vary in scope depending on anticipated outcomes. The following sections discuss two project exemplars funded by the National Science Foundation that are focused on graduate student development and have strong mentoring components: the Louis Stokes Bridge to the Doctorate and the West Texas Regional Collaborative. The Bridge to the Doctorate focuses mainly on preparing incoming URM PhD students to be productive in a research environment. The Regional Collaborative focuses on preparing future URM graduate students for meaningful teaching experiences at the community college level.

Throughout the duration of either project, fellows receive support that may include stipend, cost of tuition, conference travel, mentorship, and professional development, and engage in developmental activities. In particular, graduate students who participate in the Bridge to the Doctorate projects are introduced to research conducted in the institution's STEM departments and are provided workshops and training on how to manage scholarly and professional careers. Additionally, these students participate in seminar series focused on retention and success in graduate school, raising awareness of diversity issues, and preparation for future professional careers. Seminar topics include graduate school culture, diversity awareness, managing finances, final selection of research project and faculty mentor, publishing, writing, research ethics, funding, and dissertation proposals. Graduate students who participate in the Regional Collaborative project actively engage in an effective mentoring and teaching program and commit for an entire semester of internship to develop a relationship with the mentor(s) assigned. Each participant meets with their community college faculty mentor at least once monthly, documents their meetings as a reflective essay, observes at least two online (or face-to-face) classes at the regional community college, and prepares a summary of the class sessions. Participants also attend webinars throughout the semester as part of their professional development. Each webinar has a particular assignment such as composing a teaching philosophy that builds on experiences and knowledge gained through mentorship as well as developing a lesson plan based on their experience and observations throughout the semester. Together with a CV, these items become part of a fellow's

teaching portfolio. Finally, participants take a compulsory end-of-term survey for program evaluation.

Mentoring Activities

Bridges to the Doctorate

The goal of the NSF Bridge to the Doctorate (BD) projects is "to increase the quantity and quality of STEM graduate students from underrepresented populations, with emphasis on Ph.D. matriculation and completion" (Louis Stokes Midwest Research Center of Excellence, n.d.). BD projects have been implemented at 34 institutions nationwide. There are common features across all BD projects (e.g., selection processes, BD fellow support, mentor/protégé matching). The BD at one of these institutions is presented here as one example of this national effort.

Since 2003, the BD at the University of Texas at El Paso has served as host to 83 graduate students in seven BD cohorts. Each cohort is composed of 10 to 12 students from a competitive, national sample of STEM bachelor's degree recipients who have previously participated in high-impact, undergraduate educational practices offered by institutions that are partners in a Louis Stokes Alliance for Minority Participation (LSAMP). Students apply through an online process. Their applications are reviewed holistically by a selection committee consisting of faculty and professional staff who identify candidates for an interview. Following this interview, finalists are selected to participate in the project and a formal offer is made. Those who accept are welcomed to the project as BD fellows. Within a month, each cohort member is matched to a STEM faculty mentor, taking into consideration academic program requirements, affinity of research interests, and above all mutual consent. Typically, the faculty mentor is a member or director of an outstanding, productive research center or laboratory. It is expected that the faculty mentor will have extramural funding and a successful mentoring record of accomplishment.

Typically, BD projects include an evaluation process to assess BD fellow and programmatic outcomes. The evaluation process includes formative and summative assessments and is informed by program staff, stakeholders, and the evaluation team. Specifically, a logic model and various survey instruments are utilized for the evaluation of the BD. The evaluation assesses the following factors using self-reporting and objective measures: (a) assessment of traditional academic predictors (e.g., GPA); (b) skill development of BD fellows; (c) perceived culture within the labs to which BD fellows are assigned; (d) BD fellow participation of workshops; (e) BD fellow application of workshop skills; and (f) BD fellow access to peer and mentor resources; and BD fellow's perceived quality guidance from peer and mentor resources.

Regional Collaboratives

The Regional Collaborative initiative is a strategy implemented by the Aspire Alliance within the National Network of the NSF INCLUDES Alliances to diversify STEM faculty (Committee on Underrepresented Groups, 2011). To date, there are six regional collaboratives across the nation, including two in Texas. The West Texas Regional Collaborative, comprised of two universities and four community colleges, recruits graduate students from underrepresented groups to explore the possibility of a rewarding career at two-year institutions through a meaningful and intensive mentoring

relationship with STEM faculty. Since 2019, West Texas Regional Collaborative has hosted 41 graduate students in three cohorts.

The recruitment and selection process takes approximately 3 months, beginning with announcements being sent to all STEM graduate programs at participating universities with the application information and deadline, followed by a webinar for interested graduate students and faculty. A faculty panel reviews applications to build a cohort with diverse backgrounds, considering applicants' professional aspirations, teaching experiences, academic achievements, and other personal motivations. All selected applicants are accepted into our program either as full Aspire fellows or associate fellows based on ranking. Fellows are matched with faculty from two-year colleges according to their discipline. For example, an Aspire fellow who is a graduate student in chemistry is matched with a chemistry instructor at a local community college. On occasion, two fellows are assigned to one faculty member, depending on the availability of participating faculty in a particular discipline.

The purpose of these instructional, mentorship dyads or triads is to learn about effective teaching, the community college culture, and inclusive teaching practices.

At the conclusion of the semester-long program, there is a review of teaching portfolios, and students receive feedback. In addition, online surveys assess the mentoring experience for both the fellows and their mentors. Aggregate data determines the impact across regional collaboratives in the Aspire Alliance.

Mentoring Outputs

The Bridge to the Doctorate provides a research mentor for each BD fellow. The profile of the faculty mentor is that of a university professor with an active research program, substantial research resources, and a record of having trained and supported graduate students from diverse backgrounds. In addition, the BD principal investigator and co-principal investigators serve as mentors for the entire cohort of BD fellows, meeting with them weekly as a group during the semester or individually should the need arise to have private conversations. The intention is to provide research and career development-specific mentorship (i.e., with the faculty mentor) as well as program-specific mentorship (i.e., with BD PI, BD co-PIs) to support the BD fellows.

Similarly, the West Texas Regional Collaborative provides a mentor for each Aspire fellow. The profile of the mentor is that of a community college professor with ample teaching experience and a record of having coached junior faculty from diverse backgrounds. In addition, the leaders of the collaborative serve as mentors for the entire cohort of Aspire fellows, meeting with them every other week and individually when a fellow wishes to discuss other personal or professional matters.

Mentoring Outcomes and Lessons Learned

Program Outcomes

The use of qualitative and quantitative data to assess the benefits of mentoring to both the mentor and protégé are a key to project evaluation. In particular, instruments that measure URM students' perceived gains are used to improve programmatic aspects of a project, such as mentoring training and

seminar content. Graduate students report perceived gains from the project's developmental activities. They also indicate that they are applying material learned through mentor-guided professional development activities, that information provided by their mentors is useful for their development, and that the material discussed during mentoring meetings is relevant to the type of work they do.

The COVID-19 pandemic has increased the importance of support for URM students in STEM graduate programs. Modified evaluation protocols now assess the impact of unique stressors and support that URM students experience during the completion of graduate programs. Recent survey results identify unique barriers and supports that arise from high-stress experiences. For example, students express that there are personal, professional, and academic barriers present (e.g., job loss of family members, reduction in time available in the laboratory, and demands related to hybrid or fully virtual course delivery). They also express that they experience significant support via mentoring (e.g., regular supportive contact, access to technology resources, and financial support).

The West Texas Regional Collaborative is now in its fourth year of funding. As mentioned above, since the inception of the program, a total of 41 Aspire fellows have been paired with community college faculty mentors. Statistics on degree completion and employment at community colleges is work in progress. In contrast, the Bridge to the Doctorate has been in existence for nearly two decades. Since then, a total of 144 graduate students participated and were paired with university faculty mentors. Of these, 111 (67%) earned either an MS or a PhD degree. In addition, 25 (17%) are still making progress toward their graduate degree. A remarkable outcome is the PhD completion rate of BD fellows, which may be as high as 65%, a number that is comparable to the completion rate of majority students reported by the Council of Graduate School in the PhD Completion Project.

Sustaining the Programs

While the term sustainability speaks to the ability to maintain a project at a given level, institutionalization is the result of establishing a new norm in the culture of an institution due to the project's impact on people. Sustainability and institutionalization of a mentoring culture are slow but crucial processes with key indicators such as levels of encouragement, participation, openness, and rewards that reaffirm cultural shifts and consistency but may take more than a decade to produce desirable results. At higher levels, the current plan is to engage presidents, as well as vice presidents of academic affairs and graduate studies, who will proclaim the importance of graduate student enrollment and success and set policies to implement a system of rewards and incentives for faculty members who shine as exemplary mentors. The plan also includes engaging deans and their team of academic program chairs to execute the system of rewards and incentives and collect departmental data that demonstrate the impact of mentoring practices on graduate student satisfaction and degree production, taking advantage of infrastructure already developed for the accreditation of graduate programs.

In addition, current external funding has been secured for a multi-institutional mentoring research center that provides services to faculty and programs within participating institutions and to other institutions. The vision of the center is for professors to maintain inclusive environments for discovery and learning that lead to productive research enterprises. Ultimately, graduate students from all diverse backgrounds will develop professionally through inclusive mentoring experiences and benefit from the

versatility of their earned degrees, securing jobs contributing to the diversity of the STEM workforce.

Lessons Learned

In its more traditional form, mentorship is a bilateral commitment that positively affects two individuals engaged in a professional relationship at the graduate level. Newer models for mentorship extend the relationship to more individuals, but the goals are the same: academic success and productivity. For URM graduate students, the added value of a mentorship experience lies in the validation of their background, assets, strengths, and accomplishments, the opportunity to complete a professional identity in a safe space created by the mentors and those who seek them. On the other hand, evidence suggests that poorly matched mentor-protégé dyads lead to frustration on both ends, extended times to degree, and, what is worse, student departure.

The set of desirable outcomes to assess the impact of a mentoring project may vary from project to project but aim to be participant-centric. For URM graduate students, the metrics include participant level of satisfaction with respect to programmatic activities and mentorship experience, perceived attitudinal changes and skill acquisition. Additional metrics of institutional value should include degree completion rate and average time to degree.

Mentoring projects reflect the institutional mission, provide evidence of a culture of inclusiveness, and are a point of pride for the institution. Support and coordination at all levels are fundamental to maintaining effective mentoring efforts. Forms of institutional support must include mentorship training for faculty with opportunities for mentor-protégé socialization, recognition for participants, and awards for outstanding mentors. Nominations for awards such as the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring spearheaded by Academic Affairs are always a possibility for the truly deserving. Conversations to promote effective mentoring practices are already taking place within the Academy of Distinguished Teachers.

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THE WELL-PREPARED ADJUNCT: PEER MENTORING, AUTONOMY SUPPORTS, AND VALUES-BASED PEDAGOGY

Dionne Clabaugh

Abstract

This mentoring program was developed to meet two needs in the School of Human Development: college alumni who applied for adjunct faculty positions lacked college teaching experience, and non-alumni applicants lacked pedagogical skill with nontraditional adult learners. This college is a Hispanic-serving institution with core values of inclusion, diversity, respect, and social justice. Their transformational, culture-centered pedagogy is grounded in seven faculty values that develop learner competence across five domains: development, diversity, communication, research, and growth.

The program meta-mentor describes how and why autonomy-supportive instruction (ASI), based on self-determination theory, is embedded into all elements of the adjunct faculty mentoring program structure: program design, implementation, assessment, and improvement. Two cross-generational and cross-cultural mentor-mentee pairs describe how they engaged with and applied ASI strategies in their relationship, teaching and peer observations, and reflective practice conversations. The case study concludes with lessons learned about the quality of faculty mentor-mentee relationships and its impact on their own professional learning and development.

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Mentoring Context and Program Develop

The Need for the Program

The Adjunct Faculty Peer Mentoring Program began in 2014 to solve a problem: enrollment in our satellite campus was growing, and we needed well-prepared adjuncts. Half the applicants were Pacific Oaks College (PO) alumni who knew its pedagogy through experience but had no higher-education teaching experience, and the others were non-PO alumni who did not know the pedagogy and were already teaching in college.

Purpose and Objectives of Program

The mentoring program's purpose was to develop adjunct faculty. The primary program objective was to develop well-prepared new adjunct faculty through mentoring by seasoned adjunct faculty. Mentor-mentee pairs engaged in co-teaching and reflective practice (Dennison, 2009; Pollard, 2008) activities so that mentees could learn how to be adjunct faculty members who used autonomy-supportive instruction to facilitate the college's transformational pedagogy.

Organizational Setting and Population Served

Pacific Oaks College (PO) is a Hispanic-serving institution teaching primarily nontraditional, first-generation learners. Students' median age is 37, they often live in multigenerational households, and typically work in child development, education, nonprofit, or human-service sectors. PO pedagogy is transformative, interactive, culture- and student-centered, and dialogue-based. It is operationalized through seven core faculty values:

- The democratic classroom
- Inclusion, diversity, and social justice
- Caring
- Building on strengths through authentic assessment
- Learning through play
- Intellectual and moral autonomy
- Transformative learning

Mentors were successful, well-prepared adjunct faculty teaching human development courses in lifespan development, diversity and inclusion, communication, educational leadership, and thesis research courses, and most taught similar courses at other colleges. Mentees were pre-service adjunct faculty interested in teaching in the human development program. There was no guarantee of hire after completing the mentoring program. This program ran for 8 years, where 10 mentors worked with 18 mentees. It was designed and facilitated by a director who was skilled in adult learning strategies that ensured engagement and persistence. The program director mentored the mentors to ensure program quality and sustainability.

Organizational Support for Mentoring Program and Infrastructure

This program was appreciated and supported by campus and college leadership. The campus dean provided meeting space and budget for materials, refreshments, and training space. The campus faculty funds paid for the program director's mentoring conference attendance and travel, and regular work time was used for all aspects of program development, administration, and assessment. Most mentees were hired as adjunct faculty because they were well-prepared for a faculty role. The program director presented program assessment and improvements to the college community and at mentoring conferences over time, published academic and internal articles, and was interviewed several times about program structure and effectiveness. The program director's annual goals centered on mentoring program development, and her sabbatical project described the theoretical frames on which this program was grounded.

Operational Definition

The mentoring model was primarily structured to support developmental mentoring relationships (Dominguez, 2017) because the five elements of developmental mentoring were in place, and because mentors provided both instrumental and relational functions. The five elements were enacted as follows: mentors and mentees had to *qualify* for participation; *defining words* such as observing each other using ASI and having reflective practice (Dennison, 2009; Pollard, 2008) conversations were required program activities; *participants* were selected based on their funds of knowledge and their goals; the *functions* of in-service adjunct faculty and pre-service adjunct faculty co-planning and co-teaching; and specific program *activities* were required before, during, and after practice teaching sessions.

In this program, adjunct faculty mentored potential future adjuncts without a supervisory hierarchy; mentor activities did include instrumental and relational functions (Dominguez, 2012). Career support through skills development were instrumental functions; the relational functions were modeling ASI and providing psychosocial support during reflective practice conversations; sponsorship occured when mentors guided their mentee's teaching skills. Mentees also developed both career skills and psychosocial skills (Kram, 1985), such as how to apply ASI and use the course management system, and how to facilitate group learning activities with diverse adult learners, respectively. There were several aspects of reciprocal mentoring (Clutterbuck, 2007) demonstrated as mentees and mentors learned from each other via observation and reflective practice.

Theoretical Framework

The program's primary theoretical frameworks were self-determination theory (SDT) (Ryan & Deci, 2002) and reflective practice (Dennison, 2009; Pollard, 2008). SDT describes the relationship between a person's level and types of motivation, regulation, and determination. Self-determined learners are intrinsically motivated by a desire to learn new information, gain skills and independence, and change and grow (Ryan & Deci, 2002). The aspects of SDT are autonomy, belonging, and competence, viewed as three psychological needs. When these needs are satisfied, engagement increases because learners

use intrinsic motivation to promote their own engagement (Niemiec et al., 2006; Niemiec & Ryan, 2009). Learners thus become self-determined and self-directed and persist in meeting their goals.

Autonomy-supportive instruction (ASI) is an intentional strategy to promote self-determination. It has six teacher behaviors and classroom structures to promote learner autonomy by activating intrinsic motivation to build relatedness and competence. ASI increases learner engagement (Jang et al., 2010) and was selected intentionally to develop highly effective mentor-mentee interactions to develop well-prepared adjuncts.

Reflective practice conversations relied on reflection (Kolb, 1984) to discuss ASI observations and transformational pedagogy applied during instruction. Mentor-mentee pairs cooperatively deconstructed then reconstructed the value of ASI and transformative teaching as ways of making their teaching, thinking, and decision-making visible, which promoted their identity development as well-prepared adjunct faculty members.

Typology of Program

The mentoring program structure was based on peer mentoring with formal one-to-one pairs (Inzer & Crawford, 2005) (see Chapter 3 for more information on diverse forms of mentoring relationships) of mentors who were in-service, well-prepared adjunct faculty. Mentees were pre-service adjunct faculty applicants. Each cohort of mentor-mentee pairs and the program director formed a developmental network (Clabaugh & Dominguez, 2022) where everyone practiced and discussed transformational learning with nontraditional adult learners via autonomy-supportive instruction and reflective practice.

Mentoring Inputs and Resources

Curriculum Description

Mentoring curricula were developed based on the program director's expertise in learning and instruction, faculty development, ASI, adult learning theory, and culturally aware pedagogy for transformative education. The program director guided each two-semester cohort of mentor-mentee pairs through fall curricula on pedagogy, ASI, and learning activity development. In the spring semester curricula in Canvas, departmental policies, adjunct faculty expectations, grading and feedback, and classroom group dynamics were explained and practiced. Mentoring activities intentionally developed mentees' teaching and facilitation skills as scholar-practitioners through the faculty's pedagogical values. Mentors integrated mentees' relevant funds of knowledge into developing their teaching practice and content knowledge.

Funding

The program director used regular work hours for all aspects of program development, training, and administration. A small faculty grant was used to produce program training and assessment materials, the college funded conference participation, and the program director wrote a mentoring handbook.

Mentors were paid for their teaching, but they and mentees were not paid for mentor program involvement.

Mentoring Activities

Recruitment Activities

Well-prepared adjunct faculty with strong facilitation and communication skills and favorable student evaluations were recruited as mentors. They were invited to self-select based on their expertise with PO pedagogy and a propensity for being student-centered, not controlling. During adjunct faculty-hiring interviews, those who presented themselves as self-directed lifelong learners were invited to be mentees. They were either graduate student alumni who were unprepared for college teaching or adjunct faculty at other colleges who were unfamiliar with transformational pedagogy.

Selection Activities

Applicants who wanted to learn transformational pedagogy and ASI were selected. The program director provided a program overview and placed them on a waiting list, organized by hiring interview date. In early summer, four mentees and four mentors were invited to join a cohort to start in the fall semester. Those who agreed were scheduled to attend program orientation in mid-August. Those who preferred to start the following year were placed back on the waiting list.

Matching Activities

Matching occurred at the end of mentor-mentee orientation. During introductions, participants stated their mentoring goal, communication style, hobbies, educational background, languages spoken, and described themselves by stating, "I'm the type of person who . . . ." Opportunities for mentor conversations with each mentee included sharing perspectives and funds of knowledge for college teaching. Mentees identified a mentor, then time was provided for paired conversations. In most cases, spontaneous pairs became mentor-mentee pairs. Mentees self-selected a different mentor in the spring based on conversations, needs, and goals.

Training Activities

Program training and materials were developed by the program director and used by mentor-mentee pairs for ongoing learning throughout the program. During a summer session, mentors were trained on ASI strategies, transformative pedagogy values, and adult learning theory. After orientation, theory on ASI, transformational pedagogy, and adult learning strategies were discussed by each mentor and their mentee, then applied to teaching practice during a three-time sequence of program activities: instructional planning, teaching and observation, and reflective practice conversations.

During instructional planning, mentor-mentee pairs applied theory to planning instruction. Throughout teaching weekends, mentees observed and documented mentor use of ASI and transformative pedagogy with adult learners. In the first teaching weekend, mentees observed mentor instruction, and in the second and third teaching weekends, mentees co-planned instruction and

facilitated some activities. Mentors and mentees observed each other's use of ASI strategies. During reflective practice conversations they discussed their observations, decision-making, ASI strategy use, and instructional outcomes. Mentees applied these conversations to plan their upcoming practice teaching, to continue integrating ASI theory into their practice.

Mentors modeled examples and described experiences that linked theory to practice, giving their mentees direct experience with ASI and pedagogy. Therefore, mentee learning was grounded in ASI within the context of values-based pedagogy as they engaged in informational feedback, inquiry, and reflection.

Strategies to Monitor and Support Relationships

Mentor-mentee relationships were developed by collaborating to meet goals for learning. Belonging and competence were promoted through ASI strategy use. Trust and respect were the foundation for healthy collegial faculty relationships. The program director used ASI strategies in all communication to promote deeper learning and engagement. The program director distributed aggregated ASI documentation, which made ASI learning visible and showcased competence, engagement, belonging, and professionalism. Friendly communications modeled collegial responses to diverse perspectives. Bimonthly emails included resources on teaching adult learners and described mentor-mentee successes. Emails were written with ASI phrasing to model ASI in written communication with students and colleagues. Bimonthly reflective practice meetings between the program director and each mentor discussed instructional planning processes and mentee progress.

Formative and Summative Evaluation

The program director assessed ASI documentation, mentor-mentee focus groups, and student evaluations of mentor and mentee teaching effectiveness. Student evaluations used Likert scales to measure perspectives of mentor and mentee preparation, content knowledge, delivery, inclusion, and culture-centeredness. Students rated their own preparation, engagement, growth, and feelings of inclusion. Two recorded focus groups per semester captured mentor and mentee perspectives, progress, preferences, goals, and program improvement suggestions. Mentor-mentee pair focus group interactions were observed to assess role efficacy and compatibility.

Assessment results were used to inform improvements to program training, materials, and structure. ASI strategy use was tallied to provide evidence of mentors' ASI, tracked mentee skill development over two semesters, and documented a lexicon of ASI phrases used in written and verbal responses.

Mentoring Outputs

During 8 program years, 10 mentors worked with 18 mentees. Every mentor volunteered for between 6 and 12 semesters, leaving only to retire from college teaching or to move away. Fourteen of the mentees became adjunct faculty.

Mentoring Outcomes and Lessons Learned

Outcome of the Program

Program assessment qualitative data described how mentors and mentees applied ASI, how reflective practice impacted their development, and how ASI modeling improved their facilitation skills. Mentors described how they became better teachers by using psychosocial motivators to develop mentees into well-prepared adjuncts. Mentors said they want to positively impact mentee professional development and requested scholarly materials on adult learners, mentor-mentee relationship building, and strategies to teach writing skills. Mentors reported increased awareness about their professional skills and developmental needs in order to increase their own students' engagement and success.

Mentees were well-prepared for faculty positions and felt confident in their teaching skills. They engaged in campus activities, responded effectively to leadership communications, and were interested in academic affairs projects and opportunities. Students reported that having two faculty members in class promoted more conversation and built stronger relationships, especially for study groups.

Sustaining the Program

The program had a waitlist each year and was marketed by mentor and mentee word of mouth. Mentees described their own professional and personal growth, and mentors described feeling humbled and empowered to directly impact others' human and professional development. Mentors and mentees described personal benefits and professional improvements such as increased self-awareness during instruction and building professional relationships with colleagues and students. In-service adjuncts asked for informal mentoring, which demonstrated intrinsic motivation for professional development.

To sustain the program, the program director needed to learn more about successful mentoring faculty programs and mentoring program assessment. The program director attended annual mentoring conferences and was mentored to apply program assessment results in ways that "grew the program." She regularly presented program assessment results to faculty and administration to offer her and mentor-mentee suggestions for improvement, then invited their ideation and suggestions for scaling and success.

Lessons Learned

Mentoring with ASI to develop well-prepared faculty works for faculty, administrators, and students! Mentor engagement and mentee competence for teaching nontraditional, adult learners seemed to increase as they all became more competent, leading to increased student engagement and overall success (Jang et al., 2010; Niemiec et al., 2006; Niemiec & Ryan, 2009; Ryan & Deci, 2002). Administrators appreciated adjuncts' loyalty to the college and low satellite campus turnover rates. Students taught by well-prepared adjuncts had better attendance, grades, participation, and persistence, and were more emotionally regulated when voicing concerns. These students were also observed to be more helpful to classmates, perhaps due to their competence and belonging.

Recommendations for Future Designers and Stakeholders of Academic Mentoring Programs

I recommend that adjunct faculty be mentored using this program's layered approach to faculty mentoring to foster mentor, mentee, and student intrinsic motivation for engaged learning and academic success. Mentors and mentees demonstrated efficacy and agency for their teaching due to the reciprocal nature of ASI strategy use, reflective practice, and intrinsic motivation for professional improvement.

I also recommend that faculty mentoring programs become exceptional by being grounded in autonomy-supportive instruction. Administrators can identify and then invite enthusiastic faculty to be their first cohort, then be mentored in ASI, and they can then develop ongoing cycles of mentor-mentee pairs who know how to develop well-prepared adjuncts over time. Unfortunately, ASI as a theoretical frame for faculty mentoring was thus far used only in this California college, so we need new studies to describe how ASI impacts adjunct faculty mentoring across a variety of programs. Importantly, this case study advances the mentoring field's understanding about how and why ASI strategies lead to effective faculty mentoring outcomes.

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ADVANCING INSTITUTIONAL MENTORING EXCELLENCE (AIME): AN INSTITUTIONAL INCLUSION INITIATIVE

Valerie Romero-Leggott; Orrin Myers; Andrew Sussman; and Rebecca Hartley

Abstract

The Advancing Institutional Mentoring Excellence (AIME) pilot project was created at the University of New Mexico Health Sciences Center to address concerns by faculty of color regarding feelings of isolation, lack of representation, and suboptimal retention. The purpose of AIME was to foster an institutional culture of belonging and rigorously evaluate best practices for mentoring faculty of color toward promotion and tenure. AIME used a reciprocal mentoring model, in which both mentors and mentees increased self-efficacy and skills through a structured series of exercises and encounters. Senior faculty mentors were matched with junior faculty of color mentees through an electronic mentoring platform. The curriculum featured in-person training sessions based on an adapted RESPECT model and an AIME case study, designed to improve cross-cultural communication and interpersonal skills. The signature feature of this mentoring program was an emphasis on cognitive diversity, that is, the diverse mental tools that result from different identities and cultural backgrounds, experiences, education, and training. A mixed-methods evaluation used formative measures to gather feedback from mentors and mentees about the electronic mentoring platform and curriculum. Summative measures were used for demographic profiles and preprogram, postprogram, and follow-up surveys, as well as for focus group discussions and the "most significant change" narratives. Participants reported increased job satisfaction and satisfaction with the Health Sciences Center, as well as increased institutional connectedness and knowledge of promotion and tenure processes. Further expansion and assessment of AIME is needed to confirm findings from this pilot project regarding faculty of color retention and inclusion outcomes.

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<center>**Mentoring Context and Program Development**</center>

The Need for This Program

The Advancing Institutional Mentoring Excellence (AIME) pilot project was created at the University of New Mexico Health Sciences Center (UNM HSC) to address concerns by faculty of color regarding feelings of isolation, lack of representation, and suboptimal retention (Montoya, et al., 2018). The AIME Final Report can be accessed online at https://hsc.unm.edu/diversity/media/files/aime-report-final.pdf.

Purpose and Objectives of the Program

The purpose of AIME was to foster an institutional culture of belonging and rigorously evaluate best practices for mentoring faculty of color toward promotion and tenure. AIME used a reciprocal mentoring model aimed at increasing mentor and mentee self-efficacy and skills through a structured series of exercises and encounters. The objective was to implement and test a cross-cultural faculty mentoring program in order to increase psychosocial support, career-related self-efficacy, job satisfaction, perceptions of institutional recognition, support, and institutional connectedness and self-efficacy while enhancing the UNM HSC's capacity for cross-cultural communication and collaboration.

Organizational Setting and Population Served

As the only academic health center in the state, UNM HSC plays a critical role in the health and well-being of New Mexicans. The UNM HSC is a leader in providing health care and health sciences education to a diverse population. Research demonstrates that a diverse faculty enhances overall cognitive diversity leading to improved health, research, and educational outcomes (Page, 2007).

Robust mentoring programs are an important component of recruiting and retaining diverse and underrepresented minority (URM) faculty. However, URM junior faculty have less access to and limited time for mentorship compared to their nonminority peers. Additionally, they have fewer opportunities to encounter racial/ethnic concordant mentors. Furthermore, the mentors they seek out may not be adequately trained to provide appropriate mentorship (Beech et al., 2013).

In response to these concerns, the AIME pilot project sought to develop more effective faculty interactions and collaborations among mentee faculty of color and mentors by facilitating discussions about the intersectionality and psychosocial dimensions of academic life, including identity, implicit bias, career decision-making, cross-cultural communication, and other related professional development topics with an emphasis on navigating the promotion and tenure system.

Organizational Support for Mentoring Program and Infrastructure

The Faculty Workforce Diversity Committee, convened by Chancellor Paul Roth and led by Dr. Valerie Romero-Leggott and Professor Margaret Montoya, collected demographic data and information on the UNM HSC climate for faculty of color through meetings, surveys, and focus groups. Through these

processes, faculty of color identified meaningful cross-cultural mentoring as an important strategy for supporting their academic development after having experienced existing HSC mentoring programs and practices as lacking.

A Diversity Engagement Survey also helped characterize the HSC climate. It was administered in 2012 to measure and describe the inclusiveness of the academic environment. The survey drew upon workforce engagement theory and components of organizational inclusion. The items in the survey were mapped to the following eight inclusion factors: trust, appreciation of individual attributes, sense of belonging, access to opportunity, equitable reward and recognition, cultural competence, respect, and common purpose (Person et al., 2015).

The AIME pilot project was the culmination of collaborative work over several years. Many stakeholders, including deans, chairs, faculty, administrators, and staff, from the HSC as well as colleagues from UNM's main campus, comprised the AIME Planning Committee and/or were instrumental in the Faculty Workforce Diversity Committee work that led to the pilot project.

Operational Definition

Mentoring was operationally defined for this program as guiding academic and professional growth in an identity-conscious manner.

Theoretical Framework

A thorough review of the literature and research synthesis conducted for the mentorship pilot confirmed that, notwithstanding progress in establishing successful/best practices in faculty mentoring, very little evidence-based research addressed the specific topic of mentoring faculty of color in academic health centers. The study used culturally appropriate evaluation methods, including narrative methods, focus groups, and reliance on culturally responsive research, implementation, and evaluation criteria. Evaluation included the psychosocial dimensions of academic life such as unconscious bias, identity formation, faculty agency, respect, isolation, and cross-cultural communication. By focusing on the psychosocial and cultural contexts involved, the intention was to create an active, personalized, and team-based mentorship program that aimed to acknowledge and/or further develop the full potential and untapped human capital of faculty of color and thereby improve career-related self-efficacy and satisfaction.

A signature feature and theory that informed this mentorship program is cognitive diversity (Horwitz & Horwitz, 2007). Cognitive diversity refers to differences between team members in characteristics such as expertise, experiences, and perspectives. These differences can also include sociodemographic characteristics including race, ethnicity, and sex. The cognitive diversity hypothesis posits that diversely composed groups may generate a broader range of ideas in order to solve problems creatively. While research findings are variable, there is evidence that cognitive diversity is positively related to benefits in group performance outcomes (Horwitz & Horwitz, 2007). In short, cognitive diversity is the diverse mental tools that result from different identities and cultural backgrounds, experiences, education, and training, which collectively are proven contributors to better problem- solving skills (Page, 2007). A culturally responsive conceptual framework was also vital to the development of this program (Han &

Onchwari, 2018). A culturally responsive mentoring program incorporates the cultural orientations and experiences of participants to enrich each of them (Bennet, 1988; Hofstede, 2011; Hofstede & McCrae, 2004; Rosinski, 2003).

Typology of Program

Hierarchical mentoring, where a more senior mentor is matched to a junior mentee (Kram, 1988), was combined with group mentoring (see Chapter 3 for diverse mentoring relationships) (Friedman et al., 1998), with the intention that each mentee would be matched with up to three more senior mentors. This could also be considered a mentoring panel, many-to-one, or committee model since a panel of mentors worked with each mentee. Due to time constraints and availability of mentors, two mentors and one mentee composed most teams. This triad worked together as a team with the mentors and mentee meeting quarterly; however, the mentee decided if they preferred a lead mentor whereby this could lead to an occasional one-on-one meeting.

Mentoring Inputs and Resources

Curriculum Description

The participants' estimated time commitment for the year was less than 60 hours. Activities were based on an adapted RESPECT model (Mostow et al., 2010), cognitive diversity scholarship (Horwitz & Horwitz, 2007; Page, 2007; Page & Nivet, 2015), and a case study. The RESPECT model is an action-oriented set of communication and relational behaviors designed to build trust across differences in race/ethnicity, culture, and power. Its component skills and educational framework are:

- *R*espect
- *E*xplanatory model
- *S*ocial context, including stressors, supports, strengths, and spirituality
- *P*ower
- *E*mpathy
- *C*oncerns
- *T*rust/*Th*erapeutic alliance/*Te*am

The emphasis on cognitive diversity was based on research evidencing that teams of individuals with a range of perspectives and experiences outperform groups of like-minded experts (Page & Nivet, 2015). Four cross-cutting themes drawing on RESPECT and cognitive diversity organized the curriculum:

- cross-cultural communication,
- racial/ethnic identities and cognitive diversity,
- implicit bias, and
- faculty agency in promotion and tenure.

Each theme was integrated into the curriculum through an evolving case study that highlighted a cross-cultural relationship between a Native American junior faculty (mentee) and her non-Hispanic, white male department chair.

Funding

The AIME program was jointly funded by the UNM HSC Chancellor's Office and the HSC Office of the Vice-Chancellor for Diversity and Inclusion (HSC D & I). The chancellor committed to funding this program as it was institutionalized.

Mentoring Activities

Recruitment Activities

Participants were recruited via email with the assistance of UNM HSC deans, vice-chancellors, and department chairs. Junior faculty of color were recruited as mentees, while more senior faculty of color and non-faculty of color were recruited as mentors.

Matching Activities

Faculty mentors were matched with faculty of color mentees through an electronic mentoring platform, Insala (https://www.insala.com/mentoring), originally created to facilitate business mentoring relationships.

This mentoring platform was adapted for academic users by a collaboration with Insala. The AIME participants found that Insala was effective for uploading biographies and CVs, viewing mentor and mentee profiles, and indicating mentor and mentee preferences. After the initial mentor-mentee matching had occurred, participants did not find Insala effective as a communication medium, given that they were already using other types of software for email and texting.

If mentoring programs with larger mentor-mentee cohorts are contemplated, an electronic tool with Insala's capabilities might be useful to optimize information sharing. This matching process depends on multiple documents being shared among the participants in a fairly short period of time.

Training Activities

Mentees and mentors attended a 6-hour orientation that began with a cultural simulation activity entitled BaFa' BaFa' Learning Simulation (BaFa' BaFa' Learning Simulation, n.d.), designed to foster cross-cultural awareness of the development and impact of stereotypes. They also received information on the overall program, the other cross-cutting themes, the basics of mentoring, and the use of Insala.

Mentees were asked to meet for an hour at least once a month with their selected mentor(s). During the first meeting, mentees developed an Individual Learning Plan for the year and posted it on the Insala platform. The learning plan established professional and personal, short- and long-term goals.

It also identified areas of focus, resources, potential barriers, required time commitment, personal strengths, areas for improvement, and an action plan. During subsequent meetings, mentees reviewed their progress toward goals and posted a summary directly onto Insala.

Mentors and mentees also attended four 1-hour case-based training (lunch) sessions over a 6-month period to assess mentoring progress and best practices and examine and explore cross-cultural communication. The curriculum used an iterative and cumulative pedagogical approach, introducing all cross-cutting themes at orientation, then exploring each theme in greater depth in the shorter training sessions. At each training session, a cross-cutting theme was reintroduced and integrated into the cross-cultural mentoring case study. Each session built on the previous sessions while incorporating the new content, cross-referencing the earlier themes, and building context throughout the process, as well as taking into account the feedback from evaluation surveys. The discussions allowed the participants to work together in diverse teams and to reflect on the mechanics of cognitive diversity. The importance of personal storytelling as a method for strengthening relationships between faculty of color and their department chairs, peers, and mentors was reinforced by the use of the "most significant change" narratives as a qualitative evaluation technique (Dart & Davies, 2003; Rivera, 2012).

Formative and Summative Evaluation

The study used culturally appropriate evaluation methods, including narrative methods, focus groups, and reliance on culturally responsive research, implementation, and evaluation criteria. Evaluation included the psychosocial dimensions of academic life such as unconscious bias, identity formation, faculty agency, respect, isolation, and cross-cultural communication.
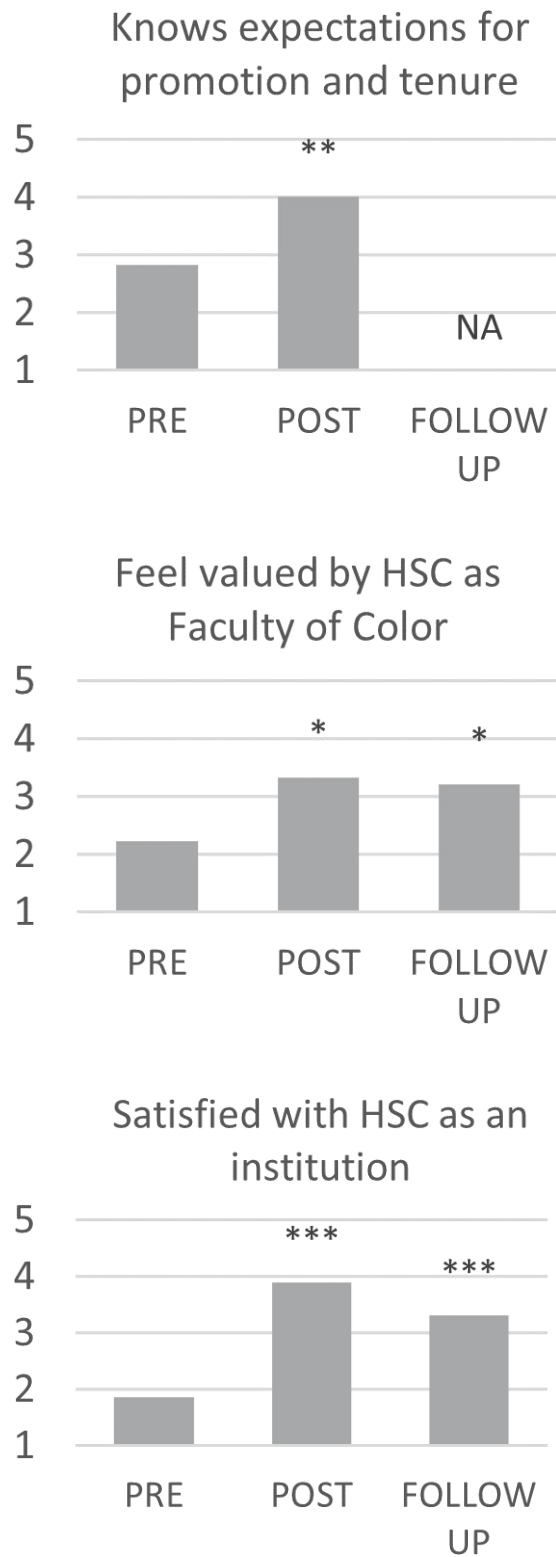
Mentees and mentors completed program surveys relating to demographics, institutional diversity, cognitive diversity, faculty agency, and programmatic goals and objectives.
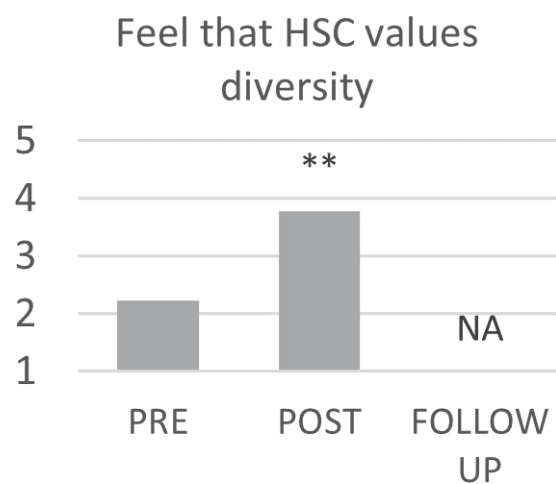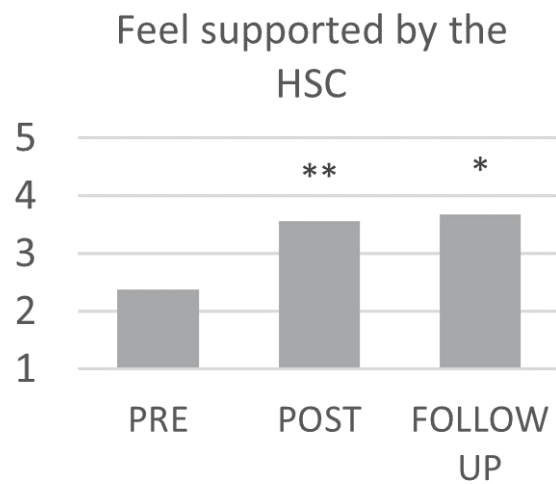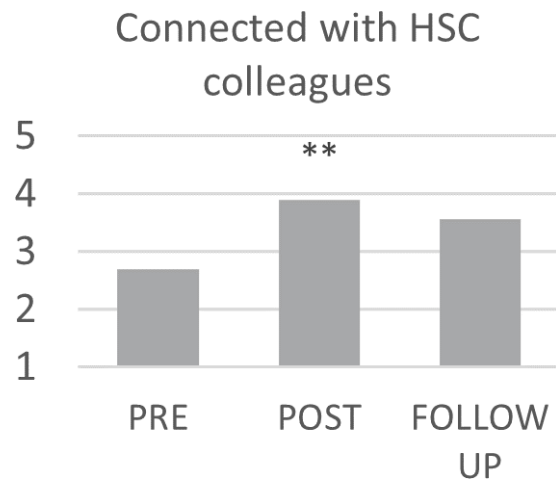
Mentees showed significant improvement in knowledge of expectations for promotion and tenure, feeling valued by HSC as faculty of color, satisfaction with HSC as an institution, connection with HSC colleagues, feeling supported by the HSC, and feeling that HSC values diversity (Figure 23.1). Mentors perceived improvements in their awareness of the unique realities of mentoring faculty of color, their connection with HSC colleagues, and their satisfaction with HSC as an institution (Figure 23.2). Importantly, the results also suggest maintenance of these gains at a 12-month follow-up for both mentees (feeling valued, supported, and satisfied) and mentors (connection and satisfaction).

These results align closely with a review concluding that health professions schools can improve faculty of color retention through focused efforts to improve the institutional culture to promote an inclusive environment (Hamilton & Haozous, 2017). They also support studies that conclude that, in general, faculty who receive mentoring experience greater job satisfaction than those who do not (Zambrano et al., 2015).

Figure 23.1

Mentee Survey Responses: Improvements in Pre- and Post-Program Ratings

Knows expectations for promotion and tenure

```
5 ──────────── ** ────────────
4            ┌────┐
3    ┌────┐  │    │
2    │    │  │    │        NA
1    │    │  │    │
    PRE     POST    FOLLOW
                      UP
```

Feel valued by HSC as Faculty of Color

```
5 ────────────────────────────
4            *         *
3          ┌────┐   ┌────┐
2  ┌────┐  │    │   │    │
1  │    │  │    │   │    │
    PRE     POST    FOLLOW
                      UP
```

Satisfied with HSC as an institution

```
5 ──────────── *** ───────────
4          ┌────┐   ***
3          │    │  ┌────┐
2  ┌────┐  │    │  │    │
1  │    │  │    │  │    │
    PRE     POST    FOLLOW
                      UP
```

Connected with HSC colleagues

Feel supported by the HSC

Feel that HSC values diversity

1 Strongly disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly agree

Evaluated using non-parametric Wilcoxon tests. * P<0.05 ** P<0.01 *** P<0.001

Figure 23.2

Mentor Survey Responses: Improvement in Pre- and Post-Program Ratings

Aware of unique realities of mentoring Faculty of Color

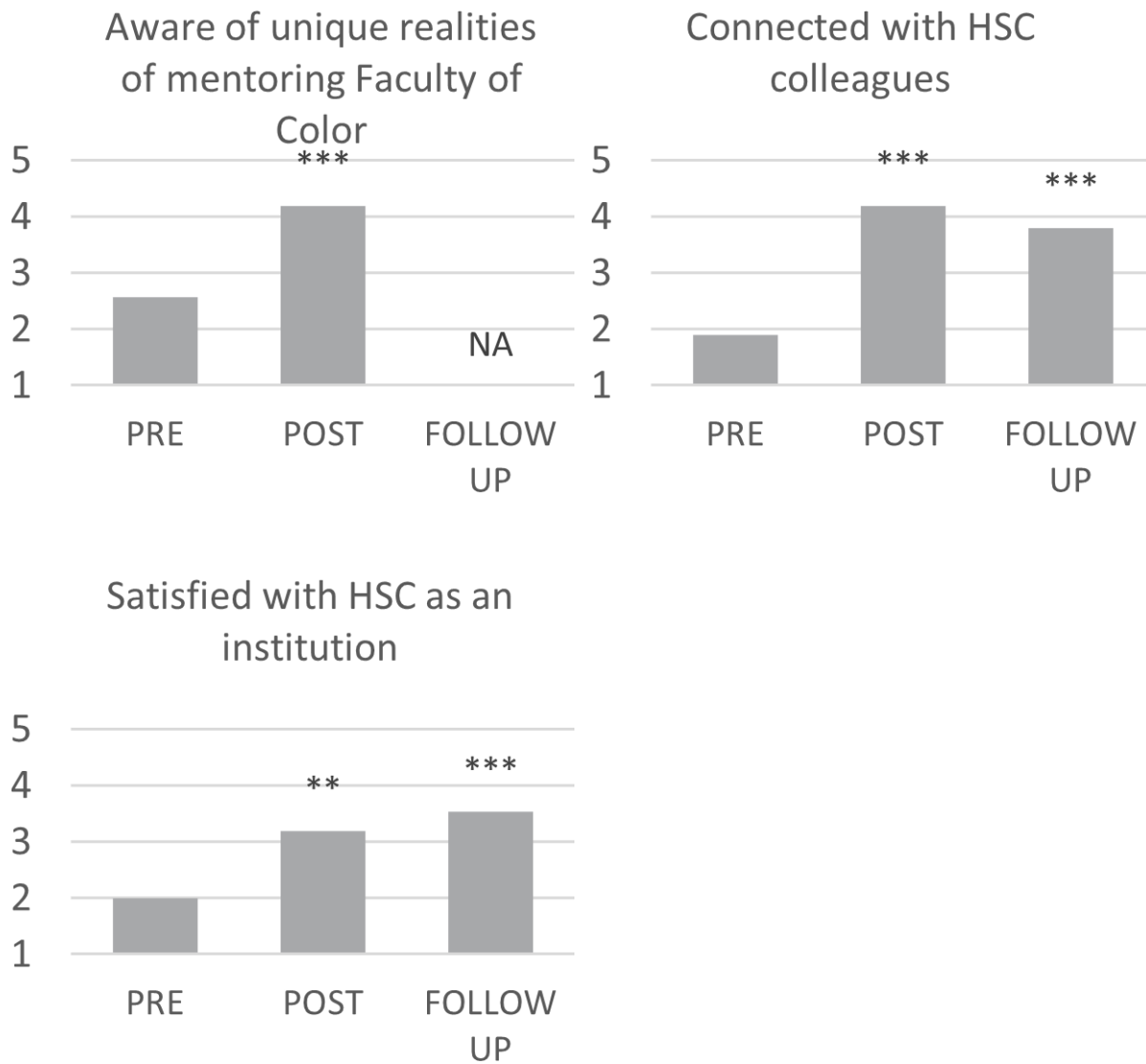Connected with HSC colleagues

Satisfied with HSC as an institution

1 Strongly disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly agree

Evaluated using non-parametric Wilcoxon tests. * P<0.05 ** P<0.01 *** P<0.001

Mentoring Outputs

All mentees were URM (*n* = 14) compared to 46% of mentors (11 of 24). Both mentees (71%) and mentors (67%) were predominantly female. The majority of mentees (86%) and mentors (92%) were based in the School of Medicine, while the remaining participants were from the College of Nursing.

Mentoring Outcomes and Lessons Learned

Outcomes of Program

The UNM HSC AIME pilot project created an opportunity and setting for faculty of color to build relationships with like-minded colleagues, discuss their career choices in the context of individual, family, and institutional demands, and examine academic choices made by their peers. The summative assessment findings revealed significant improvements in mentees feeling valued, connected to colleagues, and supported by and satisfied with their HSC institution. Thus, AIME was successful as a pilot in addressing the project goal and advancing inclusion but probably did not improve the overall institutional climate. We expect, with increased faculty retention and further AIME-modeled mentoring programs, to see these broader impacts over time.

Sustaining the Program

AIME is a partial solution to fostering an inclusive climate by promoting a fuller understanding of the contributions of faculty of color through robust discussions with faculty from different backgrounds about the complex dimensions of academic healthcare careers in New Mexico.

Elements from AIME have been applied to inform and improve an existing HSC Faculty Mentorship Development Program based in the UNM SOM Office of Faculty Affairs and Career Development. AIME is also part of the 2021 State of Mentoring review at UNM HSC. The chancellor intended to provide funds to the HSC D & I to institutionalize the program. Should this program be initiated in the future, HSC D & I would request funding from the HSC Executive Vice President's Office.

Lessons Learned

While the findings from this pilot were encouraging, there are some important limitations. The overall sample size for the AIME pilot project was relatively small, which limits replicability and generalizability. The pilot did not include a comparison group, and there was attrition across measurement periods. Therefore, nonresponders might have had different responses as compared to responders. We also did not track responses by unique identifiers, so pre- and post-program changes are reported in the aggregate, and we were unable to track based on attrition. Some mentees had low satisfaction scores that might have implications for long-term retention; however, individual participants were not identified as part of this study.

The qualitative evaluation was structured in an opportunistic manner, seeking to triangulate among different sources of information to inform our understanding of the program. We were unable to complete the projected number of focus groups due to program participants' competing demands. The

findings from this component may not reflect the full spectrum of experiences and perspectives. It is important to note, however, that our quantitative data analyses demonstrated consistent increases in virtually all areas of assessment. Additionally, the qualitative data were highly complementary to these findings, providing further confidence in the outcomes reported here. Future interventions should track participant evaluations by unique identifiers for the purpose of measurement.

Recommendations for Future Designers and Stakeholders of Academic Mentoring Programs

These recommendations are directed specifically toward academic mentoring programs to support faculty of color and to cultivate the wide range of talent and abilities represented by a diverse faculty:

1. Identify and develop best practices for faculty of color recruitment, hiring, promotion, and retention specific to your institution.

2. Implement AIME-type mentoring programs for all faculty and academic administrators in collaboration with existing mentorship programs.

3. Ensure rigorous evaluation and assessment of the programs.

4. Implement faculty of color academic leadership development initiatives to expand the pool of faculty of color mentors for the future.

5. Increase transparency related to diversity by disseminating an annual report of the demographic profile of faculty and leadership.

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INTENTIONAL ONBOARDING AND MENTORING OF NEW FACULTY AT CENTRAL MICHIGAN UNIVERSITY

Sarah Marshall

Abstract

Recognizing that faculty who are mentored are more likely to successfully navigate the tenure process and become effective members of the academic community, Central Michigan University's (CMU) College of Education and Human Services (CEHS) developed a comprehensive mentoring and professional development program for all new, full-time faculty. This program provided a network of support, resources, and guidance for navigating inevitable challenges. Prior to the development of this program, departments varied in the ways they encouraged and addressed faculty mentoring. Most informally assigned a faculty mentor, but as our initial assessment demonstrated, little to no mentorship occurred. With the recruitment and retention of faculty as our motivator, we developed a 2-year new faculty development program to aid in their transition and onboarding. Moving away from informal, spontaneous mentorship, we intentionally crafted a comprehensive, research-based program including summer support, orientation, faculty mentorship, professional development, and peer interactions. In our first year, eight new tenure-track faculty participated in the program. In the second year, we added six additional new faculty including three who were full-time and non-tenure-track. This chapter overviews our program from its origins through assessment and is organized into three sections: mentoring context and program development, mentoring activities, and lessons learned.

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Mentoring Context and Program Development

Committed to ensuring that new faculty were in the best possible position to succeed professionally, Central Michigan University's (CMU) College of Education and Human Services (CEHS) developed a comprehensive mentoring and professional development program for all new, full-time faculty. While faculty attrition was not a major concern at CMU, our dean recognized that the college's investment in faculty warranted a comprehensive approach to their indoctrination into the college. Not unique to CMU, while most new faculty had terminal degrees, they had limited experience navigating academe and its unique culture. While most had a perceived familiarity with expectations related to teaching, research, and service, the reality of successfully navigating professorial expectations was very new to them.

Need for This Program

Our journey began with the appointment of a Professional Learning Community (PLC) with faculty representatives from each of our five departments and the associate dean. We were charged with assessing the needs of new faculty and developing resources to aid in their transition to the professoriate. We discovered that departments varied in the ways they encouraged organization socialization and addressed faculty mentoring. Most departments informally assigned faculty mentors to new faculty, but little to no mentorship occurred. In most cases, onboarding was happenstance more than intentional. The PLC recommended the development of a comprehensive faculty development program to aid in the transition and onboarding of new faculty.

Purpose and Objectives

Research indicated that best practices in faculty indoctrination should be intentional and comprehensive (Lumpkin, 2011). Some of the key factors to effective mentoring programs include clear purpose and goals, support from faculty and leadership, evaluation for continuous improvement, visible support from senior administration, adequate resources, orientation for mentors and mentees, and intentional matching of pairs (Fountain & Newcomer, 2016). The goals of our program included:

- Help newer or more junior faculty members acclimate to formal and informal norms of the department, college, and university.
- Foster effective research skills and publishing strategies.
- Encourage faculty members to refine and expand teaching strategies.
- Foster development of a productive balance between research, teaching, and service.
- Guide faculty members in progression toward promotion and tenure.
- Foster an atmosphere of collegiality and community.

Organizational Support for Mentoring Program and Infrastructure

Annually, our dean appointed a faculty fellow to work on college-wide special projects. Participants often had administrative aspirations, and the fellowship program was a way to receive mentorship and

career guidance while pursuing ideas to improve the college. The fellowship included a 2-year appointment of a tenured faculty member who received a reduction in teaching load, additional professional development funds, a summer stipend, and mentorship from the dean. With the recruitment and retention of faculty as our motivator, in the capacity of a faculty fellow, I developed a 2-year new faculty development program to aid in the transition and induction of new faculty.

The research and planning phase began the semester prior to program implementation. Via the literature, I researched best practices in faculty mentorship and organizational socialization, spoke with department chairs about their current onboarding practices, and received feedback from new faculty regarding their transitional experiences. Throughout the planning stages, I had the ongoing support of the dean and the department chairs. As a member of the leadership team, I regularly informed the chairs of the initiative and sought their feedback. I was intentional in valuing the ongoing mentorship chairs provided and encouraged the continuation of those relationships. The developed program was not intended to replace their mentorship and guidance, only to enhance and expand the intentional nature of our faculty indoctrination process.

Typology of Program

This program evolved into a hybrid of hierarchical mentoring and peer mentoring. In accordance with hierarchical mentoring, a more senior, experienced faculty member was paired with a new faculty member. Throughout the course of the academic year, these pairings resulted in improved socialization to the profession and university, positive performance outcomes, and career clarity. Additionally, the program included monthly professional development seminars for the new faculty. As a result, peer mentoring occurred as the new faculty developed relationships and sought guidance from their peers. These monthly peer meetings provided a safe environment where new faculty could speak candidly about their experiences.

Mentoring Inputs and Resources

Curricular Description

The designed mentoring and professional development program included summer communications and resources, a kick-off dinner, monthly mentoring sessions, and monthly professional development sessions. First, recognizing that faculty onboarding should begin as early as possible, we launched our faculty development program toward the end of the spring semester/early summer. For example, new faculty immediately have questions regarding relocation, research space, office operations, and teaching resources. As faculty are not under contract during the summer, the faculty fellow and faculty's chairperson served as contacts. In early summer, all new faculty received a welcome letter, the book *A Survival Guide for New Faculty Members: Outlining the Keys to Success for Promotion and Tenure* (Baken & Simpson, 2011), a university/college resource guide, and an overview of the faculty professional development program. The resource guide included information about IDs, parking, phone service, library access, keys, computer purchases, start-up research funds, lab access, food service, classroom management systems, email, and more.

Second, to launch the mentoring and faculty development professional program, the dean hosted

a dinner that included the dean, associate dean, faculty fellow, department chairs, mentors, and mentees. During this dinner, introductions were made, advice offered, and sincere welcomes extended. During this meal, mentors and mentees met for the first time and arranged a meeting date for the following week.

Third, monthly mentoring sessions occurred between the mentor and new faculty member. While monthly topics were assigned and discussion questions provided, the pairs could discuss any topics pertinent to the mentee. These monthly coffee or lunch dates allowed for relationship building and provided a dedicated time to discuss the mentee's transition.

Last, at the beginning of each month, as the faculty fellow, I coordinated a 60-minute lunch and professional development seminar based on the assigned monthly topic. I personally facilitated two of the seven sessions, and the other five were facilitative by CEHS faculty or university professionals who had expertise in that topic. While the intention of these sessions was information sharing, the peer interactions and relationship building between new faculty are also noteworthy. During these sessions, the faculty became acquainted, shared experiences, formed writing groups, and developed a bond. They often arrived early or stayed late to connect with one another. Outside of the meetings, they regularly shared information, developed friendships, and supported each other.

Funding

Funding for the program was provided by the CEHS dean. Expenses included faculty fellow compensation, welcome dinner, professional development seminar lunches, monthly mentor lunches, books, and training resources.

Mentoring Activities

Faculty work is complex. To address this complexity, mentorship should come in a variety of forms. We debated multiple mentorship models and their associated advantages and disadvantages (Viravong & Schneider, 2018; Zellers et al., 2008). Some argue the provision of multiple mentors with different areas of expertise—teaching, research, discipline-based. Others argue that mentors should come from within the department as they understand the discipline, political dynamics, and department culture. Others argue that mentors need to be from outside of one's department in order to ensure confidentiality. In our case, we did not have the capacity to provide multiple faculty mentors. Additionally, departmental approval is the first step in the reappointment, promotion, and tenure of new faculty. Thus, we decided that mentorship from outside of the department was important to ensure confidentiality and vulnerability. Research tells us that new faculty are often guarded in disclosing what they do not know (Mancuso et al., 2019). They are reluctant to ask questions for fear of appearing uninformed. Often not wanting to be vulnerable to department colleagues, they hesitate in voicing their concerns, confusion, or questions. Having a mentor outside of the department, removed from any personnel decisions, allowed for more candor and frank conversations about the realities of faculty life.

Recruitment Activities
Mentors were solicited in two ways. First, a call for mentors was shared with all tenured faculty

members in our college. The call outlined the purpose of the program, expectations, and time commitment. Second, department chairs recommended faculty. They identified key faculty within their departments who they believed would best serve in this capacity. Based on their recommendations, I personally invited these faculty to participate in the program. Once identified, each potential mentor and new faculty (mentee) shared pertinent information about themselves via a Google Doc. We recognized that the transition of new faculty is both professional and personal. Many are navigating a new community, placing children in new schools, or trying to establish social networks. So that we could pair people based on both personal and professional connections, we asked both mentors and mentees to share information via a Google Doc that disclosed their teaching, research, and service interests (including methodological expertise), hobbies, relationship status, number and ages of children, and residential status. Only about half of our faculty live in the university community, so we worked to pair those who lived within the community with mentors who did so as well.

Training Activities

Eleven faculty from all five departments expressed interest in serving as faculty mentors. While we only needed eight, we opted to train all eleven, explaining that some may serve as mentors the following year. Additionally, we anticipated that not all initial pairings would result in a strong match, and a change may be needed. We also had one chairperson express reservations about a volunteer mentor, so we did not initially assign that person a mentee. At the end of the spring semester, we trained the mentors in a 2-hour workshop. During this time, we fed them lunch, and they received the shared text and a binder containing key mentoring program documents. The binder included a program overview, mentor/mentee expectations, budget information, a reading timeline for the assigned book, monthly topics and discussion questions, and tips for being a good mentor. We started the conversation by discussing their previous mentoring experiences both as mentors and mentees. Collaboratively, we outlined characteristics and actions of effective and ineffective mentors and discussed our expectations for serving as a good mentor within the program. We also spent time overviewing the program, expectations, monthly responsibilities, and paperwork. A couple of key points that were made during training were the intentional nature of mentorship and the importance of regular mentor-initiated meetings. Our program was designed to encourage meaningful dialogue centered around topics of importance to the mentee. Understanding the power differential, meaning most mentees will not reach out first to mentors because they perceive their mentors as being too busy, mentors were asked to initiate meetings (Mancuso et al., 2019).

Matching Activities

We saw mentorship/guidance potentially coming from three people: the chairperson, the assigned mentor, and what we called the department liaison. While the faculty development program only involved structure for the mentor/mentee relationship, we encouraged regular interactions (formal and informal) between the chairperson and the new faculty member. We promoted to the chair and new faculty the significance of their relationship in answering questions, onboarding within the department, and understanding the reappointment, promotion, and tenure process. Again, to encourage the intentionality of faculty socialization, we asked chairs to meet formally at least once per semester with the new faculty.

Recognizing that having a mentor outside of the department had its limitations, we asked that those serving as mentors also serve as department liaisons who provided information to either the mentor or mentee regarding departmental procedures, dynamics, or other departmental happenings. These liaisons served as mentors in the program—mentoring a faculty member outside of their department—but also served as departmental resources to new faculty within their department when necessary.

Based on mutual interests outlined in the google doc, each new faculty member was assigned a mentor from outside of their department. Assignments, contact information, and background details were provided to both the mentor and mentee when the contract year started (about 10 days prior to the first day of class). With intentional mentorship in mind, the faculty development program had a monthly theme, including university logistics; effective teaching and teaching resources; establishing a research agenda; meaningful service; annual review, reappointment, promotion, and tenure; grant writing/funding; surviving and thriving in the professoriate. At the beginning of each month, mentors and mentees would receive an overview of the topic, assigned book chapters to read, and possible discussion questions relevant to the readings or the topic. They were expected to meet for a meal or coffee at least once that month to connect and discuss the monthly topic. While the assigned topic was provided to spark conversation, (some) deviation was also expected based on the needs of the mentee. Meetings were initiated by the mentor. Meals were to be paid for by the mentors who were reimbursed for any incurred expenses. During these times, mentors were encouraged to review and offer feedback on teaching materials; help shape research agendas/read written pieces; suggest service opportunities; offer connections/insights into the community, and so on. We wanted their time together to be productive, helpful, and something they looked forward to. In many cases, relationships went beyond the monthly meeting. Mentors would regularly check in via email, mentees would ask questions outside the monthly meetings, and some became friends and co-authors. The mentor/mentee commitment was for one academic year. After the completion of the first year, mentors and mentees could continue to meet, with their meals paid for, but there was no obligation to continue or any formal structure.

Evaluation

We assessed the faculty development program throughout the academic year. Each month, mentors shared meeting dates and times, along with meal receipts, with the faculty fellow. This ensured that they were meeting monthly. As the facilitator of the monthly professional development seminars, I would frequently inquire with the new faculty about their pairings and the productivity of their monthly meetings. Last, we evaluated the program via a survey both at the semester break and at the end of the academic year. From both the mentors and new faculty, we learned about the effectiveness of the pairings, the quality of time spent, and the overall level of satisfaction with the program. Based on the feedback, we made modifications to the program. Some changes included extending the seminars from 60 minutes to 90 minutes to allow for more socialization among new faculty, expanding the program to include contingent faculty, and the provision of small group mentoring where multiple mentors and mentees would meet and discuss relevant topics. Besides program feedback, we also solicited qualitative feedback regarding the impact of the program on faculty understanding of promotion and tenure; feelings of inclusion and connectedness to the department, college, and university; comprehension of faculty responsibilities; and overall level of confidence regarding faculty expectations. The responses were overwhelmingly positive. Faculty felt the program unquestionably

aided in their transition to academe.

Mentoring Outputs

In our first year, eight new tenure-track faculty participated in the program. In the second year, we added six additional new faculty including three who were full-time and non-tenure-track.

Lessons Learned

We sustained our program for 3 years while our college experienced regular faculty increases. During this time, with the help of our Center for Innovative Teaching, we expanded the professional development series university-wide to include all new faculty. After 3 years, with the departure of our dean, coupled with the end of the faculty fellow appointment and a year with no new hires, the program, unfortunately, dissolved. In transition, department chairpersons and senior faculty provided ongoing mentoring and onboarding of new faculty. The program awakened us to the challenges encountered by new faculty in their transition to CMU and the professoriate. Our biggest takeaway was that we could not take their indoctrination and professional transition for granted—that it would just "happen naturally" over time. Intentional support, conversation, and the provision of resources are essential to their success. We also learned that new faculty often do not ask for help. As a result of the professional development program, mentorship and organizational socialization remain a college priority. While we may no longer have the college-wide program, there remains intentionality behind the transitioning of our new colleagues to our institution and to the profession.

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MENTORING PROGRAMS FOR STAFF OF EDUCATIONAL INSTITUTIONS: UNM STAFF COUNCIL MENTORSHIP PROGRAM

Amy Hawkins

Abstract

In higher education, staff sometimes feel like the third wheel, the step-child, the forgotten ones sitting on the sidelines as students and faculty bask in the warm glow of academia. Administrators in university settings owe duties to (a) faculty and student needs; and (b) staff development, morale, needs, pay, and benefits. The University of New Mexico's Staff Council was created so that volunteer university staff elected to serve as councilors can advocate for staff by offering recommendations to the university regarding staff development, morale, needs, pay, and benefits. Each can bring constituent concerns to the full Staff Council and its committees. Staff Council can make recommendations on everything from benefits and parking to award programs. A successful councilor could make the difference between getting a parental leave policy or doing without such a policy, and each bear great responsibility to their constituents and to the university to voice the concerns and will of the staff. The Staff Council Mentoring Program matches councilors with members more experienced to help guide ideas, projects, and initiatives. This chapter outlines the UNM Staff Council department's structure and details the Staff Council's focused mentorship program. Then it describes how the program aims to give each team the support it needs to realize its individualized goals. This chapter concludes with a discussion of the implications this program has on outcomes, limitations, and growth prospects.

Mentoring Context and Program Development

Purpose and Objectives of the Program

The University of New Mexico Staff Council represents the interests of all staff and serves as an important source of input into the issues and decisions of the university as they relate to the general welfare of the staff of The University of New Mexico (UNM). The Staff Council represents UNM staff to the university administration, and the Staff Council president serves as an advisory member of the Board of Regents.

Councilors represent staff on issues and decisions by making recommendations regarding policy, improving wages, and general conditions of employment (The University of New Mexico, 1996). They participate in the shared governance of the university and advocate for staff through one-on-one meetings with campus administrators, producing resolutions and commentary on campus issues and engaging in opportunities for leadership through participation in committees, monthly business meetings, projects, and events.

In order to be an effective staff councilor, the development of certain skills is crucial. Skills include communicating with constituents and administration, developing programs and events that provide UNM staff support and a forum to address issues of concern, and broadening opportunities for staff to work with people and organizations across the university and our community. The purpose of the UNM Staff Council Mentorship Program is to help councilors develop these skills.

The objectives of the Staff Council Mentorship Program combine the idea of learning skills to be an effective councilor while having the resources to seek out additional opportunities that will help reach an individual goal. It is important that the individual needs of councilors, and what they want to accomplish, are taken into consideration and fostered. The mentorship program, therefore, helps develop skills to be an effective councilor and to gain experience based on councilors' own ideas of what they wish to accomplish during their time in Staff Council. With the mentorship program, Staff Council is able to guide individuals toward their individual goals with an emphasis on the basics of being an effective representative.

For instance, not long ago, the university had no parental leave policy. One councilor found this to be unacceptable and acted. Working with the Policy Office and Human Resources, this councilor was able to communicate their concerns and learn what was possible through an administrative lens. They translated that information into a resolution (a document introduced by a staff councilor, usually requesting that action on a particular issue be taken), and with the help of a fellow councilor, expert resolution writer, and mentor, the Staff Council adopted the resolution. They then worked very quickly, talking to the administration, connecting the different administrative offices needing to be involved, and through these actions and persistence, the university enacted the policy we have today. There are many skills that this councilor honed during their time in Staff Council that helped gain this outcome. Over 3 years, they excelled as a councilor, committee chair, member of the Executive Committee,

finally, Staff Council president, participating in the mentoring program whenever it was offered, first as a mentee and then as a mentor.

Organizational Setting and Population Served

The university is committed to the principle of shared governance and recognizes the right of the council to represent the interests of all staff to the administration. The administration commits resources and support to the council to help ensure its success. The administration has also made a commitment not to interfere with issues and operations of the council and respects the right of the council to adopt positions that they may not agree with. While the council adheres to the requirements of UNM regents' and administrative policies, the council is independent of the influences of any administrative office.

The Staff Council represents the interests of over 4,000 staff at UNM as a voice in the shared governance of the university. The elected body consists of 60 representatives voted into their seats through a university-wide election to serve a 2-year term representing both job grades and areas. The Staff Council also consists of 12 standing committees, consisting of councilors and noncouncilor staff members, dedicated to carrying out specified charges of the voting council and may also serve the entire staff population, depending on the charge.

Organizational Support for Mentoring Program and Infrastructure

The university provides an annual operating budget, allocates office and conference spaces, and has designated one staff position to provide administrative support to the Staff Council. This position supports all aspects of the council's initiatives and projects. The Staff Council Mentorship Program was started and is led by volunteers and has limited organizational support. There are no budgetary or human resources allocated specifically for the mentoring program.

Typology of Program

The Staff Council Mentoring Program typically uses one of two typologies: one-to-one hierarchical mentoring or peer mentoring (see Chapter 3 for more details on diverse mentoring forms). There is a broad variety of what councilors may want to learn when they enter the program. Most of our mentoring relationships will be based on the one-to-one hierarchical structure, where the mentor has more experience and a broad scope of practices that the council engages in and will base their mentorship on those skills. This might include how to communicate effectively with constituents, propose an event, or become engaged in one of the committees. Occasionally, however, there is a mentee who may have just as much experience as their mentor in the broad scope of what the council does but wants to learn how to accomplish a very specific task, such as writing a successful resolution like the parental leave resolution mentioned in the previous example. The individuals in this relationship may very well be within the same level and power status within Staff Council; one simply has more knowledge about a specific practice to share.

Mentoring Inputs and Resources

Curriculum Description

Month one: Mentorship program group event #1 facilitated by staff administrator: Expectations and Learning Goals

- Introductions, go over materials distributed via email, and facilitate creating learning plans and goal-making

Month one: First one-on-one meeting for pairs

- Get to know each other and establish reason for participating. Build on a learning plan and goal-making that began at group event #1 by defining learning goal(s) and consider how to meet them over the several months with a timeline.

- Determine frequency and format of meetings. The recommended frequency is at least once a month.

Month two: Mentorship program group event #2 facilitated by staff administrator: (Sample) Topic: Communicating with Constituents
  Months two, three, and four:

- As needed, add specific tasks and objectives to the timeline. For instance, if the goal is writing a resolution, a good first step might be to read and review passed resolutions for structure and content.

- Consider if there are networking opportunities that would enable a connection to learn from those already doing what you are interested in. If you are unsure what kind of opportunity may be available, please reach out to the Staff Council administrator, who will do their best to research and set up opportunities that may be helpful in achieving the goal.

- Mentor/mentee check. Is the relationship working? Would a different match opportunity be helpful? No judgment here. Sometimes, through the fault of no one, mentoring relationships do not work out. If a re-match is needed or wanted, please let the Staff Council administrator know.

Month five: Mentorship program group event #3 facilitated by staff administrator: (Sample) Topic: How to Write a Convincing Resolution
  Months five, six, and seven:

- Build and finesse the timeline and specific goals. What are the success criteria? How is progress going to be measured?

- Discuss what is being learned so far. Discuss what is working or what is not working. If something is not working, how can the team pivot, reassess, and replan to meet the final goal(s)?

- If working on a project, is the final project something to present or share with others?

Month eight (final month):

- Celebrate! Take stock of lessons learned, directions taken, and what is still needed to be accomplished.
- Present any final projects to Staff Council and/or other groups as appropriate.
- Complete the mentorship program evaluation survey.

There are three optional events for participants of this program. The first is a short introductory event where participants can share expectations of the program and begin talking about learning goals. The remaining two events are determined by the mentorship program interest forms in order to provide content that is most important to that group.

Funding

The university provides a general operating budget to the Staff Council Office and separate funding for university staff appreciation events and university-wide awards. There is no funding dedicated specifically for a mentoring program within Staff Council. There are funding opportunities on a one-time basis that can be requested by any council member, but not a sustained, blanket opportunity to request funding for ongoing mentoring activities.

Mentoring Activities

Recruitment Activities

The Staff Council Mentoring Program is very limited in terms of time, lasting only 8 months, with a limited recruitment pool. Mentors, mentees, and topic experts are recruited from the body of councilors, of which there are a maximum of 60 at any one time (UNM Staff Council, 2020). A councilor with a passion for the program will announce the beginning of it during a business meeting that all councilors attend. They will describe the intent of the program and the roles of mentor, mentee, or topic expert and answer any questions that may come up. After this meeting, the Staff Council mentorship interest form (Figure 25.1) is sent to all councilors for those who wish to participate.

Figure 25.1
Staff Council Mentorship Program Interest Form

Staff Council Mentorship Program Interest Form

1. Name

2. Please tell us a little about your UNM and Staff Council experiences so far.

School, College, or Division in which you work

Total years you have been employed at UNM

Year first elected to Staff Council

Total years you have served on Staff Council

Staff Council and University-wide Committees in which you have participated

3. What role would you like in the Mentorship Program?

○ Mentee

○ Mentor

○ Topic Expert (presenter at a group event)

4. Please indicate topics about which you would like to learn more.

☐ Constituent communication

☐ Finding and developing policy ideas

☐ Leadership skills

☐ Starting new events

☐ UNM funding and decision-making processes

☐ Writing resolutions

☐ Other(s) (please specify):

5. How would you rate your level of expertise in these areas?

	Novice	Familiar	Expert
Constituent communication	○	○	○
Finding and developing policy ideas	○	○	○
Leadership skills	○	○	○
Starting new events	○	○	○
UNM funding and decision-making processes	○	○	○
Writing resolutions	○	○	○

6. What else would you like us to know about your interest in the Mentorship Program?

Matching Activities

There is no guarantee of how many participants there will be since it is a volunteer program, and the councilors self-identify themselves as mentor, mentee, and/or topic expert. After participants sign up for the program and fill out the interest form, pairs are matched primarily by interest (their desired areas of learning and strengths) and secondarily by gender. They are typically matched in one-mentor-to-one-mentee pairs but can occasionally have one mentor to two mentees if there are not enough mentors or if there is a mentor with a particular set of knowledge that is highly sought after. The interest form that all participants fill out includes questions about experiences and expertise, roles within Staff Council, and topics of interest. Once they are paired, participants have the support of one staff administrator and additional resources through their fellow councilors and committee members to call upon for questions, ideas, strategies, funding, networking opportunities, and more, but the impetus remains on them to achieve their outcomes. There are three potential roles defined in the program that councilors can choose for themselves: *mentee* (any councilor primarily interested in learning and building skills related to Staff Council); *mentor* (any councilor who has served at least one full term and is primarily interested in sharing what he or she has learned0; and *topic expert* (any councilor who has served at least one full term with a particular area—or two—of knowledge and experience that they would be interested in sharing in a group setting).

Training Activities

After the pairs are matched, each participant is then sent an initial email that includes their pairings, information for the first gathering of the group, a sample timeline of how to structure their time together, basic guidelines for effective mentoring meetings, and recommendations for how to prep for and what to accomplish during their first one-on-one meeting.

Strategies to Monitor and Support Relationships

During the second month of the program, there is a scheduled mentor/mentee check to determine if the relationship is working. This is an informal check-in at the same time as the second group event and discussion. The participants are encouraged to reach out at any time to the Staff Council administrator if they feel their relationship is not working and would like to be paired with someone else. Other needs and concerns of the mentor/mentee pairs are similarly self-identified to the Staff Council administrator.

Mentoring Outputs: Number of Mentors, Number of Mentees, Mentor/Mentee Ratio

Our current program has seven mentors and eight mentees, giving us six matched pairs with a ratio of 1:1 (1 mentee to 1 mentor) and one matched pair with a 2:1 ratio (2 mentees to 1 mentor). The previous program had six mentors and eight mentees, giving us six matched pairs with a ratio of 1:1 and two matched pairs with a 2:1 ratio.

Mentoring Outcomes and Lessons Learned

Outcomes of Program

Mentoring programs are notoriously hard to keep going without clear structure and consistent oversight. Not surprisingly, the Staff Council Mentorship Program has mixed outcomes. We have had mentees of the program graduate to become Staff Council president, and we have mentees who never met with their mentor and ultimately ended up leaving the organization. Our measure of success for this program is how many participants stick with the program for the full 8 months and continue their work within the council. Currently, our success rate is around 75%. We do tend to see more participation in committees and more involvement in council affairs from those who go through the mentoring program, although this is just an observation. We have no way of tracking the participants' involvement in the council after completing the program compared to those who do not.

Sustaining the Program

This program is run in a volunteer organization with a severely limited budget and one administrator who tends to the needs of the full Staff Council, its committees, and all the events, programs, and initiative therein. This equates to around 75 individuals, 12 committees, and 25 events ranging in size and complexity per year. The mentoring program is but one initiative out of many, and without another staff dedicated to supporting the initiatives of the program, it is impossible to see that there can be much sustainable growth.

Lessons Learned

We have had some great successes, but the program is severely limited by its short-term, limited recruitment pool and the lack of paid professional oversight and capacity. Another glaring limitation is that outcomes for this program are not clearly defined since every mentor/mentee pair is in charge of their own progress. Ideally, we would also have a solid infrastructure for the mentoring program with training opportunities for our mentors, relationship support for our teams, measurable outcomes, and an evaluation plan to document progress, achievements, and pitfalls of the program. We have learned that sustainability in this format, with this level of support, is difficult to maintain and, to have a more robust mentoring program, we would require dedicated resources and personnel.

Recommendations for Future Designers and Stakeholders of Academic Mentoring Programs

Recommendations for future designers of academic programs include training that includes a component of institutional objectives and curriculum. Training has been shown to have several benefits within a mentoring program for both mentor and mentee (Allan et al., 2006). Although it is not currently within the capacity of the department to run the Staff Council Mentoring Program in as structured a method as we know would be most beneficial, we still consider the successes that we do have significant and worthy of pursuing.

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STAFF MENTORING AND DEVELOPMENT AT ARIZONA STATE UNIVERSITY

Karen Engler-Weber

Abstract

Most university structures provide extensive mentoring and support for students and faculty, but the mentoring of university staff is often a neglected area within university systems, despite the clear need to support staff professional development, career advancement, and retention. At Arizona State University (ASU), the Commission on the Status of Women (CSW) has developed an extensive university-wide staff mentoring and development program model that pairs staff mentees with mentors, providing the space and opportunity for mentees to identify their strengths and consider their long-term career trajectory at ASU. Through mentoring, participants learn more about specific skills, university areas, and career growth within the university system. Professional and leadership development sessions, along with peer coaching groups, provide additional opportunities for mentee growth. Program selection is competitive, requiring institutional support and management and a staff community that supports the success of all of its members. This chapter provides details on the structure and development of the ASU CSW mentoring program, operational management, and the financial investment needed to support this important opportunity for staff.

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Elaine Rostad, Audrey Dumouchel-Jones, Anna Wales, and Lindy Baker; university leaders including former Provost Mark Searle, Provost Nancy Gonzales, Deborah Clarke, Duane Roen, and Kevin Salcido; Kristen Young, one of our mentoring coaches and trainers; the Office of the University Provost for their financial support of the program; and most importantly, our outstanding mentors, who have dedicated their time and skills to supporting the success and growth of our staff at ASU. Also important to thank is my husband, Tom Weber, who supported my many long days at work to make this program a reality.

Mentoring Context and Program Development

Mentoring is utilized extensively in institutions of higher education as a way to promote the success and growth of not only students but also faculty. Robust mentoring programs and procedures exist for students to support their retention, academic success, and the ultimate goal of graduation while focusing on their individual needs. Similarly, mentoring programs for faculty are often designed to provide support toward the goal of tenure, promotion, and career advancement. Yet when universities consider advancing the success of their communities, an often-overlooked group is staff. Professional development opportunities and procedures can vary greatly across academic institutions, often with the intent of providing training to do one's job better but less consideration on retention, career satisfaction, and advancement. Formalized mentoring programs for staff is often an underutilized strategy for supporting these goals.

At Arizona State University (ASU), the Commission on the Status of Women (CSW) has developed an extensive university-wide staff mentoring and development program model that remains one of the only programs of its kind nationwide. Launched in 2013, the model provides one-on-one mentoring, professional and leadership development, strengths-based resources, networking, and peer coaching structures to support a cohort of mentees who are interested in advancing their career at ASU.

The Need for This Program

The ASU CSW is an administrative unit whose mission is to identify and advocate for needed change in the university environment in order to enhance opportunities for women and underrepresented groups in the university system. The CSW fulfills its mission by providing extensive programming and activities with a particular focus on leadership development, professional development, work/life balance, and community engagement. The design of many of our programs focus on the development needs of staff, a group that often face obstacles in career growth such as confusion on career paths, uncertainty on career advancement, limited exposure to opportunities in the university system, and "feeling stuck" in their career trajectory. The CSW believed it critical to move staff members from the idea of having "just a job" at the university to instead consider their work as part of their long- term career. It is not just a difference in rhetoric but a key to staff retention, while acknowledging staff contributions to the success of the university as a whole. The CSW sought to develop robust programming that would support the retention and success of staff, and mentoring came to be viewed as part of the prescription.

In 2011, the CSW began the process with a year-long strategic review examining the prevalence and types of staff mentoring programs at public universities nationwide. Our review found that staff mentoring was largely absent from offerings in higher education, finding only three universities (0.4%) that had university-wide staff mentoring programs available to all levels of staff. A key observation in our review was that none of the mentoring resources identified provided a professional development component in conjunction with mentoring to support mentee growth (CSW, 2011).

Purpose and Objectives of Program

The CSW's review provided a blank canvas for the CSW to create a unique and innovative model that would couple mentoring and development designed to support the success of staff. With the basic ideas in place, the CSW began structuring the model for the mentoring program. This process included multiple consultations with university units to address the legal considerations for implementing a formal mentoring program and to ensure that the program would adhere to university policies, Equal Opportunity/Affirmative Action guidelines, while also limiting any potential negative impact on participants in the program.

Piloted in 2013 and fully inaugurated in 2014, the ASU Commission on the Status of Women Staff Mentoring and Development Program utilizes a traditional one-to-one hierarchical model of mentoring (see Chapter 3 for more details on diverse forms of mentoring relationships), pairing experienced and excelling staff members with staff who are interested in developing their career and leadership skills. The program is meant to inspire and support a rewarding and evolving career at ASU. The goals of the program for mentees are structured to provide mentoring, networking, and professional/leadership development. Careful consideration was also directed to support the growth of mentors, with the program providing an opportunity to develop mentoring skills, expand one's professional network, and engage in meaningful university service.

Organizational Setting and Population Served

The CSW program is open to all employees at ASU locations worldwide but limited to those classified as staff (non-faculty) and academic professionals. And while the program is managed by the Commission on the Status of Women, the program is open to all staff members, regardless of biological sex, gender identity, or expression.

Organizational Support for Mentoring Program and Infrastructure

The CSW mentoring program is a highly structured, organized program that runs in a 6-month cohort model that begins in the summer and runs through the fall semester. The program cohort identified by summer and year (e.g., summer 2020), is comprised of 40 to 45 mentoring pairs. The program begins with separate orientation and training sessions for both mentees and new mentors. Over the course of the 6 months, mentees in the program will meet at least once a month with their mentor for a total of six mentoring meetings. In addition to these mentoring sessions, mentees will participate in a series of offered professional/leadership development workshops as well as monthly peer coaching group meetings focused on networking. The program is a formal commitment with requirements that both mentees and mentors are expected to meet, with the priority on completing all mentoring meetings. For mentors, we provide formal acknowledgment of their university service to bring visibility to what is often viewed as "invisible work." Mentees can expect to spend up to 23 hours for this program over the course of six months, while the minimum time requirement is 8 hours for mentors. ASU policies support release time for professional development for mentoring (Arizona State University, 1996).

Operational Definition of Mentoring

The CSW utilizes a traditional one-on-one hierarchical model for mentoring, whereby an experienced staff mentor provides support and guidance for a staff mentee with a focus on career development and progression (Kram, 1988). Although it is a traditional model, many university staff members have had limited exposure to formal mentoring, which leads to greatly varying perceptions of exactly what mentoring is. A review of program participants indicated that over 53% had never had a formal mentoring relationship, and 43% came into the program with only having had some informal mentoring (2021 analysis). Some staff members perceive mentoring as remedial in nature—that mentoring is meant to correct deficiencies within their job performance, while others consider mentoring as friendship building, personal growth coaching, or a way to learn specific technical skills. The challenge therein lies in helping mentees understand what mentoring is and its boundaries within the context of this particular program.

Mentoring in the CSW program is driven by the needs of the mentees within the construction of a safe space. While the specifics of mentoring conversations are private,[1] the majority of mentoring pairs discuss identifying ASU-specific career paths, developing short-term goals, promoting skills, career advancement, and addressing challenges with career progression (CSW, 2022).

Mentoring Inputs and Resources

Curriculum Development and Resources

For many mentees, it can be overwhelming to engage in mentoring, especially if they have never been mentored before. The same can be true for new mentors. To alleviate this anxiety and support mentoring success, we provide mentoring guides with conversation starters as well as a career/leadership-focused book to utilize in discussions. The design of the CSW program also includes a variety of resources to directly support the professional development of the mentee. We start with a Gallup Strengths Finder 2.0 assessment (Rath, 2007), followed by a development session with a certified Gallup Strengths coach. The CSW then offers 12 different workshop sessions divided into three focus areas: identifying and promoting skills and strengths, ASU-specific career development strategies, and leadership development. Our leadership segment feature sessions led by VP-level leaders, providing a unique opportunity for mentees to consider their own leadership potential at ASU. To enhance the peer cohort experience, we introduced peer coaching groups to our program model, increasing networking opportunities for mentees who share similar career interests.

Funding and Sustainability

The CSW provides the staff mentoring program completely free of charge to the program participant and their unit, with the CSW absorbing all financial costs and providing essential staff support from its one-person office to manage the program. Time allocation toward the program represents roughly 25% of the CSW's robust portfolio of programs. Non-monetary university-wide support is also important to keeping the program free and sustainable. Human Resources provides workshop trainers and a mentoring coach to support the program, while, lastly and most importantly, the mentors in the

program donate their time for service to the program.

Mentoring Activities

Recruitment Activities

With the large number of staff at ASU and the limited number of mentee spaces in this robust program, placement in the CSW program has become increasingly competitive each cohort cycle. It is for this reason that the recruitment, application, and selection process for mentee candidates is essential.

The recruitment cycle for the program begins with widely publicized information sessions that are hosted for prospective mentees and mentors. These sessions provide an overview of program design and defines mentoring within the context of the program. It is imperative that the information sessions help prospective mentees and mentors align their expectations with what the mentoring experience will be and what the program can provide. Staff members interested in becoming a mentee or mentor complete an application featuring short essay questions, interest areas, and, in the case of mentors, expertise areas. The essay questions provide an understanding of a staff member's career trajectory, goals, and expectations for mentoring. Their marked interest areas or expertise areas help with the matching process. The application does not ask for any identifying information across the protected classes, such as sex, gender, or age.

Selection Activities

Mentee applications are evaluated by a committee on several metrics that include the perceived benefit of the program for the applicant. For mentors, the application review process assesses their suitability for mentoring. If a mentor is accepted, they become part of the CSW mentor pool and may be potentially matched with a mentee. Mentors stay on the program roster and are invited on an annual basis to participate in upcoming program cohorts and potentially be matched with a mentee. Evaluations of the mentor provided by the mentee are closely reviewed to identify areas where the CSW can support the mentor's growth or in the very rare case where it might be preferred to limit the mentor's participation in the program with no further matching.

Matching Activities

Once the mentees and mentors for a program cycle are identified, the matching process begins. This is the most time-consuming and challenging part of hosting a mentoring program. While there are computerized matching programs for offer by educational corporations, the CSW developed a multistage matching process that is done manually rather than relying solely on algorithms.

The foundation of the matching starts with the interest areas of the mentees examined alongside the expertise areas noted by mentors participating in that cohort cycle. The interest grid helps to identify those mentors that are experienced in many of the areas identified by the mentee, while the mentor's title and position helps to narrow down the match. A review process is conducted to ensure there are no potential conflicts with a mentor match. Our program rules stipulate that a mentee will not

be matched with a mentor that has any supervisory authority over them, is not from the same unit, and is not involved in any work-related collaborations. A final look at the mentee's essay questions help to finalize the mentoring assignment. Although this method is time-consuming, we have a 99.8% matching success rate, with only four out of 330 pairs in the program history requiring a new match (CSW, 2022). Once the match is made, separate notifications are sent to both the mentor and the mentee that include the skills/interest areas that served as a basis for the match.

Training Activities

At the start of the program cycle, we conduct separate orientation training for all mentees and for new mentors that cover a number of important points beyond the program guidelines to focus on best practices for successful mentoring. With only six mentoring meetings, it is important that those sessions are focused and effective, and that both the mentor and mentee know what to expect. A key part of this is not only mentoring training for mentors, but also providing training to mentees on how to be mentored. For new mentors, we encourage them to draw on their communication skills to support their mentoring and also provide strategies for when difficult conversations may come up. A mentoring program coach remains available throughout the program to provide support for a mentor or even a mentee to help make the mentoring relationship more effective.

Strategies to Monitor and Support Relationships

Each cycle of the CSW program is developed and managed by the CSW program director. As with any formalized program, organization and frequent communication are critical to ensure the program's progress and to support the engagement of participants. In addition to program orientations, the CSW office will check in with mentoring pairs periodically, send out frequent reminders about upcoming activities, and lead/co-lead all development sessions so that there is a constant connection to the program.

Formative and Summative Evaluation

During the program cycle, the CSW conducts periodic program evaluations with a longer assessment at the conclusion of the program for all participants, focused on the impact of the mentoring relationship and satisfaction with the program experience. Mentees also complete an additional evaluation on their specific mentor. Data is closely reviewed, and improvements are made for the next program cycle based on the feedback of our participants.

Mentoring Outcomes and Lessons Learned

Outcomes of Program

The investment by ASU in this staff mentoring program is returned in the outcomes for our mentee participants. In an analysis of cohorts from 2015 to 2021, on average, 97.7% of mentees indicated that the program inspired them to consider their long-term career at ASU, with 80.4% indicating that they saw themselves staying at the university for the next 5 years.[2] On average, 91% of mentees found the mentoring relationship helpful/very helpful in supporting their career goals and aspirations. Similarly,

on average, 90.1% of mentors across the same program cycles described the mentoring relationship as successful, and 94.7% of mentors indicated that they had a very positive or positive relationship with their mentee. An average of 89% of mentors felt that the program structure and resources fully supported their mentoring (CSW, 2022).

Lessons Learned

Staff mentoring is an incredibly enriching experience, but it is not without its problems or complications. Sometimes the mentee gets overwhelmed by other responsibilities and drops off, and sometimes the mentor has a shift in commitments and is not able to continue mentoring. Sometimes a mentee really does not want to be mentored, and sometimes a mentor is just not good at mentoring. These are all "sometimes" occurrences, but it is important for any program model to anticipate these possibilities, address them, and continue moving forward.

Recommendations for Future Designers and Stake holders of Academic Mentoring Programs

Based on our program, the CSW offers the following suggestions and considerations for educational institutions considering implementing a mentoring program for staff:

- Staff support, effective communication, and strong organization are essential to the management and success of a mentoring program.

- Ensure that participants have a clear understanding of the definition of mentoring in your program and that the expectations align with what your program can actually provide.

- Understand that some mentees may have mentoring needs related to parts of their identity and determine the ways that your program may be able to provide support around these areas.

- Provide formal recognition of mentor service and mentee participation that can be added to annual reviews and personnel files.

When educational institutions invest in their staff and provide mentoring support in similar ways that they do for faculty and students, it creates a culture in which it is important that *everyone* learns, grows, and succeeds.

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[1] The privacy of the mentoring relationship is protected only to exception of conversations that warrant concern for the welfare of the mentor or mentee, safety of others, or conversations where there has been a stated violation of law or ASU policy.

[2] Average from summer 2020 and 2021 cohorts. Question data not available for previous cohorts.

PART IV

NETWORK MENTORING PROGRAMS

When staff, faculty, and students reflect on their experiences at a university, most recognize that they have benefited from more than one mentor-type relationship. Within this handbook, we naturally think of a mentor as someone in a university. However, people often have mentors outside a university, such as alumni or practicum supervisors. Students, faculty, and staff can also benefit from mentoring relations with mentors inside and outside their respective departments or college.

As we further reflect, we also appreciate the developmental timing of mentoring. A new graduate student needs different mentoring than a new undergraduate student. A new staff member may want a mentor to help orient them regarding university operations, whereas a more seasoned staff member of 10 years may seek mentoring for leadership opportunities.

In Part IV of this concluding section of the handbook, we encourage practitioners, researchers, and university leaders to take a more holistic view of mentorship. This holistic view of mentoring means that mentees may have multiple mentors, friends, sponsors, allies, supervisors, employees, and others who provide developmental assistance at a given time.

To encourage those in academia to consider these developmentally appropriate multiple models, we conclude with Chanland's Chapter 27 and the corresponding case study by Paquette, Murphy, and Duffy in Chapter 28. In Chapter 27, Chanland draws upon evidence-based and theoretical literature on networks and formal programs to discuss four networked mentoring approaches. These four approaches require varying degrees of university resources. Next, Chanland explores the program characteristics of these networked approaches that predict positive program and relationship outcomes. When considering these networked approaches, the design components of the program must align with participant learning outcomes.

The case study for Chapter 28, authored by Paquette, Murphy, and Duffy, highlights three mentoring programs at Babson College's Center for Women's Entrepreneurial Leadership Mentoring Programs. The authors detail evidence-based effective practices in delivering these developmentally appropriate programs to match the mentees' needs. Developers in these three programs include upper-class undergraduate students, early-career professionals, and seasoned professionals. In each program, students are encouraged to develop a network of relationships to support their journey at Babson College.

NETWORKED MENTORING PROGRAMS IN ACADEMIA

Dawn E. Chanland

Abstract

This chapter proposes the value of informal and formalized university networked mentoring programs for the benefit of students, faculty, and staff. As research on networked approaches has proliferated, more university programs that transcend the traditional focus on one-on-one mentoring dyads are also on the rise. Drawing upon the evidence-based and theoretical literatures on networks and formal programs, I discuss four networked approaches that have shown promise to maximize mentoring's effectiveness in universities. The approaches involve varying degrees of university resource investment. We consider formal program characteristics that predict positive program and relational effectiveness in undertaking networked approaches. In addition, we integrate the literature on learning and career competencies to underscore the importance of program design that begins with consideration of participant learning outcomes. The chapter's central aim is to provide university leaders with knowledge about how to utilize a networked approach to heighten personal learning, career clarity, and educational satisfaction among its primary stakeholders.

In her seminal book, *Mentoring at Work: Developmental Relationships in Organizational Life*, which ushered mentoring into the contemporary literature, Kram (1985) noted that despite the significant value that can come from a traditional, singular mentoring relationship, most people likely derive their relational learning from "constellations" of people. Her book aligns with the rise of formal mentoring programs in practice, which were in part a means to address Title IX legislation aimed at removing barriers to equal participation in the workplace. Most formal programs' central characteristic was the pairing of a more seasoned professional with a junior one for the purpose of supporting the latter's growth and development. Kram's recognition of the reality of people drawing support from networks was largely ignored in organizations for the next 20 years in favor of formalized one-on-one dyads.

Over time, with Higgins and Kram's 2001 research applying a social network perspective to mentoring and the concomitant organizational shifts (e.g., flatter, team-based structures and increased organizational demography) that brought the notion of constellations to the foreground, networks began to gain traction in practice. The past 20 years have seen substantive headway in research on networked approaches (e.g., multiple mentors, co-mentoring, developmental networks, and others) and some use of them in various settings, including business, medicine, and education. In spite of progress in their usage and empirical support in favor of them, however, formal university programs involving singular dyadic relationship pairing still represent the dominant paradigm. We assert here that while networked approaches are not the norm, they represent great promise for academia, as they can overcome mentoring issues related to an over-reliance on one omniscient, omnipotent mentor, usually a faculty member, as a false reality. Academic institutions have not yet fully leveraged network approaches, likely because of a lack of awareness of them as alternatives and little knowledge on how to fully design and execute them.

This chapter discusses four networked approaches that can be implemented effectively in higher education with undergraduate, graduate, and doctoral students, faculty, and staff. Each has merits and requires different degrees of university investment, which are discussed for administrators and others who would design them. Best practices in formal mentoring design are integrated into the discussion for the purpose of considering how to successfully implement the four alternatives in practice. Moreover, the literature on learning and career competencies is instructive in helping program designers start with what learning outcomes are desired as the first step in creating formal programs. The next section offers a brief overview of key characteristics of networked programs and the importance of creating them with desirable learning outcomes in mind. In the section that follows, the four primary approaches are discussed in detail.

Networked Approaches in Academia and Their Value

Networked approaches align with Kram's notion of career constellations in that people most likely draw support, and need to, from multiple individuals in their lives as sources of growth and development. Traditional approaches implicitly rely upon the idea that one person—a peer, a faculty member—has the time, know-how, and willingness to meet all of another person's needs. In exploring that possibility, consider the life of a typical faculty member, with its foci on substantive teaching, research, and service requirements. Faculty members have increasingly been required to engage in additional requirements, such as engaging in public relations activities, collaborating with businesses, student recruiting, alongside their central responsibilities (de Janasz & Sullivan, 2004). The ability

to juggle all of the faculty career demands is challenging and demanding. Furthermore, universities often fail to create incentives for quality mentorship, including the fact that promotional criteria rarely favor mentorship (Tuma et al., 2021). These factors together disallow most faculty mentors from being able to dedicate sufficient time to meet all of their doctoral, undergraduate, and graduate students' growth and development needs. Higgins and Kram's (2001) reconceptualization of mentoring as a developmental network aligns well with academic programs; rather than relying on faculty members to nurture significant single dyadic relationships with each of their students, the university can leverage mentoring by networked structural approaches to support students.

Moreover, today's reality of professorial careers means that academics have stronger learning needs within their fields relative to previous decades. Research has called for professors' careers to be viewed as better served through a portfolio of mentors who grow professors' competencies over time as they transition from their doctoral programs through full professorship (de Janasz & Sullivan, 2004). In addition, a networked model may better serve women and minorities in particular because of its ability to bring greater inclusion and access to diverse role models (Girves et al., 2005). Lastly, university staff, too, can benefit from networked approaches, as they have similar growth needs and may experience limitations in what their supervisors can provide from a time and support perspective.

Networked approaches have been described over time as encompassing multiple mentors (e.g., Baugh & Scandura, 1999), group mentoring arrangements (Huizing, 2012), and developmental networks (see Dobrow et al., 2012, for a review). Multiple mentoring conceptualizations acknowledge that a focal person likely needs assistance from more than one person to support their needs, with those individuals in both work and life domains (e.g., de Janasz & Sullivan, 2004). Multiple mentoring does not assert specific arrangements for formalized programs, just that individuals need multiple mentors for growth. Group mentoring is a broad term representing a number of arrangements involving three or more people engaged in simultaneous, collaborative learning (Huizing, 2012). One- to-many mentoring (OTMM), many-to-many mentoring (MTMM), and peer group mentoring (PGM) have been articulated as among them (Huizing, 2012). OTMM, for example, could involve a faculty member who guides four to six students simultaneously during real-time meetings as a guide and ally to their growth. Students learn alongside each other and their faculty guide. PGM could occur, for example, in the case of new faculty members who informally form a group to share advice, discuss tenure and promotion expectations at their respective universities, establish plans to meet those requirements, and meet each other's psychosocial needs. Lastly, developmental networks have been conceived of as egocentric networks in which the focal individual (e.g., a staff or faculty member, an undergraduate student) holds simultaneous relationships with "developers" from different social spheres (e.g., community, work, family, graduate school) who provide varied amounts of psychosocial and career-related support. I propose that each of these types of networked approaches, or a hybrid of them, can be undertaken in academic settings successfully. Before articulating each approach in detail, we discuss the preeminent importance of considering program learning-outcome aims prior to choosing a particular structural arrangement.

Personal Learning Aims: Begin With the End in Mind

De Janasz and Sullivan (2004) smartly articulated the need to consider changing academic careers and the associated competencies needed to succeed at various career stages as supporting the need for

multiple mentors. More generally, the notion of career competencies (DeFillippi & Arthur, 1996) and personal learning (Lankau & Scandura, 2002) are instructive to maximizing the effectiveness of networked approaches in academic settings. Career competencies include the notions of *knowing why*, *knowing how*, and *knowing whom* (DeFillippi & Arthur, 1996) and can be used to evaluate the learning needs of faculty, staff, and students. *Knowing why* refers to a person's clarity around motivations, passions, and beliefs, and relates to how a person's identity aligns with tasks, projects, and orientations. *Knowing how* refers to the skills and knowledge a person needs to perform well. *Knowing whom* refers to people who can support someone's learning, access to opportunities and resources, and reputation. Similarly, research shows that mentoring is positively related to personal learning, the latter of which includes relational job learning, referring to understanding the interdependence between a person's job and the jobs of others, and personal skill development referring to acquisition of new skills and abilities (Lankau & Scandura, 2002). Taken together, these two threads of the careers literature underscore that networked mentoring approaches can support the development of needed competencies and learning to perform and adapt well in changing professorial careers and student and staff learning requirements. Applying this work, Table 27.1 shows personal learning needs for faculty, staff, and students.

Research has suggested that clarity around and communication of formal mentoring approach objectives is important for program success (Eby & Lockwood, 2015). Sometimes people in formal programs do not know what to do or discuss because they do not understand the program's purpose. This discussion suggests that networked approaches should be designed and structured to support the participating members' learning needs. For example, a multiple-mentor approach involving new faculty should consider whether the skills of the mentors align well with the new faculty's learning needs around teaching and research and enhanced confidence. Assigning two senior faculty members as mentors who excel in research but not teaching creates misalignment within the approach. In addition to structuring a program according to the audience's needs, a learning-centric approach also underscores the need to overtly codify and communicate those needs at the onset and to all participants so that they can track protégé growth.

Next, I will describe the four approaches in greater detail along with other best practices needed for the approaches to succeed. Table 27.2 shows the four approaches in terms of their primary structure, aims, characteristics, and proposed timeframe and duration.

Approach #1: Multiple Mentors

In de Janasz and Sullivan's (2004) article exhorting the value of multiple mentors in academia to support changing professorial careers, they assert that universities with formal programs could use them as one vehicle to support faculty development as a competitive advantage in the industry. Not only would strong mentoring contribute to greater retention and tenure rates, but also better work-life balance. That logic can extend beyond faculty to suggest that devising a multiple-mentor approach within a university can be a differentiator to attract students, staff, administrators, and faculty. Empirical research supports the idea that academic professionals can benefit from multiple mentors. In one study on assistant and associate professors at two research institutions, those who reported two or more mentors had significantly higher levels of subjective success and research productivity than did those with one or no mentors (van Eck Peluchette & Jeanquart, 2000). Research in the workplace

also supports the value of multiple mentors in that they have been found to be associated with greater job satisfaction, commitment to the organization, and enhanced career expectations, among other positive outcomes (Baugh & Scandura, 1999). These studies suggest the value of multiple mentors for faculty and staff. A study on undergraduate research found that a closed triad, in which an undergraduate was mentored by both a postgraduate and faculty member wherein all three interacted directly, offered uniquely valuable benefits to the undergraduates (Aiken et al., 2016). Interacting with both postgraduates and faculty simultaneously led to high gains in thinking and working like a scientist. Taken together, these and other studies showcase the benefits that can accrue to academic settings that undertake a multiple-mentor approach.

Extending the discussion above, an undergraduate multiple-mentor approach for all undergraduates could become a differentiator to attract students, alleviate the pressure for faculty to meet all of their students' growth needs, and provide students with access to multiple sources of individuals for support. Imagine a university that distinguishes itself in the higher education marketplace on the basis of taking a multiple-mentor approach to support its students. Consider the possibility of two or more mentors, up to a foursome, for a particular student that includes a faculty advisor, career counselor, student support center professional, and business professional mentor that help for the duration of the student's studies. Faculty advisors can play a number of roles in student development beyond the one they play in the classroom. Faculty members can help advise the student on class schedules (and may formally be required to play the role of advisor), discuss burgeoning career interests, ask questions to help the student engage in career exploration, and affirm the student's growth and success in courses. A complement to faculty assistance could be a designated member of the career center who can also support the student protégé in career exploration and networking opportunities, engage students in formalized career self-assessment, and provide access to internships. A designated member of the student services team can engage students with mental health issues, support for disabilities and course problems, and provide options for additional support across campus and outside of it. A business professional—an alumni or someone connected to the university in some capacity—could engage the student in conversations that allow them to learn about leadership and discipline-related challenges and opportunities in practice, and be a sounding board for other matters the student might face as they enter their career. Notably, career center and student support professionals are on campus and available to students. The difference with a networked approach is that they are assigned individual student protégés and identify themselves as part of a networked team that provides a personalized education. In the absence of this explicit approach, students may never reap the benefit of the developmental assistance they can provide.

Investing in a multiple-mentor approach involves time and other resources. It may require a program coordinator or team to support the effort, depending upon the size of the participant pool, training, and other resources required to make it successful. The approach might be implemented university-wide, with all students experiencing a formalized multiple-mentor approach, or at the college or department level. A business college, for example, might opt to enhance faculty engagement from student advisors to student mentors, playing a greater role in students' success and engaging business professionals commensurate with the number of students in each business major to have two mentors per student.

Research on formal mentoring programs underscores the importance of training, input into the

match, and volunteerism in programs (Parise & Forret, 2008). Mentors and protégés should be trained on the expectations associated with their roles (e.g., on what assistance mentors can provide, protégés should be the ones to proactively reach out to initiate contact) and how often to meet. Mentors can be taught coaching skills, such as how to ask probing questions and take a balanced approach to allowing students to solve their own problems with offering suggestions. Protégés can be taught the importance of the types of topics they can raise to mentors, questions to ask for assistance, and follow-up after receiving advice. Importantly, the university/college/department should codify role responsibilities to avoid issues that can occur wherein a protégé receives conflicting information from mentors (Baugh & Scandura, 1999). That possibility is unavoidable and perhaps even desirable for protégé students to have multiple perspectives, but having some sense of mentor roles would provide some degree of clarity for engagement. Moreover, the approach would benefit from mentors and their protégés occasionally meeting together as a "closed triad" (or some other number affiliated with the size of the mentor group) to signal investment and commitment to the proteges' growth (Aiken et al., 2016).

Ideally there should be an opportunity for protégés to request involvement from particular faculty or other possible mentors they are already acquainted with, because input into the match is desirable to support chemistry and liking between the mentor and protégé. In addition, whenever possible, asking for volunteer mentors will ensure greater likelihood that mentors will have the willingness and time to commit to their protégés. Given the demands of faculty careers, providing some type of monetary or other incentive and formally recognizing the efforts of the mentors, potentially through their annual appraisals and other means, will support commitment and motivation as well. Lastly, the group or administrator executing the approach should consider some criteria for matching protégés and mentors. At minimum, for student protégés, consideration should be given to matching them with professionals with experience that aligns with their majors.

A multiple-mentor networked approach has a number of benefits, including the ability to partner complementary mentors who can provide support directly relevant to the protégé. Mentors who volunteer likely have an affinity for and willingness to mentor, naturally creating greater prospects for success. The approach does require substantive investment to locate suitable mentors and match them well with protégés. It also is unlikely to meet all of the protégés' needs, as people have multifaceted, complex, and even sensitive needs, and even skillful mentors can only meet so many of them.

Approach #2: Developmental Networks

A developmental network approach poses a strong opportunity for students, faculty, and staff to proactively shape their own networks to meet their career and learning needs during their careers and academic programming, respectively. Developmental networks are "people who take an active interest in and action to advance a focal person's career" (Higgins & Kram, 2001, p. 268). In academia, that focal person might be a faculty member, student, administrator, or staff member. This approach involves systematically educating the target audience toward shaping a network during the program and beyond it that meets members' needs. Importantly, developers can be seniors; juniors; peers; colleagues outside of a university, including from an occupational-affiliated organization; someone in the community; a spiritual or religious organization; a family member; someone in an alumni group; or someone else. Each of the "social spheres" from which the developers stem represents an opportunity for the focal person (the protégé) to gain diverse perspectives and uniquely needed support. One

developer might provide psychosocial support, while another might provide career support. Some developers might provide a significant ongoing amount of support while others provide relatively little or infrequent support.

Studies on developmental networks show strong support for their value in various settings. High-performing individuals tend to have more extensive, diverse networks with varied and higher levels of support (Cotton et al., 2011). The number of developers a person has is positively associated with job satisfaction, promotions, and retention (e.g., Kirchmeyer, 2005; Higgins & Thomas, 2001). A few studies have directly examined or signaled the positive impact of developmental networks in academic settings. For example, one study explored faculty at different career stages and found that faculty with more sizable advice networks within their overall developmental networks had greater career and job satisfaction (van Emmerik, 2004). In spite of the positive value of larger, more diverse networks, research has shown that developmental networks are not "one size fits all" but rather dependent upon the focal person's needs. Much of finding a "person-network fit" is for the focal person/protégé to understand their unique needs and then consider which individuals, known or unknown, can help provide support to meet those needs.

As an example, a new faculty member has many needs that must be met in order for that member to thrive. (Table 27.2 notes those learning needs.) The faculty member needs to acclimate successfully into the university through learning the ropes, its culture and history, and how to navigate it; strengthen research and teaching skills; meet fellow colleagues and begin to feel accepted as a member of the university; and generally develop confidence as a new academic. A university with a formalized program that educates faculty on the power of proactively shaping developmental networks to meet those needs better equips new faculty for success. For example, a new assistant professor, armed with knowledge about the power of developmental networks, might build relationships with two other newly-minted professors inside or outside the university as peer developers in order to craft strategies to navigate research requirements for tenure and spend time together writing and sharing new teaching pedagogies. The professor could also build a relationship with a senior colleague with long-standing institutional knowledge to better understand the university culture and how to adequately publish to secure tenure. The professor's spouse could serve as a sounding board for work-life balance issues and sensitive situations with other colleagues. The network should align with that new faculty member's unique needs, as well as those common to all new academics.

A developmental network approach in a university could be aimed at students, faculty, staff, or administration. It is a low-cost approach relative to a traditional mentoring program in terms of time and resources needed to administer it (Chandler et al., 2010). An approach that targets undergraduate students could be embedded in a career development course taken by all freshmen or sophomores. As part of the module on networks, students could fill out a developmental network questionnaire such as the one created by Monica Higgins (2004) as an initial assessment of their networks, and then they would be educated on what types of support they can receive during their education and over time. The module should incorporate a thorough discussion on networks, including their structure—diversity and strength of tie—positive outcomes associated with them, undergraduate learning needs, and numerous examples of developers inside (e.g., a staff member) and outside the university (e.g., a family friend in a career of inspiration to the student) and the support they could provide. Students could be encouraged or required to engage in "mentoring episodes," one-time interactions with existing or could-be

developers for support (Fletcher & Ragins, 2007). For example, students could be asked to converse in detail with a parent about potential career options and how they could align with their strengths and interests they have shown over time. They might reach out to a successful professional in their family's social network about how that person views leadership and has taken action to be successful. Ideally, this approach would include a broad-reaching education of networks among the faculty and staff to encourage ongoing conversations during students' entire studies about their networks, mentoring episodes, and the learning that is occurring.

As noted, a developmental network approach is amenable to all internal university stakeholders. During new faculty orientation, new faculty could similarly fill out a network questionnaire to assess the relative strength of their networks and then discuss how to create informal alliances broadly within the university and outside of it. Also, during the orientation, new faculty could mutually engage each other in mentoring episodes about their career aspirations and ongoing questions about research and teaching. A new faculty orientation program that occurs over a duration of 3 months or more could embed a formal component around networks that involves having faculty share their successful mentoring episodes together over time as a means to encourage relational learning.

Formalized university approaches that leverage developmental networks are few at this point. One exception occurred in a Midwest law school. In recognizing the unique pressures of a legal career, the school partnered with the area's bar association to simultaneously explore formal mentoring dyadic pairings between a law student, a practicing attorney, and a network approach requiring law students to gain support from a network of attorneys through mentoring episodes (Johnson et al., 2013). Law students were trained on developmental networks and mentoring episodes as a means to either gain a number of one-time relational support interactions or nurture ongoing relationships that would evolve into developmental ones.

The study found that law students in the mentoring episode and network group were more likely than the matched pairs to report having discussions with someone with content expertise in an area of interest because they reached out to people with experience they found interesting. In addition, the participants reported that the strengths of their program included meeting a variety of their needs and topical discussions of interest, improvement in their ability to reach out to attorneys and non-attorneys to listen and learn, the variety of contacts they made, and the flexibility of being able to continue to nurture a relationship or no longer pursue it. One can envision these benefits playing out with all academic audiences in people being able to pursue their own developmental path with a variety of individuals inside and outside a university.

The challenges and weaknesses of a developmental network approach relative to matched mentoring were found in the law school study. Participants reported less motivation to engage relative to matched participants because of introversion or shyness. They experienced less trust because most of the network reach-outs were with people they did not know, prohibiting more sensitive conversations. In addition, some participants discussed not knowing whom to reach out to. These challenges can arguably be overcome with a strong training program for participants with numerous examples of types of developers and possible support. Should a program involve undergraduate or graduate students, creating support structures with their primary advisor or career counselors on campus can assist students who are struggling with whom to contact and what to ask.

Approach #3: Group (Co-)Mentoring

Group mentoring provides universities with another relatively low investment opportunity to support all of its major participant groups. It could be formalized by the university for various groups, as would be the case for recently tenured associate professors in relation to support as they move to full professor, or encouraged as an informal opportunity for groups to support each other. As noted earlier, group mentoring can take different structural shapes, such as peer group mentoring (PGM), one-to-many mentoring (OTMM), and many-to-many mentoring (MTMM). Someone aspiring to create a group mentoring program could search using a number of related terms, such as collaborating mentoring, mentoring circles, mentoring communities, and team mentoring (Huizing, 2012), to better understand how it has been used in practice.

Unlike developmental network approaches, which are underutilized in higher education, group mentoring has been leveraged to a greater degree as a learning vehicle. Group mentoring may offer unique advantages that occur when multiple peers interact simultaneously for learning, such as inclusiveness, widened personal networks, a safe place to discuss challenges, team spirit and skill development, friendship, and shared knowledge among them (Limbert, 1995). They do this through the provision of psychosocial and career-related support that peers are uniquely situated to provide each other—such as job networking, affirmation, understanding a school's political climate, and publishing/research support—and teaching pedagogical strategizing among them.

PGM, which involves three or more people simultaneously mentoring each other, has been examined and used in a number of academic settings with different participant groups, including but not limited to female nursing students, teachers and faculty, and graduate library students (Glass & Walter, 2000; Level & Mach, 2005). One successful example of PGM in academia involves a group of four doctoral students and a professor, wherein the group predominantly operated as a peer group with some professorial input at times (Hadjioannou et al., 2007). The group found positive benefits of their self-regulated engagement around a number of issues pertaining to being a doctoral student, participating in the academic community and academic discourse, and enhanced writing capability.

MTMM involves multiple protégés in groups being mentored concurrently by more than one mentor. As an example of the effectiveness of MTMM, Allen et al. (1997) examined 68 first-time MBA students allocated in groups of five with two to three second-year MBA students from the same institution as mentors for a 10-week period. They found that student personal and professional development hinged on satisfaction within the mentoring relationships and the quality of their interactions (not the quantity of time together).

Group mentoring can bring great value when people with similar careers within an organization are brought together to share stories and challenges and converse about strategies to succeed, all within a psychologically safe environment. Given the importance of an environment where people can be open and vulnerable, the group should ideally discuss norms of engagement and a "whatever is said here, stays here" group climate. Should people worry about confidentiality, they are less inclined to participate fully and reap the benefits of group mentoring. In a formalized setting, a facilitator or the self-structured group should identify particular objectives and topics of discussion relevant to its members' growth. In that respect, discussions can be tailored to the group's aspirations, heightening

motivation to attend and participate. Members should be sure to give proper airtime to everyone and maybe at times include an agenda that participants can give input to. Finally, the group should establish each time how frequently it will meet and for how long so that its members can attend.

Group mentoring is a flexible mode of relational support due to its different forms. While a peer group for staff might be most sensible, student group mentoring may require a facilitator such as a professor or professional staff member to ensure a meaningful discussion. It requires some degree of accountability on the part of members to support each other. It also requires group members to consciously engage in high-quality connection behaviors, such as vulnerability and openness, and ask questions to allow each member to reflect on their challenges and opportunities (Ragins, 2016). One limitation of peer group mentoring is that because members are generally of equal status and knowledge, the group may at times lack expert input and suggestions needed to help propel their growth.

Approach #4: Hybrid Approach

While any one of the three preceding approaches can provide strong value to its participants, a university/department/college should evaluate its target audience's needs and whether a given approach can meet all of them. Combining approaches in a complementary fashion may allow the greatest growth for participants. For example, three new faculty might each be assigned two senior faculty mentors to help them learn the university and college cultures, to navigate tenure expectations, to strategize how to meet research requirements, and to act in a group mentoring capacity with each other for friendship, affirmation, peer feedback on research manuscripts, and sharing teaching strategies.

A developmental network approach as a complement to any one of the other three approaches offers the unique advantage of empowering protégé groups to create their own mentoring opportunities inside and outside the university based on their individualized needs. In this way, protégé groups do not need to lean excessively on more senior faculty, who may be juggling numerous other responsibilities. If protégés are taught to emphasize numerous mentoring episodes in which they invite single faculty members to coffee or lunch to ask them growth-related questions, protégé groups may find the approach refreshing and less time-consuming than if they were formally paired with mentors.

Other Best Practices to Shape The University's Approach

Academic careers are arguably becoming increasingly complex and varied, which can be exciting for faculty but also quite stressful. The higher education landscape is becoming more competitive, pushing universities to differentiate in ways that impact faculty's jobs. No longer just the demanding trifecta of teaching, research, and service, faculty are asked to engage in the community, public relations, recruiting, and other activities to support enrollment and retention. Technological shifts that support online learning have required professors to gain competencies in virtual and asynchronous teaching. Faculty and doctoral student learning demands have heightened, which presents an opportunity for networked learning to support them. The heightened competition presents an opportunity for universities to leverage mentoring networked approaches to attract students, staff, and faculty, all of whom can benefit from an environment of employee development. A university could support broad-

based networked approaches that impact undergraduates and graduates, as well as faculty and staff, by dedicating marketing efforts to publicize networked mentoring as a differentiator. Students who come on campus could be introduced to prospective mentors, and both campus tours and the matriculation orientation efforts could endorse it as part of the overall education.

Crucially, universities need to have a formalized and concerted overall effort toward any one of these approaches. Incentives for mentoring through overtly incorporating mentoring into tenure requirements and yearly appraisals would be a crucial step, as faculty are often educated to eschew any activities that go beyond teaching, research, and basic service early on. Research has shown that organizational support for mentoring (Eby et al., 2006) matters to the extent that people provide it. If university senior leadership teams and college deans publicly recognize and speak about the importance of mentoring, then it is more apt to become a value that faculty and staff act upon. Grants for mentorship, which enable hiring a program director and potentially offer faculty stipends, align with mentoring emerging across a university. Educating senior leadership on its positive values and the different networked approaches is one step in facilitating a mentoring culture. Creating a high-facilitation pilot program and collecting pre- and post-measures for it can provide some early support for a larger-scale intervention, particularly in resource-constrained environments. Universities tend to have cooperative climates and, as they move toward more significant efforts for diversity, equity, and inclusion, are well-positioned to lead networked approach efforts relative to the business sector. It is important for universities to move toward equitable access and inclusion, hiring diverse faculty and staff so that women, students of color, and minorities have demographic role models in formal networked programs and in their informal efforts to reach out for relational learning.

Discussion and Future Research

As of yet, universities have not harnessed the full power of networked mentoring approaches for their major stakeholders. It may be that universities are unaware of the networked literature, given that most popular press discussions and formal corporate mentoring programs emphasize one mentoring relationship. However, as the field of mentoring has been reconceived over time as one wherein a protégé gains developmental support from a variety of sources, networked approaches are likely to gain traction over time. A university, college, or department leader has plenty of empirical support available for the broader value of mentoring and the positive benefits of strong developmental networks to make the business case for investment in these alternative approaches. As has been argued, universities can utilize networked approaches as differentiators for hiring and retaining faculty and staff and as attractors to students who aspire to an individualized education. When programs are formalized, it is important for program directors or others charged with developing them to take a learning outcome-focused approach to provide a honed opportunity for participants. In environments whose mission is centrally to enhance and inspire learning, maximizing relational learning through networked mentoring should be part of the academic experience.

Fully capitalizing on networked mentoring approaches will require some degree of institutional change on the part of universities—either incremental or more transformational, depending upon the scope and scale of networked implementation. For example, embedding a module on mentoring networks into a freshman course requires less change than would seeking institutional differentiation based on mentoring at the university level. The latter could involve hiring multiple program directors

for different student groups, marketing and public relations campaigns to raise awareness with the public and with prospective students, education at the senior leadership level on an institutional shift toward relational learning, recruitment of business leaders as developers, and other investments. Universities that undertake this more significant shift need to create a concerted change plan, engage all impacted stakeholders to gain input and communicate to them early and often, and create at the onset a business case for mentoring as an investment for differentiation. It is advisable to leverage institutional change models and frameworks such as Kotter's eight-stage model (2012) to help those who lead the effort to be conscientious about executing the effort. Two-thirds of change efforts fail (Kotter, 2012). Leaders who realize this and the barriers that lead to change can be more proactive to create effective programs and institutionalize mentoring across their universities. For example, knowing that a sense of urgency must be created at the onset of the change wherein most senior university leaders believe that implementing networked approaches is more advantageous than doing nothing, mentoring network leaders can begin their efforts by targeting senior leaders who allocate resources to make the business case for mentoring as a differentiator.

From a research perspective, developmental network research in academic settings remains relatively rare when compared to business settings, which has shown strong support for their value. Multiple-mentoring research has similarly received somewhat limited attention. Group mentoring has received greater attention and is still in the formative stages as mostly case studies, interviews, journal reflection analysis, and focus group transcripts, as qualitative approaches are the dominant method of scrutiny. This makes sense as theory is being generated. The field, however, is ripe for more larger-scale survey studies and longitudinal mixed methods, which can move the field toward a more robust understanding of causality and a nomological network of relevant variables.

Table 27.1

"Beginning With the End In Mind": Network Approach Learning Aims

Potential approach learning aims	Personal learning and competency development aims
New faculty	- Socialization into university culture, history, campus logistics - Support meeting new colleagues - Skill development in teaching and research - Enhanced confidence in navigating an academic career - Clarity around research projects, services, teaching pedagogies that resonate with one's identity (knowing why)
Assistant and associate faculty	- Further skill development in teaching and research - Skill development in non-research areas such as service and administration - Navigating tenure-related progress - Managing difficult conversations with peers and senior colleagues - Updated knowledge of new pedagogies and technologies - Development of skills such as consulting and community-interfacing engagement - Clarity around choices that resonate with identity (knowing why)
Doctoral students	- Increased knowledge of scientific methods and discipline-based knowledge - Connectedness to other students and faculty - Knowledge regarding academic and nonacademic career paths available to those with doctoral degrees - Ability to publish in peer-reviewed journals, books, and popular press outlets - Ability to teach
Undergraduate students	- Knowledge about major-related career paths - General career exploration - Enhanced professional competence and identity - Enhanced self-esteem - Connectedness to peers, faculty, and staff - Identification with college life and the institution - Strengthened general education subject and major-related knowledge
Staff	- Socialization into university culture, history, campus logistics - Support meeting new colleagues - Growing job-related competencies needed to excel - Supporting and representing the department with interdependent ones

Table 27.2

Four Networked Approaches Amenable to Academic Settings

Approach	Multiple mentors	Developmental	Group mentoring	Hybrid
Structure	Protégé assigned more than one mentor	Protégé educated to shape developmental network to suit growth needs	Groups of relative peers who meet to assist each other	Combination of developmental networks and either multiple mentors or group mentoring
Aim	Enhance protégé growth and learning through two mentors with complementary perspectives and capabilities	Empower protégé to meet growth needs autonomously	Provide peer learning within an egalitarian group of equals	Boost protégé learning through multiple methods, one aimed at self-empowerment and the other through provision of relational support
Characteristics	More learned mentors and junior protégé	Protégé shaped "group of people who take an active interest in and action to shape protégé's growth."	Protégés learn through thoughtful discussions about common challenges and opportunities	Protégé has support from assigned more learned mentors and is encouraged to proactively shape a network that meets growth needs
Best timeframe for onset	Matriculation or hire	Matriculation or hire or at a designated point (e.g., a class)	Matriculation, hire, or as opportunities arise	Matriculation or hire or at a designated point (e.g., a class)
Duration	Between 3 months and 2 years	Throughout education and beyond	Three months to several years	Throughout education and beyond

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NETWORKED MENTORING PROGRAMS: TARGETED DEVELOPMENTAL RELATIONSHIPS AND BUILDING A BROADER COMMUNITY

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Abstract

We introduce a targeted approach to mentoring programs that considers students' developmental stage and fosters an inclusive mentoring community. Using the case study of Babson College's Center for Women's Entrepreneurial Leadership Mentoring Programs, this chapter will detail evidence-based effective practice in delivering high-quality mentoring across distinctive student populations as well as connecting students and mentor volunteers to one another to cultivate a mentoring community. We highlight three mentoring programs: the Undergraduate Near Peer, Undergraduate Professional, and Graduate mentor programs. Each program is designed to match student mentees with developmentally appropriate mentors who provide support tailored to their needs. The Undergraduate Near Peer Mentoring Program pairs first-year students with third or fourth students for adjustment to college and integration with the broader community of diverse leaders. The Undergraduate Professional Mentoring Program pairs junior and senior students with early-career professionals (3–15 years of work experience) for vocational exploration and transition to work opportunities and challenges. The Graduate Mentoring Program pairs graduate students with seasoned professionals (15+ years of executive experience) for more advanced vocational exploration and sophisticated career transition strategies for diverse leaders. Programs are designed to incorporate industry best practices, including participant input for matching, required orientation, mentorship agreements, goal setting, and resources. Across all programs, students and mentors are encouraged to connect with one another through formal program opportunities and to develop a network of relationships to support their journey at Babson College and beyond.

Mentoring Context and Program Development

The mentoring programs at Babson College's Center for Women's Entrepreneurial Leadership (CWEL) facilitate meaningful developmental relationships that support students in advancing their personal and professional goals. The program's focus on women was developed to offset the structural and perceptual barriers for women in networks (Chanland & Murphy, 2018) and align with the mission of the CWEL and the institution.

Babson College is a global leader in entrepreneurship education, with more than 2,600 undergraduate and nearly 1,000 graduate students representing more than 80 countries. The Center for Women's Entrepreneurial Leadership, founded in 2000, was the first center ever focused on women entrepreneurial leaders at a business school. The mission of the CWEL is to close the gender gap in business by advancing gender equity as a growth strategy for individuals, organizations, and society as a whole while educating and empowering students to reach their full potential as inclusive entrepreneurial leaders.

Underpinned by Babson's leading research on mentoring (Murphy & Kram, 2014) and entrepreneurial leadership development (Greenberg et al., 2011), the CWEL Mentor Program was introduced in the founding year of the center. Originally introduced as a faculty service, the program has evolved and grown over time. Now, with a dedicated team overseeing the program and funding provided through the CWEL student programs operational budget with annual donor support, CWEL offers three dyadic mentorship programs delivered at critical points in our students' tenure at Babson, serving enrolled undergraduate and graduate students of all gender identities.

Purpose and Objectives of all Programs

The core learning objectives of the programs are to expand and diversify students' professional networks while applying an individualized approach to develop their own career-readiness skills. Through the practice of professional communication, relationship building, and goal-setting, students are able to increase their professional, academic, and social confidence with perspective and inspiration from relatable, professional role models. They learn to differentiate the roles of mentors, sponsors, coaches, and peer groups and to analyze the structure and context of their current networks and how it impacts their own personal and professional development (Murphy et al., 2017).

Organizational Support for Mentoring Programs and Infrastructure

Program operations and delivery is led by a dedicated program director within the Center for Women's Entrepreneurial Leadership, in coordination with student support staff (both volunteer and part-time work-study employment), staff, faculty, and campus partners. Student employees and volunteers provide valued program support in administrative tasks, student outreach and promotion, the matching process, peer advising, and program evaluation. The CWEL executive director and faculty advisors provide critical expertise and advising to the program staff throughout the design, development, and delivery phases of the program. This includes value-add content development and speaking engagements aimed to enhance both event experiences and resource materials provided to participants. Additional marketing, recruitment, and promotional support is provided by the CWEL

team and through valued campus partnerships, including College Advancement and Centers for Career Development.

Operational Definition

At the Center for Women's Entrepreneurial Leadership, we adopted Higgins and Kram's (2001) definition of mentors as part of students' developmental network, which is "the set of people a protege identifies as taking an active interest in and action to advance their career." This set of people includes mentors, coaches, sponsors, and peers, who all play a role in our students' personal and professional development (Murphy & Kram, 2014). We expect that as a mentor, our volunteers will take a holistic approach, focusing on a broad range of issues, and will offer many types of support, including both psychosocial and career-related, to help the protégé succeed (Dobrow et al., 2012; Kram, 1985). Our mentors are advised to support, encourage, and train students to manage their own learning. They are reminded that their job is not to have all the answers but instead to care, ask good questions, and support the protégé in finding their own solutions.

Theoretical Framework

The CWEL network of mentoring programs is conceptualized based on the literature on positive organizational psychology, specifically that on high-quality connections (Dutton & Heaphy, 2003), and the robust mentoring and developmental network literature (Dobrow et al., 2012; Higgins & Kram, 2001; Kram, 1985), which build on literature in the areas of careers (Sullivan & Baruch, 2009; Hall, 2002) and adult development (Kegan, 1982). These frameworks guided both the structure and content of all aspects of our work, particularly in our expectations of participants and their engagement in each stage of relationship development.

Typology of Programs

Current program offerings include the Undergraduate Near-Peer, Undergraduate Professional, and Graduate mentor programs. Each program is designed to match student mentees with developmentally appropriate mentors who provide support tailored to their needs. The Undergraduate Near-Peer Mentoring Program pairs first-year students with third or fourth year students for adjustment to college and integration with the broader community of diverse leaders. The Undergraduate Professional Mentoring Program pairs junior and senior students with early-career professionals (3–15 years of work experience) in a traditional, hierarchical mentoring relationship for vocational exploration and transition to work opportunities and challenges. The Graduate Mentoring Program is also in the traditional model, pairing graduate students with seasoned professionals (15+ years of executive experience) for more advanced vocational exploration and sophisticated career transition strategies for diverse leaders. Each program runs for 12 weeks and engages 30–60 mentor/protégé pairings within each cohort.

Mentoring Activities

The three programs are each structured in the same format and include key elements that contribute to success according to evidence-based research and practice, including training, networking, support

resources, and a compatibility-based matching process (Allen et al., 2009; Ragins, 2012).

Recruitment Activities

Mentors are recruited from the Babson College network of alumni, parents, and friends. They are women who are committed to making a difference in the lives of the next generation of entrepreneurial leaders. They come from a variety of backgrounds and industries, live either locally or abroad, and have their own unique combination of expertise and networks to share.

Individual outreach leveraging staff, faculty, and College Advancement contacts is combined with email, social media campaigns, and word-of-mouth efforts that target alumni, parents, and friends. Direct enrollment periods for mentors begin 4–6 weeks prior to the start of each program; however, recruitment continues throughout the year as a running volunteer interest list built through direct CWEL networking efforts. Salesforce CRM is utilized to track volunteer interest throughout the year as well as manage the enrollment process and historical data. Mentors and protégés are also recorded as pairs in Salesforce to document the relationship.

Student enrollment occurs in the same time period, 4–6 weeks prior to the start of the program. Students are targeted through email, social media, flyers, on-campus tabling, word-of-mouth, peer outreach, and scholarship communities. As a core and consistent offering of the Center for Women's Entrepreneurial Leadership, the mentorship programs are promoted throughout the year at student orientations and admissions events, allowing students to plan ahead for their participation.

Training Activities

The 12-week program begins with separate 1-hour orientation sessions required for both the mentors and the mentees. In these sessions, participants review goals, expectations, and best practices for the mentoring relationship (Allen et al., 2009; Murrell & Blake-Beard, 2017; Ragins, 2016). The separate sessions for mentors and mentees allow for introductions among the cohort and opportunities to encourage a network of peer support at the start of the program. Students are required to attend prior to committing to the program so they may understand expectations before enrolling.

To enroll, both mentors and mentees complete a questionnaire to share their bio, program goals, LinkedIn profile, life experiences, meeting preferences, and qualities they are looking for in a mentee/mentor. This information is compiled into a participant profile book, which is shared with both students and mentors prior to the kickoff event.

All participants are given access to a Canvas (learning management system) site where various resources, helpful articles, discussions, program guides, and calendars are shared to support them throughout the process. Key guides and materials include but are not limited to an initial conversion guide, a mentorship agreement, goal setting worksheet, and an essential guide to coaching (Murphy & Kram, 2014). In addition to the Canvas platform, participants engage with current and past mentors and mentees via a Babson College CWEL Mentor Network Linkedin group. This group provides an opportunity for participants past and present to connect and share news and resources. This also serves as a channel for stewardship, recruitment, and promotion of additional CWEL and Babson programs.

Matching Activities

The program officially kicks off by bringing all participants together for a reception and speed-networking session. Participants have the opportunity to casually network over a meal and then take part in a structured speed-networking session. Each student has the opportunity to meet each mentor for 3-to-5-minute introductions, then rotates to the next mentor. *Note: This program has also been delivered successfully as a virtual session.*

At the conclusion of the speed-networking session and after each participant reviews the profile book, both mentors and students submit a matching sheet where they list five preferred matches and opt to share up to five mentors/students that were not a match. Participants are encouraged to look beyond strictly industry alignment and select their preferences based on compatibility. Post-event, CWEL staff reviews the match preference submissions and manually determines the pairings. In the case where a match is not made, staff honor student preferences over the mentor's or utilize data from the profiles provided to make the best estimate. The pairs are then introduced to each other via email introductions to coordinate their one-to-one mentoring sessions.

Strategies to Monitor and Support Relationships

Pairs are advised to schedule at least four virtual or in-person meetings in a cadence of once every other week for the duration of the semester and to determine the schedule and format during their first session. Some pairs opt for variations of that schedule. Students are required to submit their mentorship agreement (see Appendix) and a goal that they set with their mentor for the program after their first session.

As an additional resource for our mentors, we offer the opportunity for the cohort to gather at the mid-point in the program to share ideas and challenges and to network with each other. The open-forum style with a facilitator is offered virtually and provides opportunities for mentors to share advice with each other and offer connections and resources that also further benefit the students. It also serves as a wonderful stewardship and networking opportunity for our dedicated mentor volunteers.

The program director offers open and scheduled office hours throughout the semester to support both students and mentors in their progress and to provide expert advice or counsel as needed. Finally, all programs conclude with a celebratory finale event that brings all participants back together to reflect on the process, celebrate their accomplishments, and demonstrate gratitude toward the program volunteers.

Mentoring Outputs

Since 2018, our programs have facilitated 100+ mentor/mentee pairings annually across our three program offerings, typically serving approximately 50–60 graduate students, 20–30 junior/senior undergraduate students, and 15–30 first-year undergraduate students. Each year, approximately 80 alumni, graduate students, and friends of the college and 15–30 upperclassman undergraduate students volunteer to train and serve as mentors in the program.

Mentoring Outcomes, Sustaining the Program, and Lessons Learned

Outcomes of Programs

Post-finale, all students and mentors complete a survey that evaluates their overall experience. Key success indicators include (a) net promoter score (NPS) of the overall program experience, (b) did the student/mentee reach, progress toward, or pivot from their initial submitted goal to their satisfaction, and (c) will they continue to engage with their mentor/student post-program. The Near-Peer program includes an additional final reflection assignment, where mentoring pairs submit a video or written reflection of their experience, utilizing prompts provided.

Data has been collected by the program director every year and used to make appropriate adjustments to each program. Here, we provide sample results for the Undergraduate Professional Mentoring Program from 2020–2021:

Students

- 90% net promoters overall satisfaction; average score of 9.6 (out of 10)
- 90% plan to continue meeting with their mentor after the close of the program

Mentors

- 73% net promoters overall satisfaction; average score of 8.9 (out of 10)
- 87% plan to continue meeting with their mentee after the close of the program

And sample results for the Graduate Mentoring Program from 2020–2021:
Students

- 58% gave 9/10 overall program satisfaction; average score of 8.7 (out of 10)
- 89% plan to continue meeting with their mentor after the close of the program
- 97% would participate again as a mentee or mentor

Mentors

- 46% gave 9/10 overall program satisfaction; average score of 8.3 (out of 10)
- 77% plan to continue meeting with their mentor after the close of the program
- 82% would participate again, 18% maybe, 0% no

Qualitative data is collected by the program director over time from past participants, both formally for program feedback or marketing purposes and informally through daily interactions with alumni and friends of the college. Comments often include positive themes such as great matches, a well-organized program, enjoying virtual, and positive staff and student energy. Negative comments include issues with students being unresponsive or too busy, challenges of virtual, desire for a longer time frame, and deeper connections with other mentors.

Sustaining the Programs

The CWEL mentoring programs have been successful due to the combination of dedicated staff, institutional support, a cohort-style approach to learning, and the compatibility-based matching process.

Due to the complexity of operations, communications, curriculum development, volunteer management, and stewardship, we recommend assigning a dedicated team to oversee the program. This includes the continuity of the director to build ongoing relationships to ensure sustainability and a dedicated student co-coordinator engaged in the operations, promotion, and program development, which is key to generating excitement, commitment, advising, and accountability among their peers. Providing a high level of service and approachability throughout the experience will generate positive experiences that result in a continuation of repeat mentors and student participants that have experienced the impact and return to give back to others. Proper and transparent transition of leadership should occur to retain key volunteers and student engagement.

In addition to building a dedicated internal team, it is essential to build strong partnerships and trust across the institution. We report on our CWEL mentoring programs as part of our annual report to key institutional partners and alums. Leveraging Advancement and Alumni Relations as key partners will generate new relationships and ongoing positive volunteer engagement while utilizing faculty and staff experts to provide theory and practice behind successful mentoring relationships and best practices to your participants will legitimize the value of the learning experience.

Lessons Learned

To enhance the experience and impact of the program, it is essential to create a cohort environment and engaging opportunities where participants have access and connections to each other beyond their one-to-one pairing through event interactions, online discussion boards, and/or chat groups, profile books, peer meet-ups, and so on. This is especially a value-add for the mentors volunteering their time, who come away with an expanded network of peers in addition to their student mentee.

Salesforce CRM software has been primarily used for mentor recruitment, data management, and relationship tracking. Our program intake forms have been custom-built within Salesforce in order to collect necessary contact information, profile questions, and participation records for our students and mentors. The platform allows us to link our student and mentor accounts to document the relationship, queue a report to facilitate communications, and merge our intake data into a participant profile book that we share with participants at the start of the program. Beyond those functions, we do not utilize Salesforce to facilitate matching, track meetings, or deliver program content. We are currently in the process of vetting other technology platforms that could provide these additional functions and sync with our Salesforce CRM system or custom-building another function within Salesforce.

Finally, we have learned that it is critical to design the matching process to ensure matches based on compatibility ahead of industry or other baseline "on-paper" factors. Empowering participants to meet one another and play an active role in selecting their own matches improves satisfaction with the results and provides an additional opportunity to promote connections across the cohort.

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Appendix

Mentoring Partnership Agreement

Use the template below after completing the "Essential Conversation." Documenting a shared understanding of the mentoring relationship in writing serves to formalize the process. Use bulleted answers to complete the form and be sure to agree on goals, note ground rules, spell out the "what ifs" in case there is a stumbling block and determine criteria for success.

Mentoring Partnership Agreement

We have agreed on the following goals as the focus of this mentoring relationship
 • Mentee:
     1.
     2.
     3.
 • Mentor:
     1.
     2.
     3.

We have discussed the protocols by which we will work together, develop, and in the spirit of partnership, collaborate on the development of a work plan to achieve our goals. In order to assure that our relationship is a mutually rewarding and satisfying experience for us both, we agree on the following :   • **Meet regularly.** Our specific schedule of contact and format for communication is as follows: • **Look for multiple opportunities to support achievement of each other's goals.** We have identified and will commit to the following specific opportunities for learning: • **Ground rules and confidentiality.** Specifically, we agree to/that: • **Communication and feedback.** We will provide regular feedback to each other and evaluate progress by ….   We agree to meet regularly for a period of _____ months to accomplish our predefined goals. Periodically throughout the relationship we will return to this agreement to assess our progress in both maintaining a healthy mentoring process and achieving our goals. In the event that one of us decides that this is no longer a productive relationship, we will seek outside intervention through CWEL and use closure as a learning opportunity.   _____   _____   Mentor Signature and Date   Mentee Signature and Date

<div align="right">

29.

CONCLUSION

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David Law and Nora Domínguez

Conclusion

Too often, formal mentoring programs are started at universities without thinking through and addressing the details needed for the program to succeed. As stated at the beginning, the primary purpose of this handbook is to provide a "one-stop shop" resource that guides program coordinators to be intentional and effective in designing, implementing, evaluating, sustaining, and funding their academic mentoring program. In this concluding section, we describe how this book's chapters and case studies connect to form a comprehensive guide for program coordinators and other stakeholders. Making the chapter's interconnections explicit makes a needed contribution to the mentoring field, particularly as it applies to academia. We conclude by emphasizing how important it is for program coordinators and university leaders to build their programs upon a firm foundation. Building this secure foundation overlaps with phase 1 of Figure 7.1 in chapter 7.

To build this secure foundation, program coordinators need to understand the interconnectedness of the content of the chapters focused on theories (Chapter 2), operational definitions (Chapter 1), needs assessments (Chapter 5), typology of the program (chapter 3), and goals and outcomes (Chapters 4 & 8). Mentoring programs in academe begin by addressing a perceived problem such as low student retention rates, high faculty turnover, or disenfranchised staff. Too often in academia, the perceived problem is enough to justify developing a mentoring program. Rather than using a perceived problem to justify the development of a mentoring program, we recommend the guidance of Legler in chapter 5 to conduct a needs assessment to ensure that the perceived problem exists supported by measurable data.

When it is clear that a problem exists, the program coordinator should spend time in chapter 4, where Arocho and Johnson describe the benefits and outcomes of formal mentoring programs that may address the identified problem. After reviewing the benefits and outcomes of formal mentoring programs, the program coordinator should know if a formal mentoring program can address the

identified problem.

Once coordinators determine that a formal mentoring program is viable to address the identified problem, the next step in building a firm foundation is creating an operational definition following Garvey's guidelines in chapter 1. The operational definition should align with a theoretical framework that Hager, Hales, and Dominguez explore in depth in chapter 2. Finally, this operational definition should naturally flow into the program's goals, objectives, and outcomes, as explained by Fain and Crites in chapter 8. In this concluding section, we emphasize that the development of an operational definition, theoretical framework, goals, objectives, and outcomes is not a linear process, but rather the process is bi-directional and iterative.

After a program's goals, objectives, and outcomes are explicit, the program coordinator is ready to consider the diverse forms and functions of mentoring relationships described by Murrell and Onosu in chapter 3 and Chanland in chapter 20. As editors, we feel the time has come for program coordinators and university leaders to consider more holistic development networked mentoring models described by Murrell, Onosu, and Chanland. After developing a secure foundation for their mentoring program, the coordinator is ready for the preparation phase, which is phase 2 of Figure 7.1.

In phase 2, the program coordinator assesses available resources, potential costs, benefits, and whether there is institutional support and mission alignment for such a program. In chapter 6, Taylor and Dart describe the processes and considerations program coordinators must take into account to secure institutional support. Without institutional support, the program will well be doomed. While we present institutional support as occurring in phase 2, the reality is that it is not linear. We recommend program coordinators and other stakeholders meet with institutional leaders early and often so that institutional leaders feel that their opinions have helped mold the program, thereby gaining their support early in the process. Securing institutional support is bi-directional, and the program coordinator should be prepared to modify the program goals and objectives relevant to feedback from university leadership.

After securing institutional support, the program coordinator has the approval to begin designing the mentoring program. In chapter 9, Law describes processes and considerations for recruiting mentors and mentees. In this recruitment process, coordinators determine how diversity and inclusion will factor into their program, as outlined by Zerai and López in chapter 12. Next, training materials to prepare effective mentees and mentors, as outlined by Mickel in chapter 10 and Clabaugh in chapter 11, are readied. In this third design phase, the methodology of the evaluation plan described by Lunsford in chapter 13 begins to take shape. In developing the evaluation plan, stakeholders must determine if the program will contain a research component described in chapter 14 by Law, Vouvalis, Harris, and LaMuth, and how including a research component may impact the implementation timeline due to needing Institutional Review Board approval.

In the fourth phase of Figure 7.1, the program coordinator implements the plan determined while designing the program. For example, in addition to developing the training program, the coordinator trains the mentors and mentees. A critical component of phase 4, matching participants, is delineated in Law's chapter 9. As described by Zerai and López in chapter 12, particular attention to diversity and inclusion should factor into the matching process. In this phase, monitoring the progress of the

mentoring relationship occurs, as outlined by Lunsford in chapter 13.

Even though phase five on evaluation and phase six on funding and sustainability are the last two phases of figure 7.1, program coordinators use the guidelines found in these chapters by Lunsford and Castañeda-Kessel throughout all phases of the program. The program coordinator should consider what constitutes functional evaluation and sustainability as they build the program's foundation. Being thoughtful in the early phases of the program will naturally lead to efficient program evaluation and the program's sustainability.

Reviewing the twelve case studies in this handbook illustrates that the programs varied significantly in what areas they emphasized as they described the six phases of mentoring program design, execution, evaluation, funding, and sustaining the program. The program coordinator reading this handbook will gain much insight in reviewing the case studies and comparing them to the recommendations for progressing through the six phases. By following the guidelines of the chapters in this handbook and examining the case studies, the program coordinator will have the tools needed to build their respective program, which is the primary purpose of this handbook.

While editing this book, we have settled on four recommendations that will continue to advance the mentoring field in academia.

Recommendations

We present four recommendations to help shift formal mentoring programs in academia away from ad hoc mentorship toward intentionality. The first recommendation describes how to make a theory of change explicit. The second recommendation explains how to create a mentoring culture. For recommendation three, we advocate that program coordinators and other stakeholders consider adding research to their respective evaluations. Our final recommendation, recommendation four, encourages coordinators to seek funding for formal mentoring programs.

Recommendation 1: Make the Theory of Change Explicit

Create a visual representation that makes explicit your theory of change. This visual representation should provide an overall framework that explains how the program will obtain its objectives and goals. Program coordinators and university leadership can use this visual representation to explain the program to stakeholders. This visual representation could be a logic model, concept map, or another visual diagram. Most importantly, this visual representation should clarify the interconnections between a needs assessment, operational definition, theoretical framework, methodology, and objectives and goals. These interconnections are explained further in the following subsections.

1.1 Conduct a Needs Assessment. Needs assessments are often skipped when developing mentoring programs in academia because program coordinators and university leadership may think a needs assessment takes too long and will not provide new insight into students, faculty, and staff needs. However, conducting a needs assessment is critical in developing a mentoring program because it ensures that university resources address prioritized institutional needs. In addition, identifying needs leads to congruent program objectives and goals. Key findings of the needs assessment should be

incorporated into the theory of change.

1.2 Create an Operational Definition. In chapter 14, Law, Vouvalis, Harris, and LaMuth highlight the lack of operational definitions in formal university mentoring programs. Not having an operational definition limits the ability to measure what constitutes a successful mentoring experience, leading to weak evaluation and research design and replication problems. Creating an operational definition makes key constructs explicit, facilitating replication and a more rigorous methodology for evaluation and research. The theory of change should include critical constructs from the operational definition. These key constructs should have natural ties to the needs assessment, theoretical framework, methodology, and objectives and goals. In chapter 1, Garvey addresses the challenges of creating a singular definition of mentoring and offers guidelines to develop a description of mentoring using a dimensions approach for mentoring programs in higher education. In addition to Garvey, we recommend the work of Dominguez and Kochan (2020) in developing an operational definition. Dominguez and Kochan emphasize that, first and foremost, mentoring is a developmental relationship comprised of five dimensions. Putting these five dimensions together constitutes an operational definition. These five dimensions are a *qualifier* that explains the context of the interaction. A *defining word* describing the type of relationship. A description of who the *participants* are. The *activities* in which participants engage. And lastly, the expected goals and objectives expressed in *outcomes*. The case studies provide examples of operational definitions for various formal mentoring programs in higher education in the United States.

1.3 Develop a Theoretical Framework. As described in Chapter 14 by Law Harris, and LaMuth, more recent mentoring programs in academia include theoretical frameworks. However, the lack of programs containing theoretical frameworks continues to plague formal mentoring programs in academia. The operational definition of the mentoring program should be influenced by the theory chosen and vice versa. In Chapter 2, Hager, Hales, and Dominguez describe several theoretical frameworks and how they can be applied to mentoring programs. In addition to describing linkages between theory and operational definitions, the theory also influences methodology by making explicit independent, intervening, and dependent variables. Thus, describing theoretical links between mentoring and evaluation/research questions or hypotheses is not just an intellectual exercise; it also shifts the focus and makes explicit what is being emphasized.

1.4 Increase Methodological Rigor by Clearly Identifying Program Variables. In chapter 14, Law, Vouvalis, Harris, and LaMuth describe ways to increase methodological rigor in formal mentoring programs by addressing internal and external validity threats. Identifying and operationalizing the independent, intervening, and dependent variables increase internal validity. A theory of change model should show how the program's variables connect to the theoretical framework and operational definition of mentoring, making the relationship between the independent, intervening, and dependent variables explicit.

1.5 Include Program Objectives and Goals in the Theory of Change. The program's objectives and goals should evolve naturally from the needs assessment and be reflected in the operational definition, theoretical framework(s), and variables selected. Additionally, program objectives and goals should align with institutional priorities as described in Chapter 6. The authors of chapter 8 guide the

program coordinator using a logic model framework to employ seven design elements. These elements help determine and reach the mentoring program's objectives, goals, and outcomes.

Recommendation 2: Create a Mentoring Culture

In addition to drawing from the chapters in this handbook regarding this second recommendation, we reference the work of Zachary's (2005) book Creating a Mentoring Culture: The Organization's Guide. Zachary and the authors of chapter 6, Taylor and Dart, emphasize that an institution's infrastructure is the foundation of a mentoring culture. At universities, infrastructure is anchored within multiple layers and commits its leadership and time to mentoring over the long run by providing appropriate financial, technical, and knowledge resources. With a supportive infrastructure, Zachary (2005) highlights eight hallmarks contributing to a vibrant mentoring culture. These hallmarks, described next, are alignment, accountability, communication, value and visibility, demand, multiple mentoring opportunities, education and training, and safety nets. We use Zachary's eight hallmarks to help frame our second recommendation, creating a mentoring culture. Similar to recommendation #1, which describes the interconnections between a needs assessment, operational definition, theoretical framework, methodology, objectives and goals, the eight hallmarks though differentiated from each other, are interdependent and contribute together to form a vibrant and full mentoring culture.

2.1 Create Institutional Alignment. When mentoring programs align with the university's goals and visions, the reasons to engage in mentoring are evident to university leadership, faculty, and staff. More engagement by administration, faculty, and staff leads to positive effects within the university (Zachary, 2005). In chapter 6, Taylor and Dart describe the process of aligning vision, executive support, and participation in the mentoring program.

2.2 Create accountability. When the roles of university leadership, program coordinators, mentors, and mentees are unclear, it leads to ambiguity and unintended consequences, such as resentment and frustration. Accountability increases with participants and the organization when roles and responsibilities are clarified to manage expectations (Zachary, 2005). The authors of chapters 10 and 11, Mickel and Clabaugh, guide readers through preparing effective mentees and mentors to communicate using interpersonal skills and tools, thereby increasing accountability.

2.3 Develop a Communication Plan. Ineffective communication in mentoring programs can wreak havoc by creating confusion, false expectations, and eroding trust (Zachary, 2005). Effective mentoring programs have communication plans that are implemented and monitored. At universities, communication plans keep all parties, from leadership to the mentee, informed and how to be involved. As described by Lunsford in chapter 13, evaluative data can be part of communication plans revealing what is and is not working to inform process improvements. Communication plans should be bi-directional, creating a culture that values feedback and dialogue.

2.4 Increase the Value and Visibility of Your Mentoring Program. As the right people talk about mentoring in formal presentations, speeches, and informal meetings, it increases the value and visibility of mentoring and increases momentum (Zachary, 2005). University leaders can do much to structure job recruitment, application, and selection procedures that highlight the university's commitment to mentoring. Department chairs and academic deans can recognize and reward effective

mentoring much as they do teaching and research through annual rewards, promotion, and tenure practices (NASEM, 2019).

2.5 Increase the Demand for Your Mentoring Program. Creating demand for the mentoring program is best served when mentors and mentees are not forced to participate; instead, they are motivated to participate (Zachary, 2005). Leaders of the program increase motivation when they have credibility with the participants and when they join the program, as Taylor and Dart describe in chapter 6. A well-thought-out strategy jump-starts the program and creates buy-in. Patience is required as the demand for mentoring at universities evolves and is stimulated by non-mentors and mentees learning of the success mentors and mentees enthusiastically share. Inclusive mentoring, described in chapter 12 by Zeria and López, increases feelings of belonging which are highly contagious and motivating for those not yet participating.

2.6. Create Multiple Mentoring Opportunities. Chapter 3 of this handbook, authored by Murrell and Onosu, describes various mentoring relationships such as hierarchical, peer, group, reverse, and developmental networks. Chanland, in chapter 20, focused on four networked mentoring models that have shown promise in maximizing mentoring's effectiveness in universities. The key word in Zachary's sixth hallmark subtitle is "opportunity." As explained in chapter 4 by Arocho and Johnson, formalizing mentoring opportunities and practices distribute the benefits of mentorship more equitably and effectively among its members. The main point of Zachary's sixth hallmark is that an effective mentoring culture provides opportunities for mentees to engage with one or more mentors at the appropriate developmental time to receive the guidance and support needed to flourish in their university roles.

2.7 Develop Continuous Education and Training. Mentoring programs in academia should begin by providing evidence-based training and curriculum development that prepares mentees and mentors to be effective, as described by Mickel and Clabuugh in chapters 10 and 11. This training and curricula should explore the interpersonal and intrapersonal elements that facilitate successful communication between mentor and mentee. Guidelines for developing curricula for academic institutions should be included. In addition, training materials should consist of tools and frameworks such as guided discussions, communication plans, and mentoring compacts to ensure clear expectations between mentor and mentee.

Zachary (2005) emphasizes that a culture of mentoring not only supports education and training at the beginning of mentoring relationships but provides continuous and ongoing training. For example, mentor groups should meet regularly to exchange best practices and promote peer learning. Veteran mentors should have opportunities for advanced training. Mentoring coordinators and other mentoring leaders should keep themselves updated about best practices. Ongoing training can also make explicit the process for addressing problems in mentoring relationships or the program, thereby mitigating unintended negative consequences of mentoring relationships.

2.8 Create Program Safety Nets. In chapter 7, Christiansen and Busenbark describe the many roles of the program coordinator, including designing structured feedback systems as part of the overall assessment and evaluation plan. When appropriately designed, feedback systems provide safety nets that help mentees, mentors, and program coordinators deal more adeptly with obstacles they may

encounter. Safety nets are the eighth and final hallmark of Zachary's (2005) mentoring culture. Safety nets minimize negative consequences.

As described by Chapter 13's author Lunsford, assessment involves direct feedback from participants about their self-reported experiences in the program, including the quality of the mentoring relationship. An example of providing a safety net as part of the program assessment is creating a feedback system where mentors and mentees can share concerns regarding their relationship. We recommend that such assessments be conducted regularly through reliable electronic surveys and programmed to alert program coordinators of existing or potential problems immediately. This feedback loop creates a safety net in four ways. First, this safety net improves accountability. Second, it provides data for who should and should not be in the program. Third, it gives insight if a new strategy is needed. Lastly and most importantly, this safety net clarifies if an intervention is required to mitigate any unintended consequences of mentorship.

Recommendation 3: Turn Your Evaluation into Research

As explained by Lundord in chapter 13, international standards for mentoring programs require assessment and evaluation as markers of an effective mentoring program. Lunsford, along with Law, Vouvalis, Harris, and LaMuth in chapter 14, distinguish the differences between assessment, evaluation, and research. Our third recommendation is that as stakeholders design their formal mentoring program, they consider adding a research component as part of their evaluation. When program coordinators conduct effective assessment and evaluations of their respective programs, they are already completing the bulk of the necessary steps to conduct research, such as collecting and analyzing data to assess mentoring relationships and to determine if the program is achieving its desired outcomes. Adding a research component is not as extensive of an "add-on" as one might think. The benefits of adding a research component far outweigh the extra work. The benefits of including research into the design are; first, research will create a more extensive scope for the program. Second, the study will clarify how the proposed mentoring program fits within the general mentoring field and what contributions the program will make to the science of mentoring. Lastly, including research better positions the mentoring program to be externally funded, which is our fourth recommendation.

Recommendation 4: Seek Funding for Your Formal Mentoring Program

Few handbooks on formal mentoring programs provide a step-by-step process for securing external funding. This handbook makes this unique contribution in chapter 15 as Castañeda-Kessel offers this step-by-step guide and alerts program coordinators and university leaders about the many possibilities for funding mentoring programs. We recommend that during the design phase of program development, program coordinators and other interested stakeholders familiarize themselves with funding opportunities to determine if there is an overlap between their program and funding sources and the viability of pursuing these resources.

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Grant writer, researcher, and consultant, Monica Castañeda-Kessel, EdD, has expertise in grant-development funding strategies and identification as well as program implementation. Mentoring has been a lifelong interest for Dr. Castañeda-Kessel because of its connection to early-career faculty grant development and professional development. She has shared her skills for over 15 years with industry and academia. Her primary funding domains are engineering, healthcare, and education. She has been funded by multiple federal, state, and nonprofit organizations. Recent examples of her work with faculty include projects that support Hispanic-Serving Institutions (HSIs), people with disabilities, LGBTQ+ in engineering, veterans, and industry internship pathways. Castañeda-Kessel has served as a project manager for a large federal grant serving over 2,200 minority and/or disadvantaged participants in healthcare careers. In addition, she has participated as a federal, state, and local reviewer. Dr. Castañeda-Kessel is the grant development manager for the Utah State University College of Engineering.

Dawn E. Chanland (Chapter 27)

Dr. Dawn E. Chanland (formerly Chandler) is a professor of management and organizational behavior at the McColl School of Business at Queens University of Charlotte. Dawn has over 30 years of business, consulting, coaching, and academic experience and 12 teaching and research awards since the beginning of her academic career. Her research contributions, centering on mentoring and coaching, have been featured in several popular press outlets, including but not limited to *Wall Street Journal* ("How to Be a Smart Protégé" and "When Mentoring Goes Bad"), *New York Times, Los Angeles Times, Forbes, AOL, CareerBuilder*, and *MSN*. Dawn has also published in top academic journals, such as *Academy of Management Annals, Journal of Management, Journal of Organizational Behavior, Journal of Vocational Behavior*, and *Career Development International.*

Mike Christiansen (Chapter 7)

Born and raised in Northern Utah, Dr. Mike Christiansen earned a bachelor's degree in chemistry from Utah State University in 2004 and a PhD in organic chemistry from Brigham Young University in 2010. He did postdoctoral research at Colorado State University until 2011 and then became a full-time faculty member at USU's Uintah Basin Campus, where he currently teaches general, organic, and biochemistry lecture and lab courses. Mike's enthusiasm for mentoring has been an integral part of his 18-year career in higher education and university research. He accordingly served for 2 years as a member of the USU Uintah Basin Mentoring Committee and was then asked to chair that committee in 2019. In this role, Mike continues to serve and support faculty as they mentor and guide students through their university educations and post-university careers.

Dionne Clabaugh (Chapters 11, 12)

Dionne Clabaugh, EdD, is a human development specialist who designs engaging curriculum and professional learning for deep learning and far transfer. After teaching in higher education for nearly 30 years, she also consults in mentoring and instructional design. She developed a faculty peer mentoring program, the Resiliency Bridge™, and the Human Learning System™ instructional framework. She authors professional learning for faculty mentoring, and K–12 compliance and curriculum. For 40 years she has taught across the lifespan, including youth music and scouting, parent education, board members, and educators. Dr. Dionne believes that effective mentoring happens through autonomous engaged relationships where people are invested in each other's growth. Dr. Dionne facilitates learning via high-impact, autonomy-supportive, engaging strategies. Her degrees in music therapy, organization development, learning and instruction (University of San Francisco), and social innovation (University for Peace, Costa Rica) yield an interdisciplinary approach to human development through educational equity.

Kathleen M. Cowin (Chapter 20)

Kathleen M. Cowin, EdD, is an associate professor (career track) of educational leadership at Washington State University Tri-Cities, where she teaches, mentors, and co-mentors aspiring PK–12 school leaders. Her research focuses on the development of effective relational co-mentoring practices for PK–12 educational leader formation and the creation of co-mentoring circles among current and former educational leadership students. Kathleen served as a teacher and elementary and middle school principal for over 25 years and also completed her superintendent certification. Kathleen is the past chair of the American Educational Research Association Mentorship and Mentoring Practices Special Interest Group, and in 2020 she was selected as a member of the Washington State University President's Teaching Academy.

Jamie Crites (Chapter 8)

Dr. Jamie Crites is currently the people analytics coordinator at Weyerhaeuser, where she serves on multiple teams aimed at fully integrating mentoring throughout the organization. She previously served as the Operations Lead at the Center for Mentoring Excellence under the mentorship of Lisa Fain. She recently earned her PhD from the Seattle Pacific University Industrial-Organizational Psychology program. During her time in the program, she led the formal mentoring program to pair current students with alumni. Her research centers around mentoring, diversity, equity, and inclusion to better understand how mentoring can better serve minority populations.

Greg Dart (Chapter 6)

Greg Dart is a chief campus administrator and senior associate vice president of Utah State University Eastern, a comprehensive regional college within the Utah State University statewide system. Before his time in his current role, Dart was a vice chancellor for Enrollment Management and Student Affairs at Utah State Eastern. Prior to that, Dart served as vice president for Student Services at Zane State College, an associate professor of journalism and communication, and in director roles at other institutions. Dart has split his time primarily between Utah and Alaska. Before coming to higher education, he served in various political, advertising, news media, and public relations positions. Dart received his associate's degree from Snow College, his bachelor's degree from the University of Alaska-Anchorage, his master's degree from Utah State University, and recently finished his doctoral coursework at Northeastern University in Boston. Dart's primary academic research has been on how student motivation impacts persistence.

Susan Duffy (Chapter 28)

Dr. Susan Duffy is an associate provost for transformational learning and partnerships at Wentworth Institute of Technology, and former executive director of CWEL at Babson College. She earned her PhD from the George Washington University (GWU) in management and organization, a master's degree in applied behavioral science from Johns Hopkins University, and a bachelor's degree in nutrition science from Pennsylvania State University. She has designed and taught courses in entrepreneurship, management, and organizational behavior and is committed to creating learning experiences that change lives. She has also previously served on the faculty of GWU and Simmons College, where she was named the 2011 "Professor of the Year." Currently she serves on the board of directors of the International Council for Small Business; the Center for Women's Business Research; and Venturing Out, a Massachusetts nonprofit that teaches entrepreneurship to incarcerated and court-involved adults and high-risk youth.

Karen Engler-Weber (Chapter 26)

Karen Engler-Weber serves as a program director for the Office of the University Provost at Arizona State University. In her role, Karen directs and coordinates the work of multiple offices, providing a variety of innovative programming, resources, and support to promote the advancement and success of women and underrepresented groups within the university system. Karen also manages a number of faculty excellence programs and international fellowships and serves as ASU's liaison to the US Fulbright Scholars and Specialist programs. In addition to over 20 years of experience in higher education administration, Karen has served as an English instructor in ASU's Department of English for nearly two decades. Karen holds an MA in counseling psychology, an MA in English literature, and is ABD on her PhD in English literature. She is a married mother of three, an avid baker, and a barre/pilates devotee.

Lisa Z. Fain (Chapter 8)

Lisa Z. Fain is the CEO of the Center for Mentoring Excellence, an expert in the intersection of cultural competency and mentoring, an executive coach, and a global speaker. A former attorney, Lisa's passion for diversity and inclusion led to her role as senior director of diversity and inclusion at Outerwall, Inc., and her passion for development and growth led her to found Vista Coaching to help executive women design their authentic leadership journey. Lisa and the Center for Mentoring Excellence founder, Dr. Lois J. Zachary, are the co-authors of *Bridging Differences for Better Mentoring* (Berrett-Koehler, 2020) and *The Mentor's Guide, 3rd Edition* (Jossey-Bass, 2022).

Benjamin C. Flores (Chapter 21)

Dr. Benjamin C. Flores is the Forrest O. and Henrietta Lewis professor of electrical engineering at the University of Texas at El Paso (UTEP). The son of a single working mother, he was the first in his family to pursue and earn a college degree. As an educator and researcher, he has been dedicated to developing socio-academic models that improve the retention and graduation of underrepresented minorities in STEM disciplines. Dr. Flores has held a number of administrative positions. During his tenure as dean of the Graduate School, UTEP reached a milestone, awarding more than 100 doctoral degrees in 2013, in anticipation of the institution's centennial celebration. Dr. Flores is the principal investigator of the University of Texas System Louis Stokes Alliance for Minority Participation and the Inclusive Mentoring in STEM Center of Excellence. He is the recipient of a Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM).

Bob Garvey (Chapter 1)

Professor (Emeritus) Bob Garvey, PhD, Fellow of the Royal Society of Arts, is one of Europe's leading academic practitioners of mentoring and coaching. He is an experienced mentor/coach working with a range of people in a variety of contexts. Bob works internationally, and he subscribes to the repertoire approach to mentoring and coaching. He is in demand as a keynote conference speaker, webinar facilitator, and workshop leader. He is widely published in books and journals, and his book, *Coaching and Mentoring: Theory and Practice*, published by Sage, is in its fourth edition. Bob has a Lifetime Achievement Award for contributions to mentoring.

Jennifer Grewe (Chapter 19)

Dr. Jennifer Grewe is an assistant professor with the Department of Psychology at Utah State University. Jenn has taught thousands of undergraduate students via the many psychology courses for the undergraduate psychology program. Jenn teaches both on campus and online courses. She is a director of Connections for the first-year experience program and a co-director of the psychology undergraduate program. Jenn is the advisor for the local chapter of Psi Chi (International Psychology Honors Society), the Rocky Mountain VP of Psi Chi, and a consulting editor for *Teaching of Psychology*. Her work and interests have focused on the teaching of psychology, teaching and learning, and student success.

Tara S. Hackel (Chapter 17)

Tara S. Hackel has served in academic and student support roles within a diverse Research 1 University for over 10 years, including more than 8 years of experience managing student-centered programs at the University of New Mexico. Tara's work focuses on optimizing well-being for learners who are historically excluded from the full rights, privileges, and opportunities of formal education. Tara strives to expand access to quality research education, especially in science, technology, engineering, and math (STEM). They have developed curriculum, presented countless workshops, and taught more than seven university courses. Tara is an active researcher with current projects examining how to optimize schooling experiences for LGBQ+, trans, and gender-diverse students. Tara has coauthored four peer-reviewed publications, two book chapters, and fourteen national conference presentations. Tara is currently a program manager at the University of New Mexico's School of Medicine Research Education Office and can be reached on LinkedIn

Mark J. Hager (Chapter 2)

Dr. Mark J. Hager is a professor of psychology at Menlo College in Atherton, CA. He earned his graduate degrees from Harvard University (EdM) and the University of Michigan (PhD). Dr. Hager's research and consulting focus on social-psychological influences in training and development, particularly on the role of mentoring and developmental relationships in education and training settings. He consulted on early career professional socialization with the US Department of Veterans Affairs for many years. He is co-author of the first editions of the widely used University of Michigan *Graduate Student Mentoring Guide: A Guide for Students.* Dr. Hager frequently speaks at national and international venues, including the US Department of Veterans Affairs, the University of New Mexico Mentoring Institute, the American Educational Research Association, the International Congress of Psychology, and the UK Council for Graduate Education

Kim Hales (Chapters 2, 9, 18)

Kim Hales is an English faculty lecturer for Utah State University (USU) at the Roosevelt Utah campus. Kim holds an MA in English; she specializes in rhetoric and composition and is working toward her PhD in literature and culture studies. Kim is the past editor-in-chief for USU's *Journal on Empowering Teaching Excellence* (JETE), an academic publication that boasts more than 40,000 downloads and is read worldwide. In addition, she serves as part of the university's Strategic Enrollment Master Plan Committee and, along with the Mentoring Committee, she has helped develop, research, and publish regarding the efficacy of faculty-to-student mentoring. Kim feels it has been an honor to be a part of her campus mentoring program and help grow the program. Being part of this book development has been a labor of love that Kim feels will impact instructors and students for years to come.

Andy Harris (Chapter 14)

Dr. Andy Harris is an assistant professor in the Department of Human Development and Family Studies and the chair for the Southwest region for the statewide Faculty-to-Student Mentoring Program at Utah State University.

Rebecca Hartley (Chapter 23)

Rebecca Hartley, PhD, is an assistant dean for foundational medical sciences, director of program evaluation, and professor of cell biology and physiology at the University of New Mexico School of Medicine. She teaches anatomy, histology, and embryology, oversees the preclinical curriculum, and is a medical education researcher. She is passionate about mentoring faculty, students, and other trainees.

Amy Hawkins (Chapter 25)

Amy Hawkins is the administrator of the University of New Mexico (UNM) Staff Council, where she oversees the efforts of 12 committees and 60 volunteer councilors whose primary goal is to advocate for staff. Hawkins earned her bachelor's degree of fine art from New Mexico State University and her master's degree in public administration from UNM. She has been awarded two fellowships from the New Mexico Evaluation Lab, received UNM's most prestigious staff award, and has been a recipient of the UNM Staff Council STAR Award for 3 years in a row. Hawkins is talented at distinguishing what is and what is not an organizational problem, where the solution(s) should come from, and the most advantageous way to implement those solutions. As a fifth-generation New Mexican, Hawkins is passionate about ethical and equitable treatment of staff at UNM and accessible content and resources that allow staff more opportunities.

Paul R. Hernandez (Chapter 9)

Paul R. Hernandez is an associate professor in the Department of Teaching, Learning, & Culture and the Department of Educational Psychology at Texas A&M University. He received his doctoral degree in educational psychology (measurement, evaluation, and assessment) from the University of Connecticut. His research focuses on developmental relationships, social contexts, and novel interventions that support motivation and persistence in science, technology, engineering, and mathematics (STEM) degree and career pathways—particularly for undergraduates from historically underrepresented groups. In addition, with funding from the National Science Foundation and the National Institutes of Health, Dr. Hernandez has investigated mentors' roles in recruiting and retaining diverse, talented students in STEM domains. Dr. Hernandez's publications are in educational psychology outlets, such as *Educational Psychology*, the *Journal of Educational Psychology*, and the *Journal of Experimental Education*, as well as high-impact STEM education outlets, such as *BioScience, CBE-Life Sciences Education*, and *PLoS ONE*.

Benjamin A. Johnson (Chapter 4)

Benjamin A. Johnson, PhD, SFHEA, is an associate professor of higher education in the Department of Student Leadership and Success Studies at Utah Valley University. He received a PhD in educational philosophy and psychology (educational policy and leadership) from The Ohio State University. He co-founded (with students), *The Journal of Student Leadership*, a double-blind peer-reviewed publication, and helps students enhance their editing, design, and public relations skills. He has enjoyed mentoring students on independent research projects, and he regularly trains faculty. His scholarly work has included publications and conference presentations related to educational design, self-regulated learning, metacognition, service learning, higher-education leadership, faculty-student mentoring, and first-year student experiences.

Gönül Kaletunç (Chapter 16)

Dr. Gönül Kaletunç is a professor of food engineering in the Department of Food, Agricultural and Biological Engineering at The Ohio State University. She is the director of aspiration for Women's Advancement and Retention in Engineering and Sciences (AWARES), focusing on women's retention in the engineering discipline, and director of the College of Engineering Faculty Mentoring Program, targeting recruitment, retention, and development of successful careers for new faculty. She completed her BS and MS degrees in chemical engineering at the Middle East Technical University in Turkey and received her doctorate in food engineering from University of Massachusetts. Her research focuses on food and biological materials, food safety in fresh produce, encapsulation of nutrients for targeted and controlled delivery, and mentoring in STEM. Dr. Kaletunç edited two books and has numerous publications. She serves as an editorial board member of *Food Engineering Reviews* and is an executive committee member of the Society of Food Engineering.

Harrison Kleiner (Chapter 19)

Dr. Harrison Kleiner is an associate professor of philosophy, associate vice provost for general education, and director of the Liberal Arts Program at Utah State University. Harrison teaches across the curriculum in philosophy at Utah State, teaching and writing on issues in philosophy, theology, political thought, the great books, and liberal arts education. He leads institutional efforts in curricular and assessment reform in the first-year experience and general education and consults regionally and nationally with faculty involved in general education and on issues around excellence in teaching and learning.

Jim LaMuth (Chapter 14)

Jim LaMuth is a program coordinator at Utah State University. He facilitates and manages the assessment and survey data for their statewide Faculty-to-Student Mentoring Program. He started his career with school-based mentoring programs with Big Brothers Big Sister of the Western Upper Peninsula. In addition, Jim has served as both an AmeriCorps volunteer in Michigan and PeaceCorps volunteer in Benin, West Africa.

Neal Legler (Chapter 5)

Neal Legler is the director of the Center for Innovative Design and Instruction (CIDI) at Utah State University. He has worked in the instructional design and training field for over 20 years, producing and maintaining training materials and learning environments for higher education, corporations, international NGOs, local nonprofits, and K–12 environments. He and his team at Utah State University provide consultation and mentorship to hundreds of faculty and staff. He has played a leading role in major technology system implementations; new faculty development, data analytics, and accessibility initiatives; the establishment of the *Journal on Empowering Teaching Excellence*; and the institution-wide transition from face-to-face to remote teaching during the COVID-19 pandemic.

Hannah M. Lewis (Chapter 18)

Dr. Hannah M. Lewis is a lecturer of mathematics at Utah State University Eastern. She joined the faculty at USUE after completing her doctoral degree in mathematical sciences from Utah State University in 2020. She has served as a faculty mentor since the program began in 2020 and has served as a member of the steering committee beginning in spring 2021. Her professional interests include the development and implementation of growth mindset structured assessments, faculty and graduate student professional development, and the classification of semi-simple Lie algebras. Her efforts in teaching have been recognized by multiple excellence in teaching awards from USU. Outside of professional interests, she enjoys long distance bike riding, reading, and spending time with her husband and two kids

Nancy López (Chapter 12)

Dr. Nancy López is a professor of sociology at the University of New Mexico (UNM) and directs and cofounded the Institute for the Study of "Race" and Social Justice. Her scholarship, teaching, and service are guided by the insights of intersectionality—examining the simultaneity of systems oppression and resistance. Her books include *Hopeful Girls, Troubled Boys: Race and Gender Disparity in Urban Education* (2003) and *Mapping "Race": Critical Approaches to Health Disparities Research* (2013). Dr. López received funding from the WT Grant Foundation and Hewlett Foundation to examine the role of high school ethnic studies curriculum and pedagogy in reducing inequalities. She received funding from the RW Johnson Foundation for a project on employing intersectionality to revise federal administrative race and ethnicity data, and the National Science Foundation for cultivating a community of practice on intersectionality and student success in Hispanic Serving Institutions. Dr. López has served on over 75 PhD/MA committees.

Laura Gail Lunsford (Chapter 13)

Dr. Laura Gail Lunsford is an expert on mentoring and leadership. A US Fulbright Scholar, she authored the seminal *The Mentor's Guide: Five Steps to Build a Successful Mentor Program*. She co- edited the *Sage Handbook of Mentoring*, and co-authored *Faculty Development in Liberal Arts Colleges* in addition to authoring over 50 peer-reviewed articles and chapters. Her work has been funded by NSF, the Department of Education, the Luce Foundation, and the Institute for Education Sciences. Lunsford received the Hope Dissertation award from the International Mentoring Association and serves as a board member for the association. She is a professor of psychology at Campbell University, where she is also an assistant dean in the School of Education and Human Sciences. Her PhD is from NC State and she is a co-founder of Lead Mentor Develop, LLC.

Sarah Marshall (Chapter 24)

Sarah Marshall, PhD, is a professor of educational leadership with an emphasis in higher education administration at Central Michigan University. She served as a senior leadership fellow for the College of Education and Human Services; in this capacity, she developed a mentoring and professional development program for pre-tenured faculty and non-tenure-track faculty. She also served as a Center for Teaching Excellence fellow, where she implemented a similar program to the larger university community. Prior to joining the professoriate in 2001, she was a university administrator primarily in the area of student services/student affairs administration. She earned her PhD in higher education administration and MEd in college student personnel from Loyola University Chicago and her BA in Spanish and economics at Albion College. Her research interests include teaching techniques to enhance student learning, work/life management, and the profession of student affairs.

Natasha Mickel (Chapter 10)

Dr. Natasha Mickel earned her doctoral degree in instructional psychology and technology from the University of Oklahoma. At the University of Oklahoma Health Sciences Center (OUHSC), she is an assistant professor in the Department of Family and Preventive Medicine, assistant director for faculty development, director for the Oklahoma Center for Mentoring Excellence (OCME), and director for Multicultural Engagement for the College of Medicine. Within her roles, Dr. Mickel supports a variety of professional development opportunities for faculty, staff, and students. These offerings include curriculum vitae review workshops for faculty, mentor training for clinical and translational researchers, mentor training intended to support a campus-wide mentoring network initiative, and providing specific training related to broadening diversity on campus. This experience has allowed her to work with constituents from various academic fields including education, mathematics, aeronautics, engineering, and biomedical sciences to meet a common mission of education, research, and community service.

Milka Montes (Chapter 21)

Dr. Milka Montes is an associate professor and chair of the Chemistry Department at the University of Texas Permian Basin. A former NSF Louis Stokes Bridge-to-the-Doctorate fellow, Dr. Montes prepared for a career in academia, focusing on research, teaching, service, and mentoring excellence. Currently, she is the campus director of the University of Texas Louis Stokes Alliance for Minority Participation and the co-principal investigator of the INCLUDES Aspire Alliance: West Texas Regional Collaborative, a partnership between universities and community colleges to prepare future generations of STEM faculty in inclusive teaching practices. Dr. Montes is also the president of the Peer-Led Team Learning International Society and a life member of the Society for the Advancement of Chicanos and Native Americans in Science.

Wendy Murphy (Chapter 28)

Dr. Wendy Murphy is an associate dean of the Undergraduate School and a professor of management at Babson College. She earned her PhD from Boston College. She teaches organizational behavior, leadership, and negotiation across undergraduate, MBA, MSM, and executive education programs. Her research is at the intersection of careers, mentoring, and diversity issues. Murphy has published her work in a range of journals, such as *Human Resource Management, Gender in Management, Journal of Management*, and the *Journal of Vocational Behavior*, among others. Her book with Dr. Kathy Kram, *Strategic Relationships at Work: Creating Your Circle of Mentors, Sponsors, and Peers for Success in Business and Life,* bridges mentoring scholarship and practi*ce.* She has also written for *Harvard Business Review, MIT Sloan Management Review,* and *Boston Business Journal*. In 2014, she was recognized by Poets & Quants as one of the "40 Most Outstanding B-School Profs Under 40 in the World.

Audrey J. Murrell (Chapter 3)

Audrey J. Murrell, PhD, is currently a professor of business administration, psychology, and public and international affairs at the University of Pittsburgh. She has co-authored several books including *Mentoring Diverse Leaders: Creating Change for People, Processes and Paradigms* and *Diversity Across Disciplines: Research on People, Policy, Process and Paradigm*. Dr. Murrell is the current associate editor of the journal *Equality, Diversity and Inclusion: An International Journal* and a member of the editorial board for the *International Journal of Environmental Research and Public Health*. Previously she served as acting dean of the University of Pittsburgh's Honors College, associate dean of the College of Business Administration, and director of the David Berg Center for Ethics and Leadership.

Orrin Myers (Chapter 23)

Dr. Orrin Myers, PhD, is a biostatistician and professor in the Department of Family and Community Medicine. He has over 25 years of experience designing and conducting research in human health and on the environment.

Gloria O. Onosu (Chapter 3)

Gloria O. Onosu, PhD, conducts research focused on leadership development and identity, cross-cultural engagement, diversity, equity, and inclusion. Dr. Onosu's work contributes to our understanding of the interconnection between business, ethics, leadership, and the impact of this interrelationship on business and the stakeholders. She is currently a clinical assistant professor at Robinson College of Business at Georgia State University.

Valerie Paquette (Chapter 28)

Valerie Paquette is the executive director of Workforce Development and Professional Education at Wentworth Institute of Technology and the former director of global initiatives at the Babson College Center for Women's Entrepreneurial Leadership. Her career focus has been on delivering engaging experiences and building communities that educate and empower learners to maximize their potential. In her roles, she has designed and implemented mission-aligned programming focused on entrepreneurial leadership, gender acumen, career strategy, and developmental relationships. Valerie was previously a director of alumni career strategy and educational initiatives at Northeastern University where she developed people, programs, and partnerships aimed to educate and inspire stakeholders, strengthen networks, and promote philanthropic cultures. Valerie earned her MBA from Northeastern University and a BFA from the University of Massachusetts, Dartmouth.

Valerie Romero-Leggott (Chapter 23)

Valerie Romero-Leggott, MD, is a first-generation college student and native New Mexican Hispana with strong roots in her cultural heritage. She received her Bachelor of Arts degree from Harvard University and her medical degree from the University of New Mexico (UNM). Dr. Romero-Leggott serves as vice president for diversity, equity, and inclusion at the UNM Health Sciences Center (HSC) and as a professor in the Department of Family and Community Medicine. She is a primary care provider on the forefront of treating populations burdened by socioeconomic, racial, and ethnic disparities and has extensive experience teaching cultural competence, developing educational pipeline programs for underrepresented youth, and providing mentorship and career development opportunities for diverse faculty, residents, students, and staff across the nation. Dr. Romero-Leggott is a role model for young, female learners and professional women in the health sciences and has had a profound career advocating for women of color.

Yadéeh E. Sawyer (Chapter 17)

Dr. Yadéeh E. Sawyer has a long-standing commitment to mentoring. Her positions began informally as a high school biology teacher in Miami, but solidified as she formally mentored students through the Undergraduate Research Opportunities (UnO) program within the Biology Department at the University of New Mexico (UNM) while earning her PhD. Through this, she became a research assistant for the program. Upon graduation, Yadéeh began working as staff for UNM, with a continued focus on increasing success in science, technology, engineering, and math (STEM) students. She currently runs semester-long mentoring and research programs through her position with the Engineering Student Success Center at UNM and directs the Certificate in University Science Teaching (CUST) program through the UNM Health Sciences Center. Yadéeh has coauthored numerous peer-reviewed publications and has presented at national conferences and various invited presentations and panels.

Timothy Schroeder (Chapter 17)

Dr. Timothy Schroeder serves as the director of the Undergraduate Research, Arts & Design Network at the University of New Mexico. Throughout his 30-year career, he has also worked in student and academic affairs at Newman University, the University of Alaska Southeast, and San Juan College. His work focuses primarily on developing programming to better serve marginalized student populations and to shift institutional culture and practices to become more inclusive and equitable. He earned his bachelor's degree in political science from Southwestern College, his master's in education from Newman University, and his doctorate in educational leadership from the University of New Mexico. He has written and supervised seven multi-million dollar federal grants deigned to improve equity in higher education.

Jessica Shenberger-Trujillo (Chapter 21)

Dr. Jessica Shenberger-Trujillo is an associate dean of assessment, accreditation, and strategic planning at the University of Texas at El Paso's School of Pharmacy. She is a trained experimental psychologist who utilizes her skillsets to assess student and programmatic outcomes to support evidence-based recommendations. As a single teen parent, she benefited from research mentoring and funded research programs (i.e., the McNair Scholars Program and Summer Research Opportunities Program) throughout her undergraduate education. Because of these instrumental research and educational supports, Dr. Shenberger-Trujillo's career has focused on serving as an educator, mentor, administrator, and champion for the inclusion of individuals from underrepresented backgrounds in STEM and health disciplines. Dr. Shenberger-Trujillo is a co-principal investigator of the University of Texas System Louis Stokes Alliance for Minority Participation and the Inclusive Mentoring in STEM Center of Excellence.

Jeff Spears (Chapter 18)

Dr. Jeff Spears is an assistant professor in the Department of Social Work at Utah State University. He completed his MSW degree at the University of Kansas and PhD in social work at the University of Utah in 2018. His dissertation explored the importance of the Internet in developing self-efficacy in the areas of socialization, financial, and medical literacy for baby boomers. Dr. Spears teaches social policy and seminar classes. He works as a part-time therapist at Pinnacle High School providing individual and family therapy. His research interests include community organizing, cryptocurrencies, aging issues, and undergraduate mentorship. Dr. Spears currently serves on the steering committee and also the faculty chair for the Price campus at USU.

Andrew Sussman (Chapter 23)

Andrew Sussman, PhD, MCRP, is an associate professor in the Department of Family and Community Medicine and also directs the Behavioral Measurement and Population Science Shared Resource and Office of Community Outreach and Engagement at the University of New Mexico Comprehensive Cancer Center. Dr. Sussman received his PhD in cultural anthropology and master's in community and regional planning from the University of New Mexico and completed a postdoctoral research fellowship in the Department of Family and Community Medicine. Dr. Sussman's research focuses on addressing health and cancer care disparities among underserved populations in New Mexico. Dr. Sussman has expertise in qualitative and mixed-methods research and teaches qualitative research design in the Master of Science and Clinical Research program.

James Y. Taylor (Chapter 6)

Dr. James Y. Taylor is a senior associate vice president and associate professor of sociology for Utah State University and a director of the Uintah Basin Statewide Campuses. His academic and professional passions and publications include sustainable rural and mountain communities, relationships between people and place, and effective organizational leadership. Prior to Utah State University he was a vice president and dean for Colorado Mountain College in the Rocky Mountains. He has more than 30 years of executive-level leadership. His academic and professional work has taken him around the world, studying mountain and alpine communities and populations. Within the United States he has extensive field and backcountry research experience in the heart of the Greater Yellowstone Ecosystem. He also has been a member of three specialized and nationally recognized search and rescue teams. In his spare time, he enjoys running marathons and ultra-marathons and spending time with his family.

Nicole Vouvalis (Chapter 14)

Nicole Vouvalis is the human research protections executive director at Utah State University. She facilitates the activities of USU's IRB and oversees all other aspects of human research protections at USU. As a first-generation college student, she earned her BS from Florida State University in 2008 and her JD from the FSU College of Law in 2010. Nicole is passionate about higher education programs that provide access and pathways to successful completion for underrepresented students. In her previous role, Nicole created and oversaw mentorship programs for underrepresented and first-generation college students at Utah State and worked closely with its GEAR UP programs.

Shirley L. Yu (Chapter 16)

Dr. Shirley L. Yu is an associate professor of educational psychology in the Department of Educational Studies at The Ohio State University. She is also the director of the university's Graduate Certificate in College and University Teaching. Her research centers on classroom contexts, self-regulated learning, and motivation in undergraduate science, technology, engineering, and mathematics (STEM). She is engaged in mentoring and other programs with the overarching goal of improving retention and success in STEM majors and careers, particularly among individuals from underrepresented populations. She is the recipient of multiple teaching awards, most recently The Ohio State University College of Education and Human Ecology Distinguished Teaching Award. She earned her PhD in education and psychology and an MA in psychology from the University of Michigan. She completed her BA in psychology from the University of California, Los Angeles.

Assata Zerai (Chapter 12)

Dr. Assata Zerai serves as the vice president for equity and inclusion and a professor of sociology at the University of New Mexico (UNM). At the helm of the Division for Equity and Inclusion, Zerai has expanded diversity programming and strategy at UNM. Zerai works with her team to plan for, resource, and document the impact of efforts to improve equity and inclusion at UNM. She is a professor emerita at the University of Illinois at Urbana Champaign, where she served from 2002 to 2019, and held posts most recently as an associate provost and associate chancellor. A decolonial feminist scholar, Zerai's research interests include BIPOC and LGBTQIA+ inclusivity, access to mobile technology, making the work of marginalized scholars more accessible, and environmental justice/health activism. She has published five books spanning these topics, the latest of which is *African Women, ICT and Neoliberal Politics: The Challenge of Gendered Digital Divides to People-Centered Governance* (2019).

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If you have questions/suggestions or are interested in re-using a portion of this book for your own pedagogical purposes, please reach out to Travis Thurston at travis.thurston@usu.edu.