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Mentorship Experiences of Doctoral Students: Effects on Program Satisfaction and Ideal

Mentor Qualities

by

Alicia Apperson

Dissertation

Submitted to the College of Education

Department of Leadership and Counseling

Eastern Michigan University

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Educational Leadership

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January 4, 2019

Ypsilanti, Michigan

## Dedication

This dissertation is dedicated to my family, friends, and colleagues for their support and encouragement throughout this process. To my friends who have endured many stressed out conversations with me, I appreciate you more than you know. To my coworkers, what a blessing you all have been! Your support throughout the past four years has been incredible. Most of all, I dedicate this dissertation to my parents, David and Ruth-Ann. You truly showed me the meaning of perseverance and strength. Although neither of you went to college, you made sure I understood the value of an education and made it possible for me to earn one, no matter the sacrifices you had to make. I love you both more than there are words and I hope I have made you both proud.

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## Abstract

The road to doctoral completion is often fraught with barriers, self-doubt, and complications. Creighton, Creighton, and Parks (2010, *Mentoring & Tutoring: Partnership in Learning*, 18(1), 39-52. doi:10.1080/13611260903448342) asserted that mentoring plays a crucial role in the development and success of graduate students, especially those in doctoral programs. The mentorship of doctoral students can also assist in alleviating the attrition rates that are currently estimated to be between 40% and 60%. In this quantitative study, correlational and stepwise regression analyses were conducted to examine the most beneficial qualities currently enrolled doctoral students find in a mentor and to describe the relationship between the qualities of a mentoring experience and doctoral students' satisfaction with their program. This study analyzed data collected from currently enrolled doctoral students (n = 339) through the use of online Facebook and LinkedIn doctoral groups. The findings of this study suggested that higher reported levels of program satisfaction were significantly correlated to mentor satisfaction rates. Further, academic and instrumental mentoring scales were reported by respondents to be most beneficial qualities in a mentor. Findings of this study offered evidence that institutional and department leaders of doctoral programs can implement mentoring programs and, moreover, provide faculty members' opportunities to build mentoring of doctoral students into their faculty loads. Leaders everywhere should recognize the importance of mentorship benefits not only to students, but also to program satisfaction, retention, and degree completion.

## Table of Contents

Dedication .....	ii
Acknowledgements .....	iii
Abstract .....	iv
List of Tables .....	viii
Chapter One: Introduction and Background .....	1
Introduction .....	1
Statement of the Problem .....	3
Purpose of the Study .....	4
Operational Definitions of Terms .....	6
Limitations and Delimitations .....	7
Scope of Study .....	8
Significance of Research .....	8
Summary .....	9
Chapter 2: Literature Review .....	10
Organization of the Literature Review .....	11
Mentoring of Doctoral Students .....	11
Mentorship Characteristics and Practices .....	22
Attrition .....	36
Persistence .....	39

Summary .....	52
Chapter 3: Methods.....	53
Conceptual Framework .....	54
Research Questions .....	55
Research Design and Approach .....	56
Setting and Sample.....	57
Data Collection Process .....	57
Instrumentation.....	59
Pilot Study.....	61
Data Analysis .....	62
Summary .....	63
Chapter 4: Findings.....	64
Introduction .....	64
Data Cleaning.....	64
Description of the Sample.....	64
Answering the Research Questions.....	72
Additional Findings.....	79
Summary .....	82
Chapter 5: Discussion and Conclusions.....	83
Introduction .....	83

Discussion of Findings .....	85
Implications for Practice .....	88
Recommendations for Future Research .....	91
Recommendations for Policy .....	95
Recommendations for Practice.....	96
Summary .....	98
References.....	100
Appendix A: Invitation and Informed Consent Form .....	116
Appendix B: Eastern Michigan University’s Institutional Review Board Approval.....	118
Appendix C: Adapted Survey Form.....	119
Appendix D: Strategic Tools for Mentorship Quality_ (Thomas, Willis, & David, 2007)	134
Appendix E: Stages of Doctoral Persistence (Tinto, 1993) .....	135
Appendix F: Permissions for Use of Survey Instruments .....	136



## List of Tables

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<b>Table</b>	<b>Title</b>	<b>Page</b>
1	Frequency Counts for Selected Variables.....	65
2	Psychometric Characteristics for Summated Scale Scores.....	68
3	Instrumental Mentoring Items Sorted by Highest Importance Rating.....	69
4	Academic Mentoring Items Sorted by Highest Importance Rating.....	69
5	Psychosocial Mentoring Items Sorted by Highest Importance Rating.....	70
6	Career Mentoring Items Sorted by Highest Importance Rating.....	71
7	Ratings of Mentor Qualities Items Sorted by Highest Mean.....	72
8	Frequency Counts for Qualitative Responses to Most Beneficial about Mentor....	76
9	Frequency Counts for Qualitative Responses to Most Challenging about Mentor..	78
10	Pearson and Spearman Correlations for Satisfaction with Mentor Behavior Scale.....	79
11	Pearson and Spearman Correlations for Selected Variables with Satisfaction with Doctoral Program.....	80
12	Prediction of Satisfaction with Doctoral Program Based on Selected Variables: Stepwise Regression.....	82

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## **Chapter One: Introduction and Background**

### **Introduction**

A doctoral program is one of the most challenging educational experiences that a student will encounter. Economic, social, and personal barriers can hinder progress toward degree completion (Hwang et al., 2015). Deadlines common in the first phase of coursework fall away at the point that a student reaches doctoral candidacy, leaving some students unprepared to move from being the learner to being an independent scholar with responsibility to proceed through the remaining requirements of dissertation writing. It is not uncommon for students to drop out of the academic program at this point; thus, it becomes important to determine how to assist students in both persistence and completion of their doctoral programs

Finding themselves in an environment that is unstructured, doctoral students may become disoriented in their program without the proper guidance and mentoring (Bagak's, Badillo, Bransteter, & Rispinto, 2015). Sugimoto (2012) noted that the relationship that exists between a doctoral student and his or her dissertation chair or advisor is the most critical element in a student's doctoral education.

Cochran, Campbell, Baker, and Leeds (2014) estimated that between 40% and 60% of all doctoral students do not persist to graduation. With a high attrition rate, it is paramount that doctoral students find formal or informal support to work toward degree completion. Formal support can be found through mentorship experiences the candidate has had with an advisor or faculty member, such as their dissertation chair. These experiences can provide an avenue for doctoral students to find academic guidance and understanding and can also contribute to a doctoral student finding the personal psychosocial support needed to drive

them toward degree completion. For the purposes of this research, mentorship was defined traditionally as a developmental relationship, in which an experienced person provides both technical (career) and psychosocial support to a less experienced person (Chesler & Chesler, 2002).

In 2015, the National Science Foundation (NSF, 2015) reported that 55,006 research doctoral degrees were awarded between 1995 and 2006. This not only represented the highest numbers ever reported on the Survey of Earned Doctorates (SED) but also indicated a strong upward trend, increasing on average 3.3% annually. Mentorship support of the large influx of students in graduate education, particularly doctoral degree programs, can lead to higher numbers in both retention and program completion. Bierema and Merriam (2002) acknowledged the benefits of mentoring toward an individual's academic achievements, career ambitions, and personal development. Brill, Balcanoff, Land, Gogarty, and Turner (2014) added that the rigors of doctoral research that contribute to feelings of isolation, self-doubt, and confusion on behalf of the student can be alleviated through mentorship experiences.

Finding the right match between doctoral student and mentor can lead to both technical and personal assistance. Not all mentors will match all students, and it is important to identify attributes in a mentor seen as desirable by doctoral students. Katz and Hartnett (1976) noted that although graduate students see their relationships with faculty as the most important aspect of their graduate experience, faculty may hold different perceptions about the role of mentoring. Olwell (2017) reported that faculty spend only 2% to 6% of their time meeting one-on-one with students due to other usually more pressing commitments. This disconnect between student perception of faculty relationship benefits and the ability of

faculty to meet the perceived need creates a gap in perceptions. Although doctoral candidates may have built relationships with particular faculty members through their academic coursework, they may discover that those faculty members are not a good match as a mentor. This may be due to the time a doctoral student desires to spend meeting with their faculty mentor or a direct result of the mentor's work and academic time constraints.

### **Statement of the Problem**

Mentoring plays a crucial role in the development and success of graduate students, especially those in doctoral programs (Creighton, Creighton, & Parks, 2010). Faculty advisors often have a critical role in the mentorship of aspiring academics and can frequently engage in conversations about topics outside of academic coursework. Whereas research on mentorship has broadened considerably in recent years, little research is extant on the perceived need of mentorship for doctoral students in particular, and the extent to which that perceived need is met. The problem is compounded by the doctoral candidate's need to find a compatible mentor with qualities to help him or her to persist through the program.

In a study of doctoral students, Rose (2005) discussed the need for additional research on the relationship between what mentoring was desired and what mentoring was, in fact, received by doctoral students. Although studies have explored the relationship between gender and instances of mentorship, the literature was lacking with regard to the value of mentorship of doctoral students, the effect on program satisfaction, and how the perceived need for mentorship was met or not met.

Several factors contribute to failure of doctoral students to progress toward degree completion. Having time to dedicate to study, dealing with burnout and exhaustion, and experiencing feelings of isolation, which can include lack of support such as mentorship, all

contribute to the high attrition rate in doctoral programs. With a reported 50% of graduate students dropping out of doctoral programs every year, it is important to examine the ability that mentoring has to impact this rate and provide an opportunity to assist doctoral students in the completion of their doctoral degree (Farkas, 2018).

Although the number of students enrolling in doctoral programs is increasing, the number of degrees they attain is not rising; thus, there is a need to refocus the research literature and include issues relating to mentorship and persistence. In this study, the researcher examined this gap through the use of adapted versions of Rose's (2005) 34 Ideal Mentor Scale, an adapted version of the Survey on Doctoral Education (Golde, 2005), and an adapted version of the First Decade Study drafted by Williamson, Tracy, Molasso, Meirovitz, and Downing (2004).

### **Purpose of the Study**

The focus of this study was to examine the characteristics that doctoral students believed to be desirable qualities in a mentor and the extent to which students believed their relationship with their mentor affected their satisfaction with their doctoral program. Survey data collected and subsequent analysis was used to examine doctoral students' self-reported perceptions of advantageous mentor qualities and the benefits mentors provide that support students' motivation to complete the doctoral degree and their satisfaction with their doctoral program. The analysis identified the most desirable mentoring qualities perceived by doctoral students and noted differences in these qualities by demographic variables of gender, race, and age groups. The following questions were used to guide the research regarding doctoral students' perceptions of prime mentor qualities and the effectiveness of mentoring in the persistence toward degree completion:

**Q1.** What are the qualities that are most beneficial in a mentorship relationship with currently enrolled doctoral students?

**Q2.** What is the relationship between qualities of the mentoring experience and a doctoral students' satisfaction with their program?

This research filled a gap in current literature by addressing the specific career and psychosocial qualities that currently enrolled doctoral students found in mentors, whether a relationship existed, and the link, if any, between a doctoral students' mentoring experience and their satisfaction with their program. Although current literature addressed ideal mentor qualities and program satisfaction of graduated doctoral students, it did not look specifically at currently enrolled doctoral students or address program satisfaction from a current student's point of view. This vantage point differs from that of persons who have completed their doctoral studies, as post-doctoral persons may report satisfaction with the program by virtue of completing it.

Survey tools provided a quantitative framework to view mentorship perceptions, mentorship needs, and trends among doctoral students. Three survey tools gathered data from doctoral students about their perceptions on positive mentorship qualities and whether their mentorship needs were being met as they related to program satisfaction. Adapted versions of the Ideal Mentor Scale (IMS), the Survey on Doctoral Education, and the First Decade Study were used to investigate self-reported beliefs about ideal mentor qualities as well as feelings of social and academic integration and satisfaction with support systems and academic programs.

**Goals for responses to surveys.** The data gathered included a total of 339 survey responses from students currently enrolled in doctoral degree-granting programs. An

invitation and consent form containing the Google Doc link to participate in the study were disseminated via electronic means on Facebook, LinkedIn, and email, and the link included the Institutional Review Board (IRB) approval form and an adapted survey that included a demographic section, the Ideal Mentor Scale (IMS), the Survey on Doctoral Education, and the First Decade Study on the Google Doc form for participants to complete (see Appendices A, B, and C). The researcher joined a minimum of 16 Facebook groups and three LinkedIn groups to invite participants to complete the survey instrument. Examples of the joined Facebook groups were the American Education Research Association (AERA), American College Personnel Association (ACPA), The National Association for Multicultural Education, Queer PhD Network, Black & Brown @ AERA, and Group of the AERA. In addition, the researcher joined LinkedIn pages that included the Association for the Study of Higher Education (ASHE), American Education Research Association, and the PhD Forum. These sites were visited and posted every third day over a two-week period to raise awareness among their members to participate in the study. Further details of the research design and data analysis are discussed in the methods chapter of this study.

### **Operational Definitions of Terms**

The following defined and operationalized terms and concepts provide a clearer understanding of their use relative to discussion and findings in this research.

- *Attrition:* The number of individuals who withdraw from a program of study before completion (2018).
- *Doctoral Student:* A person successfully admitted into a doctoral program.
- *Mentor:* A role model, someone the student wants to emulate professionally. In this study, a faculty member.

- *Mentoring*: A developmental relationship, in which an experienced person provides both technical (career) and psychosocial support to a less experienced person (Chesler & Chesler, 2002).
- *Persistence*: The act of continuing toward an educational goal, such as earning an advanced degree.
- *Socialization*: A process through which an individual becomes part of a group, organization, or community (Austin, 2002).

### **Limitations and Delimitations**

**Limitations.** All studies are limited by elements over which the research has no control and are imposed by the assumptions such as those associated with the phenomenon, research approach, and methods employed. This study was limited by sample size and time. The study was done in a specific time and did not include longitudinal data. The validity of the data gathered is dependent upon the validity and reliability of the instrument used and the assumption of honest and truthful answers provided by bonafide doctoral candidates. The sample comprised students from various programs and institutions, which will limit generalizability in a program or institutional size or design that is not represented in the sample.

**Delimitations.** Several controls to the current study were imposed by the researcher, including the choice to survey doctoral students through use of online forums such as Facebook and LinkedIn. In addition, data were gathered from currently enrolled doctoral students in various doctoral degree-granting programs. Finally, the researcher acquired survey responses from 339 doctoral student participants which allowed for a range of responses.



## **Scope of Study**

This study encompassed self-reported data from 339 doctoral students who had been successfully admitted to a doctoral degree program. The survey instruments were distributed to prospective participants through the use of online forums such as Facebook and LinkedIn. As part of various online groups, the researcher requested doctoral students to complete and return the online survey. The online link contained the IRB approval, demographic survey form, Ideal Mentor Scale, Survey on Doctoral Education, and the First Decade Study.

## **Significance of Research**

The findings of this research added to the literature base on mentorship relating specifically to doctoral students, assisted in understanding the need for mentorship from this group's perspective, and determined how the act of mentoring can contribute to higher levels of persistence and subsequently lower attrition rates for doctoral students in doctoral degree programs.

Research findings suggested that mentoring improves a doctoral student's success with relation to retention, persistence, and graduation rates (The 7<sup>th</sup> International Conference, 2012). Pursuing input and insight from current doctoral students regarding their need for mentoring and the attributes they see as beneficial to them allowed for an understanding about support systems within doctoral programs that benefit both students and the departments. In addition to the benefits of student retention and persistence toward completing the doctoral degree, the programs and institutions were able to identify further areas needed to support doctoral students from the beginning of their academic program and began to addressing the high attrition rates in doctoral programs. These high attrition rates coupled with time to completion ranging from 7.7 years to 8.2 years (Spaulding &

Rockinson-Szapkiw, 2012) allowed this research to provide opportunities for improving program retention and graduation rates which, in turn, may reflect on the retention rates of the institution as a whole.

### **Summary**

The mentoring of currently enrolled doctoral students, regardless of their academic program, plays a crucial role in the retention and completion of new academics that will positively impact the professoriate and the academy for generations to come. However, the research literature needs to be expanded to address the specific career and psychosocial mentoring functions that current doctoral students believe to be beneficial in addressing their needs and whether a relationship exists between those qualities and their satisfaction with their doctoral program. This research is important not only for doctoral student development but also can be used by departments and institutions to decrease program attrition and increase student persistence and completion rates. Utilizing data from currently enrolled doctoral students from a variety of programs allowed the researcher to find common themes relating to mentorship as well as differences between program clusters.

**Organization of this document.** The introduction, statement of the problem, research question, and basic elements of this study discussed in Chapter 1 are followed by the literature review of relevant topics in Chapter 2, details of the methods employed in the conduct of the study in Chapter 3, and findings of the data in Chapter 4. Conclusions, implications, recommendations, and ideas for further study compose the final chapter.

## **Chapter 2: Literature Review**

Mentoring plays a crucial role in the success and persistence of graduate students. Faculty advisors often have a central role in the mentorship of students and can frequently have conversations with advisees about topics beyond academic coursework that can include support such as publication advice, evaluation of writing, and even assistance with networking (Welton, Mansfield, & Lee, 2014). At this point, faculty advising can become a

*mentorship*. For the purposes of this research, the terms *advisor* and *mentor* were used interchangeably. Several facets of mentorship were examined in this study, including qualities that graduate students perceived as ideal in a mentor, racial and gender differences in mentoring, and the effectiveness of a mentoring experience upon the persistence of students to degree completion.

### **Organization of the Literature Review**

Access to articles and books in the Bruce T. Halle Library on the campus of Eastern Michigan University facilitated the literature review. An emphasis was placed on scholarly journal articles and research on key terms, including *mentoring*, *doctoral student persistence*, *mentor relationship*, and *graduate school*. To further assess mentor relationships between doctoral students and faculty mentors, the review also explored the concepts of gender, race, and persistence toward graduation amongst doctoral students.

### **Mentoring of Doctoral Students**

Creighton et al. (2010) cited that mentoring is considered to be most essential to a doctoral student's success in academia. As McLaughlin (2010) stated, mentoring takes place at three levels in an academic environment, including the relationships between faculty and students (usually doctoral students), between faculty and postdoctoral fellows, and between senior and junior faculty. With a focus on the doctoral student and faculty relationship Nettles and Millett (2006) published a decade-long study that contained survey data of more than 9,000 graduate students enrolled at 21 top research institutions. From this research, the scholars found that more than 30% of all graduate students surveyed did not feel they had a faculty member relationship. However, those who were pursuing degrees in engineering, sciences, mathematics, and education reported having many social interactions with faculty

members. Findings of this extensive survey indicated that a significant mentoring relationship with a faculty member will have a positive effect on a doctoral student's progress toward degree completion. Further, that doctoral students placed significant importance on the frequency of contact with their mentor.

Identifying faculty mentorship as a form of academic involvement in doctoral education, Anderson, Cutright, and Anderson (2013) conducted a study designed to examine how doctoral students perceived their experience, how important they believed faculty mentorship was, and if there was a predictive relationship between academic involvement such as faculty mentorship and doctoral education outcomes including degree progress and program satisfaction. Using a sample of 217 doctoral candidates who had completed coursework, passed applicable exams, and who were in the process of completing dissertations, the researchers developed a survey instrument to measure variables that were pertinent to doctoral candidates' perceived academic involvement and doctoral outcomes. The instrument consisted of two sub-constructs: faculty mentorship and intellectual community, each represented by 10 indicators. These 20 indicators were measured by perceived frequency and perceived importance on a 7-point Likert-type scale.

From the survey data, faculty mentors who provided feedback on a project and degree progress were noted more frequently than any of the 10 dimensions of faculty mentorship, and conversely, faculty mentors who had promoted participants' development as an instructor and had involved them in pre-dissertation research were reported less frequently than any other dimension. In addition, the researchers found that a fair number of participants stated that they had never experienced one or more of the dimensions of faculty mentorship or intellectual community. These findings were highlighted by 18% of

participants who reported that they had not experienced faculty who assisted with their development as an instructor, and another 20% reported never having been involved with faculty in pre-dissertation research. Few (3%) of survey participants reported never having had a faculty member provide constructive feedback on a project, and only 4% reported never having received feedback on degree progress (Anderson et al., 2013). Throughout this study, participants rated having a faculty mentor who provided constructive feedback and those who provided feedback on their degree progress as the most important dimensions of faculty mentorship.

Kathy Kram (1983) conducted a foundational research study on analysis of the phases of mentorship based on 18 developmental relationships at a large northeastern public utility of 15,000 employees. Kram narrowed the focus of the study to young managers between the ages of 25 and 35, with three or more years of experience in the organization, who were at the first three levels of management, and had not yet advanced to senior top management positions. The random sample resulted in interviews with 15 young managers who met the set criteria. Only three developmental relationships were identified; thus, further recommendations were sought from personnel staff of other young managers whom they believed had developmental relationships. From these recommendations, several more young managers with mentors were identified resulting in a total of 18 relationships included in the study. Through two interviews with the participants, a conceptual model of the relationship phases of a mentor/mentee experience was identified.

In her analysis, Kram (1983) stated that a mentor relationship has the ability to enrich career development and psychosocial development of both the mentor and the mentee. Career functions including sponsorship, coaching, protection, exposure-and-visibility, and

challenging work assisted a young manager in learning an organization's culture and prepared for advancement opportunities. In addition, through psychosocial functions including role modeling, acceptance-and-confirmation, counseling, and friendship, a young manager was supported in developing his or her own sense of competence, confidence, and effectiveness in the managerial role.

Kram (1983) concluded that although these developmental mentor relationship may vary in the length of time, they generally proceed through four predictable, but not entirely distinct, phases, including: initiation; the time a relationship begins; cultivation, during which the range of various functions expands to a maximum; the separation phase, during which the relationship is significantly altered either by organizational context and/or psychological changes for one or both parties; and finally, the redefinition phased, during which the relationship evolves into a new form that is significantly different than before or the relationship ends completely.

Revising Kram's (1983) mentoring model, Johnson's (2007) model aligned with the duties higher education faculty performed to mentor students, both graduate and undergraduate students. The model contained four phases including initiation, cultivation, separation, and redefinition, and showcased the benefits for both mentors and mentees. Later, McCallum and Sule (2014) critically examined and redefined the mentoring process using Johnson's (2007) model. Through qualitative methods, McCallum and Sule (2014) collected data from 10 graduate students who were in the dissertation phase of their program, and compared the findings with Johnson's (2007) four-phase mentoring model.

The results added two new phases to the current model: contemplation and reflection. The contemplation phase recognized the background a student brings to graduate school that

can influence their mentorship experience. Reflection was acknowledged to occur at any time during a student's graduate school experience but typically after being involved in a mentoring relationship for a period of time. The authors asserted that a student will reflect on the support he or she is receiving during this phase and evaluate what mentoring needs are not being met that would assist them being successful in their academic program (McCallum & Sule, 2014).

**Types of mentorship.** Vital to the success of doctoral students are their advisors and other mentors they encounter throughout their academic journey (Russo, 2011). Whereas mentorship promotes success, it is important to differentiate between the various types of mentorship a student may experience or be searching for. Through a study by Curtin, Malley and Stewart (2016), the relationships between different kinds of mentoring were identified and compared with academic career self-efficacy, interests, and goals. Specifically, the authors identified three types of mentoring support as being career or instrumental, sponsorship, and expressive or psychosocial mentoring. Career or instrumental mentoring was defined as encompassing direct training in research methods, providing information about content, ethics, and procedures, and ongoing efforts to confirm that the mentee was given opportunities to learn what they need to know (Blake-Beard, Bayne, Crosby, & Muller, 2011). This type of mentorship may provide students with concerted information regarding the types of opportunities available to them in addition to developing a sense of efficacy as they learn to master the skills necessary for success in their chosen fields.

The second type of mentorship noted sponsorship, which includes the active recommendation of the mentee to other individuals, providing them access to the mentor's professional network as well as advocating on the mentee's behalf (Ibarra et al., 2010). This



form of mentorship conveys to the mentee that their mentor values their contributions to their chosen field. Lastly, the authors defined expressive or psychosocial mentoring as including encouragement and support as a mentee learns and survives through times of doubt and failure (Blake-Beard et al., 2011). This form of mentorship may provide support to students who are pursuing their goals, whether academic or career, through difficult circumstances.

**Socialization.** Mentorship of doctoral students may also be understood by using the frame of socialization to describe the doctoral student-faculty member interaction.

Socialization is noted in the literature as a process through which an individual becomes part of a group, organization, or community (Austin, 2002). The process involves learning about the culture of the group or organization, including its values, attitudes, and expectations (Corcoran & Clark, 1984). Doctoral students in particular can experience several socialization processes at the same time, including socialization to the role of graduate student, to the academic life, and to their chosen discipline or field. This socialization process can occur through a variety of venues that often showcase gaps or discrepancies within an academic arena.

With this in mind, Austin (2002) noted research conducted in a four-year longitudinal, qualitative study that followed graduate students who aspired to be faculty members and who also held teaching assistantships. Through multiple in-depth interviews every six months with participants over four years, researchers asserted that socialization is an ongoing process rather than a result of occasional events. Participants reported a lack of systematic professional development opportunities, which was cited as an absence of being encouraged to use their teaching apprenticeship to perform more complex tasks over time. Students cited wanting supervision and opportunities for conversation with faculty and

insufficient feedback and mentoring by faculty members. Respondents perceived that they had received inadequate information about the basic requirements of graduate school, including processes, expectations, and guidance on dissertation requirements (Austin, 2002).

Participants made recommendations for improved socialization experiences, which included more attention to regular mentoring, and feedback citing placing value on guidance about how to navigate graduate education. This guidance included assistance on how to balance their personal and professional lives and discussion of possibilities for alternative career routes if they chose not to pursue the professoriate. Structured opportunities to meet and talk with peers, regular guided personal reflection, and opportunities to teach diverse courses and develop through increasingly complex tasks were among the top recommendations made by the participant group.

Through the socialization process doctoral students become aware of and begin to adopt the norms, values, beliefs, and ways of belonging to a particular profession, academic discipline, or the academy in general (Weidman & Stein, 2003; Austin & McDaniels, 2006). Weidman and Stein (2003) suggested three fundamental elements in the academic socialization process that are central to a student's socialization experience: (a) knowledge acquisition, (b) investment, and (c) involvement. All of these core components highlighted faculty as key elements to assist students to learn more about the student's chosen field, offering them guidance, introducing them to the norms of academia, and helping them to develop networks that provide access to necessary resources and information (Austin, 2002; Dixon-Reeves, 2003).

Gardner (2008) asserted that a lack of socialization in doctoral programs will increase the risk for doctoral student attrition. In other words, the less a student perceives that they *fit*

the expected social patterns of a program, the more likely that student is to not finishing his or her doctoral degree. This circumstance is considered especially applicable to students from underrepresented populations, particularly women and students of color. Initiating a mentoring relationship for these populations can be difficult, especially if they prefer to be mentored by someone who represents a similar racial and gender background. Hu, Thomas, and Lance (2008) researched factors believed to promote the formation of mentoring relationships. The researchers found that three factors were influential in the initiation of mentorship relationships: (a) the mentor and mentee having a similar race, sex, or age; (b) how the mentee viewed their membership in their social group (defined by race, sex, or age) with regard to how their group had historically been treated by society; and (c) how proactive the student appeared to be in accomplishing goals from the viewpoint of others (this gives the appearance of power in the case of the mentor, or probability for success, in the case of the mentee).

**Multiple mentor relationships.** Over the course of the mentor relationship, a mentee may need different functions at different times depending on progress into the doctoral program or current experiences. Mentoring can be viewed as a communal process that facilitates individual growth and can counter feelings of isolation (Wunsch, 1994). Jairam and Kahl (2012) suggested that doctoral students may require multiple mentors within their networks to support their experience throughout a doctoral program due to their complex life roles and learning needs. Earlier, Tierney and Bensimon (1996) argued that it is unrealistic to expect that one individual can meet the variety of a mentee's needs. The researchers made a distinction between formal and informal mentoring, asserting that formal mentoring requires two parties to agree to be in a mentoring relationship, whereas informal

mentoring occurs when a less experienced person acquires knowledge through everyday actions, such as informal conversations or lunch breaks.

Lived experiences with mentoring relationships and the connection to progression and program completion were examined by Terry and Ghosh (2015), who conducted in-depth, 45-minute-long interviews with each of 10 EdD graduates, candidates, and students. The researchers found three broad themes in response to how multiple mentor relationships support doctoral student success: (a) accessibility, or being able to access their mentor when they had a question or concern; (b) diverse perspectives, having connections with mentors from their own ethnicity and beyond that would complement the students' learning; and (c) a wide range of support, indicating having a wide mentor network that offers expertise in multiple areas that the mentee can draw upon given their situational needs at a particular time. In addition, the researchers found that multiple mentor relationships impact the doctoral experience through reducing attrition by providing strategies for navigating academic systems and coursework, having support from family, and providing strategies for encouragement that assisted the student in realizing they belong, or fit in, to their academic program.

Research on the mentoring of doctoral students identified many benefits, both psychosocial and technical, such as advantages in job placement, research skills, less intense feelings of isolation, and self-efficacy (Kram, 1983; Rose, 2005). Wunsch (1994) established that both the institution and academic program benefit from the mentoring of doctoral students through improved student retention, achievement, and degree completion rates.

In a study by Noonan, Ballinger, and Black (2007), the definition of a faculty mentor was discussed as well as the mentoring experiences of doctoral students, peer mentors, and

faculty mentors. The researchers reviewed the outcomes of doctoral students' mentoring experiences. Three individual focus groups comprised four protégés: (a) doctoral students in the first group, (b) four peer mentors in the second group, and (c) eight faculty members in the third group. By asking four guiding questions, the researchers found that each group's participants used similar words and definitions when labeling mentoring. Respondents described mentoring as both formal and informal and believed that mentors could be found in a variety of roles, including professors, advisors, or peers. Moreover, the responses given in each of the focus groups identified six themes in describing specific mentoring behaviors: (a) relationship, (b) motivation, (c) professional socialization, (d) instruction, (e) opportunity, and (f) procedures. Participants agreed that mentors not only provide direction for classes and the program, but also provide opportunities to network, help students to gain essential skills and knowledge, make them believe they could achieve professional goals, and build a relationship with them to create not only a professional connection but a personal one as well.

After analysis of focus group data to ascertain concrete outcomes attributed to the mentoring experience, the investigators found procedural outcomes, including program admission, knowledge of program procedures, and completion of degrees. Participants discussed learning outcomes, such as professional behaviors and skills, as well as professional activities, such as teaching and research publications, as direct results of their mentorship experience.

Much emphasis can be placed on the attributes of the mentor; however, it is also important to understand a doctoral student's motivation to participate in a mentoring relationship. For many doctoral programs, the design and implementation of mentoring

programs is a way for program designers to address student satisfaction with the program and retaining students in the doctoral academy through completion.

Holley and Caldwell (2012) examined the kinds of motivation that impelled doctoral students to participate in a mentoring program, the outcomes of mentoring anticipated by the students, and how mentoring program components could be increased across an institution. Utilizing 10 participants from the Tide Together mentoring program at the University of Alabama, the researchers sought to understand students' motivation and experiences that were associated with their participation in the formal mentoring program. Data gathered through interviews with student and faculty participants suggested the importance of careful and deliberate selection of faculty members to participate as mentors for doctoral students.

Although participants cited contact with faculty as an important component of the mentoring program, the team-based approach was determined to be most helpful in offering insight into academic norms. Being able to approach not only faculty mentors with questions but to also engage in conversation with their peers about the same issues created balance, and a sense of an inclusive community was created for doctoral students. Moreover, students believed they not only gained a relationship with their mentor, but also that the contacts outside of their academic department allowed them to feel more connected with the university as a whole. Participants asserted that through the mentorship program, they were able to establish peer networks within the institution that allowed them to share information and develop a sense of camaraderie. As cited by Holley and Caldwell (2012), doctoral students experience their degree programs in a highly discipline-focused environment, but the researchers opined that we should not underestimate the value of doctoral students who also feeling a sense of belonging to the larger institutional community.

## **Mentorship Characteristics and Practices**

According to Bair and Haworth (2004), doctoral students are more likely to persist to graduation and report higher program satisfaction if they engage in a meaningful relationship with a faculty mentor or advisor. With varied literature on mentorship, there has not been unanimity among researchers on what makes a person a mentor. As cited by McLaughlin (2010), no consensus has been found about the definition of a mentor or about the variables that contribute to successful mentoring. The terms advisor and mentor are often used as synonyms; however, they are not always interchangeable (Brill et al., 2014). The two terms can be differentiated by defining an advisor as someone who acts in an official capacity, whereas a mentor is defined as someone who has deeper relationship and serves as a coach throughout the multidimensional process of doctoral education success (Mullen, 2007). To this end, research surrounding the topic has attempted to come to a general agreement about how to delineate the attributes of mentorship and subsequently mentoring students in a positive way.

In an exploratory study conducted through a 30-item online survey, Welton et al. (2014) investigated the mentorship experienced by doctoral students, whether there were differences in gender, and how participating students defined mentorship. Participants were asked about factors that accelerated or hindered their progress and about their perspectives of the quality of mentorship they experienced. Findings indicated that 39% of male and 40% of female doctoral students agreed that having a supportive and actively involved advisor or mentor helped them move forward to degree completion. Conversely, the researchers reported that when participants were asked to identify factors that hindered their progress toward degree completion, 73% of men and 67% of women stated poor or inattentive

advising or mentoring services constrained their program progress. In this same study, participants were asked to report on attributes they believed were important in a mentor. All of the respondent doctoral students strongly agreed that a quality mentor should not only give constructive feedback to the mentee but also encourage research idea-formation, provide professional support, and assist with networking.

Clark, Harden, and Johnson (2000) sought to strengthen the knowledge base of mentor relationships of doctoral students in clinical psychology. The research addressed the prevalence of mentor relationships, mentor functions, gender differences in protégé experiences, and a variety of other issues related to mentorship from students' perspectives. Following a sample of 787 doctoral graduates who had completed their degree, researchers found that 66% of participants had a faculty mentor during their doctoral training. The protégés were asked to rate the degree to which they agreed that Kram's (1988) nine mentoring functions had been present in their mentor relationship. Although Kram's nine career and psychosocial mentoring functions were endorsed in the mentee's relationships, the most highly rated functions of direct training, acceptance and support, and role modeling were found to be highly related to a graduate school professor's customary role.

Negative aspects of mentoring were also discovered, as 25% of participants indicated that their mentor was not as available as they would have preferred, and 14% admitted feeling unable to meet their mentor's expectations. Also, of the participants surveyed, non-mentored respondents offered several reasons for not having a faculty mentor during graduate school; however, only 7.5% indicated they did not believe they needed a faculty mentor, another 32% stated that they did not believe faculty members had time to mentor them, and 30% advised that mentoring had not been encouraged or provided by their doctoral



programs. In addition, 29% indicated they had not been able to find a compatible mentor among faculty, and 5% reported receiving mentoring from someone outside of their doctoral program (Clark et al., 2000).

Luna and Cullen (1988) and Golde, Bueschel, Jones, and Walker (2009) were among the researchers who found that doctoral students perceived mentorship to be the most important factor of a high-quality graduate education and experience. Although there are many benefits for doctoral students through mentorship, advantages also exist for the institution and academic program, including improved student retention, dissertation completion, and research productivity rates (Gardner & Barnes, 2007). To this end, Carpenter, Makhadmeh, and Thornton (2015) explored in two separate but related studies, how faculty members of communication departments mentor PhD students through two objectives, which were to articulate the range of functions that describe mentor behaviors and to identify the theoretical structure of the doctoral student faculty mentor paradigm.

To address the objective of articulating the range of attributes that encompass mentor behaviors, Carpenter et al. (2015) surveyed 29 faculty members through an email survey that included open-ended questions about their informal and formal mentoring practices, how they mentored a student throughout their Ph.D. program, and the various ways that they encouraged student development. The second and larger of the two studies sought to identify the theoretical structure of the doctoral student-faculty mentor construct. Using an online questionnaire, 551 faculty members of communication doctoral programs were surveyed. Through both studies, the researchers found indications that mentoring properties encompassed at least four areas, including career and psychosocial attributes (Kram, 1983) and the functional areas of research and intellectual (Carpenter et al., 2015). The

identification of good mentoring that potentially includes all of these distinct dimensions could help broaden the support systems and programs offered to mentees and to serve as guides for those faculty members aspiring to be mentors.

**Barriers that impede a faculty mentor relationship.** In a graphic representation adapted from a study by Thomas, Willis, and David (2007), strategic tools illustrated an effective and quality mentoring relationship (See Appendix D). The researchers noted that several strategies must be employed to enhance the mentoring experiences of doctoral students that will lead to improved professional and career development and improve persistence of doctoral students toward degree completion. For many, barriers for both the mentor and the mentee can lead to ineffective mentoring or a loss of the relationship altogether.

McLaughlin (2010) highlighted several barriers for faculty mentors that include many of the tangible and measureable job duties that faculty is expected to complete, including demands for research, teaching loads, and committee work. These expectations often discourage faculty from finding adequate time to serve as an engaged mentor to doctoral students. In addition to the barrier of time to devote to the task of mentoring, learning how to be a good mentor also requires an investment of time and energy; this investment does not bring the same professional prestige of research and publications within the professoriate.

There may not be a sufficient number of faculty to match with doctoral students who desire a faculty mentor relationship. In order for mentor and student pairs to flourish, there needs to be a sufficient number of faculty volunteers and a faculty structure that is representative of students who seek mentors. Surveys of potential mentees found a strong preference among both female and minority populations for mentors with characteristics

similar to the students' (McLaughlin, 2010). A level of comfort between mentor and mentee can be established based on familiarity and shared experiences that allow for the relationship to not only be sustainable but also beneficial for both parties involved. With the growing number of women and minority doctoral students, it is essential for diversity in faculty mentors to allow students to be mentored by someone with whom they may identify (McLaughlin, 2010).

The faculty-student mentorship relationship can shape the outcome of a doctoral student's degree completion. Mentorship activities are often shaped by the needs of the academic program and the needs of students (Ali & Kohun, 2006; Ward, Johnson, & Campbell, 2004). These activities often involve not only teaching but also coaching, and personal and professional advice, depending on the current needs of the student (Dobie, Smith, & Robins, 2010). In addition, students often find this support through building relationships with fellow doctoral students who are experiencing similar situations and have the same issues and concerns regarding the norms and rules of the academy, program completion, and the path toward completing the degree.

To gain insight about how to make doctoral programs more effective, Bagaka's, Badillo, Bransteter, and Rispinto (2015) conducted a study with a holistic, mixed-methods approach to explore doctoral program practices, including engagement and faculty and peer mentorship practices that enhance doctoral student success. The researchers found features that made doctoral programs more effective involved socialization activities within the program, including personal interaction, which may have involved faculty and students attending events such as conferences together, meeting in groups to discuss research, and having one-on-one guidance to discuss research skills and techniques.

Cockrell and Shelley (2010) found that verbal and nonverbal professional role modeling by faculty members cannot be substituted by the use of technology or other means. Role modeling showcases mentorship and socialization into the academy by assisting students to develop their professional skillset and informing students through modeling the norms and social values held by a particular academic profession.

**Gender and racial issues.** No single mentor will be perfect for every student. Each student possesses different qualities and often seeks mentors or advisors who have qualities to which particular students relate or prefer in someone they choose to help guide them. Bell-Ellison and Detrick (2008) addressed this issue in their study regarding doctoral student perceptions of the importance of both mentor attributes and mentoring functions. The researchers examined Rose's (2005) 34-item Ideal Mentor Scale (IMS) to determine whether male and female doctoral students valued different qualities in their ideal mentor.

Participants were asked to list the three most important things a mentor could do for their protégé. The results showed that the correlations were higher than those found in Rose's (2005) samples, with the largest correlation being between Integrity and Guidance ( $r = .65$ ), followed closely by the correlations between Relationship and Integrity ( $r = .48$ ), and Relationship and Guidance ( $r = .39$ ). Although female participants were more likely to rate items relating to acceptance and confirmation as more important than their male counterparts, there is still a need for further research regarding gender and the perceptions of the ideal mentor relative to how those perceptions are impacted by a student's age, ethnicity, and motivations for obtaining a degree.

The facets and intricacies of mentoring doctoral students are compounded by who is doing the mentoring and who is receiving the mentoring. Gender and racial backgrounds can

influence both the degree to which doctoral students feel they need mentoring and the extent to which they perceive they are or are not receiving mentorship. Whereas much attention has been given to mentoring undergraduate students on college campuses, the same attention is just now being given to graduate students, particularly those who are part of minority populations.

Many minority graduate students experience more extreme feelings of isolation and lack of access to mentors or role-models, which can contribute to lower persistence rates and satisfaction in their doctoral programs (Girves, Zepeda, & Gwathmey, 2005). In a study conducted by Ellis (2000), Black students reported being more dissatisfied with their advisor relationships than their White counterparts. Black students also reported being less likely to have a faculty, whom they considered to be a mentor as an advisor in their home department.

With increasing numbers of students enrolling in graduate degree programs, a focus needs to be directed not only to admissions criteria, such as GRE scores and grade point averages, but also to the types of students being admitted. Further, programming strategies are needed to both engage and support students of color as they move through their graduate program and as contributing members to their career areas.

The lack of minority mentorship has been a concern addressed by many researchers, who have asserted that increasing the number of minority students in graduate education is directly related to developing an emerging group of diverse scholars who are equipped to move into faculty roles (Gasman, Gerstl-Pepin, Aderson-Thompkins, Rasheed, & Hathaway, 2004). Including mentoring as part of the faculty-student relationship can offer a greater prospect for students to not only attain the knowledge necessary to complete their degrees but also to gain the insight required to move into the faculty realm (Felder, 2010).

To this end, Felder (2010) conducted research to address the essential components of a positive faculty-student relationship, mentoring practices that hinder doctoral student success for African Americans, and how faculty assisted these students to overcome completion barriers. Using a case study framework, the researchers collected data from a pool of African American graduates who completed doctoral degrees between 1994 and 2005. All of those interviewed agreed that faculty mentoring and support were paramount in promoting the students' socialization, scholarship, and research and career development following doctoral degree completion. The participants all asserted that meeting often with their faculty mentor was valuable as built their mentoring relationship.

Felder (2010) cited the work of Tinto (1993), who recognized the importance of relationship-building as the first stage of the doctoral process that he termed *transition and adjustment*. Moreover, participants also noted the relevance of managing the support and advising they received from their faculty mentor and of obtaining support outside of their program. The university doctoral students also discussed their sense of personal agency about their work—with setting their own deadlines, developing expectations about their research abilities, and creating relationships beyond the realm of their academic program. These belief systems acknowledged and supported Tinto's (1993) second and third stages of doctoral persistence, which were attainment of candidacy and completion of the dissertation.

Respondents believed that mentoring facilitated their socialization and that faculty diversity was an important socialization factor that provided presence and accessibility for mentorship for the African American student. Successful mentor practices were viewed as those that served to deconstruct the myths surrounding the academy (Felder, 2010).

Maher, Ford, and Thompson (2004) researched factors that can affect female doctoral students' progress to degree attainment and the extent to which the identified factors remained consistent or differed between women who finished their degree relatively quickly and those who took a longer time. Noting that the survey instrument used was designed by administrative staff linked to the education doctoral program at Stanford University, the researchers mailed the questionnaire to 295 doctoral degree recipients who had been admitted to one of the doctoral programs in the Stanford School of Education between 1978 and 1989. Usable responses were received from 160 alumni. After receiving these data, the researchers categorized the participants into early finishers who completed their degree in 4.25 years, average finishers who finished between 4.5 and 6.5 years, and late finishers who finished in 6.75 years or more.

Findings showed that most women who finished their program early reported very few, if any, factors constrained their ability to complete their degree. A small number of women who did not agree stated that they had not encountered the *right* mentor or advisor. The theme of finding the right fit was again discussed as an emergent theme of needing working relationships with faculty to facilitate students' progress toward degree. Women labeled as early finishers described faculty members as advocates, *removers of road blocks* that were standing in the way of attaining their degree. Early finishers established positive working relationships with faculty that were maintained over the course of their doctoral student career. Conversely, nearly half (47%) of women labeled as late finishers reported that they had received poor advising, and 36% believed that a faculty member had impeded their degree progress.

Holmstrom and Holmstrom (1974) and other researchers argued that the professional development of female graduate students was best advanced by mentors of the same gender. Gibson (2006) noted that female doctoral students often have feelings of isolation and constraint due to existing structures in academia and outside responsibilities, such as family demands and responsibilities. In a study by Gardiner, Enomoto, and Grogan (2000), female doctoral students perceived good mentors as those who demonstrated good communication skills, established a personal connection, allowed opportunities for reflection, and gave specific feedback.

A study conducted by Hayes and Koro-Ljungberg (2011) examined obstacles to mentoring for female doctoral students. Following semi-structured interviews with 10 female doctoral students to continue the discussion about positive mentoring experiences and any that were negative or harmful. Barriers to mentoring female doctoral students emerged as themes following the focus group discussions.

An issue that impacted a participant's willingness to ask for mentoring in a program that did not have a formal avenue, pertained to the mentor having a lack of time to spend with the student. A participant in the study cited that, faculty would advise students to stop by any time for assistance, but the faculty members were rarely available. This lack of time was also true of the participants, as they also had to balance other commitments. In addition, a mismatch was found between the goals of mentors and mentees. This idea was highlighted in a response given by one of the students, who said she felt as if her mentor would be happy if she never graduated so that she could continue working for the mentor instead of the mentor assisting her in progressing toward degree completion (Hayes & Koro-Ljungberg, 2011).



Students may seek same-gender mentors because they perceive that they will be more comfortable with that person and that the mentor will better understand their needs and situation. In a study by Harden, Clark, Johnson, and Larson (2009), results indicated that male students were significantly more likely than female students to find a same-gender mentor, with 79% of men choosing a male mentor and fewer than half (46%) of women having found a senior female professor to mentor them. This finding supported growing concerns of inadequate numbers of senior female faculty to mentor burgeoning numbers of female doctoral students who seek mentoring relationships. Further, female students who had male mentors reported significantly higher levels of encouragement, support, and acceptance from their mentors than reported by male counterparts. This finding provided strong support for Allen and Eby's (2004), which indicated that both male and female mentors are more inclined to provide psychosocial support to female students than to male protégés.

Mentor experiences from the mentees perspective very often take on the personal lens of the mentee. Looking at gender and identity intersections to research mentorship experiences, Welton, Mansfield, Lee, and Young (2015) conducted a mixed method study to gain personal insight from 12 currently enrolled, female doctoral students and to gather data in a 30-item survey from a sample of 78 currently enrolled doctoral students. Qualitative and quantitative data collection processes sought to discover how graduate students defined mentorship, what mentorship activities they experienced, and whether mentor experiences differed according to gender, race, or other identity factors. The combined data set produced three major themes: (a) students' perceptions of quality mentoring, (b) experiences with mentoring activities, and (c) subsequent differences in experiences according to intersecting

identity factors. Constructive feedback and professional support highlighted students' concept of quality mentoring. Further, although participants believed that academic support to sharpen skills and knowledge in preparation for a career was highly promoted, participants did not believe their doctoral programs provided emotional support to them. A noteworthy difference was found between men and women with regard to the location of their mentors, with 81% of men reporting finding a mentor at their university, and only 65% of women experiencing a mentor at their institution

Mismatches regarding mentor and mentee differences in agendas, finding ideal mentor qualities, or mentors to whom a student can relate were at the forefront of a study conducted by Garrett (2006), in which the effects of mentoring on the quality of the doctoral experience were discussed. As part of the literature review, Garrett found a faculty development program analyzed by Willie, Grady, and Hope in 1991. From this project, 141 faculty members participated in the development program, and 46% of the fellows responded to a questionnaire regarding their social and academic experiences while they attended graduate school. More than 70% of the respondents were graduates of historically Black institutions. However, of those scholars who completed the survey, the Black students who attended primarily White institutions (PWIs) were dissatisfied with the lack of opportunity they perceived they had to work with faculty members and noted the absence of a racially diverse professoriate. Further, only approximately half of the respondents indicated having a mentor, and of those, only half had a mentor at their home institutions.

In 2000, African Americans comprised approximately 12% of the population; only 3.1% of doctoral degrees are awarded to this population. It is imperative to support the doctoral program completion for these students. With this in mind, Garrett (2006)

recommended that universities need to take an aggressive approach to retain qualified African American faculty to mentor incoming cohorts of students. Doing so would lead to a professoriate more representative of the student body and allow more time and space on the schedules of new faculty members to mentor effectively. A final recommendation proposed that universities and tenure boards consider mentoring and advising efforts in both tenure and promotion decisions. This is to say that faculty mentoring should be considered as a necessary piece of a workload and have as much prestige as research and course load efforts.

For some students, ideal mentor qualities can refer to attributes beyond psychosocial and relational. For many students, finding a mentor and building rapport with them can begin simply by finding a faculty advisor that is similar to the student in terms of gender and/or race. These characteristics alone meet certain mentorship needs of graduate students, but needs can vary based on the students' gender or ethnicity.

Noy and Ray (2012) addressed a central question regarding the paramount importance of mentorship in graduate school, and whether there is a systematic disadvantage in the perceived support given by faculty to women and students of color in contrast to that given to men and Whites. The researchers also sought to determine the extent to which respondents felt their advisor exhibited six different mentorship dimensions: affective, instrumental, intellectual, exploitative, availability, and respectfulness. These dimensions were examined in relation to the variables of race and gender within the participant group.

The authors found that females perceived that their advisors provided more support than that perceived by their male counterparts. This result coincided with the study done by Bell-Ellison and Dedrick (2008), which cited that women felt that acceptance and confirmation were key attributes in their ideal mentor. The 2008 study also found that

women did not seem to have the perception of disadvantage in support from their advisor. The authors also found that, as an extension of the primary scholastic support provided by their advisor, women doctoral students may search for a secondary advisor to provide interest and concern for their personal lives and overall well-being. In contrast, Noy and Ray (2012) found that students of color in comparison to White students reported their advisors to be less respectful, which would imply that those students were experiencing disadvantage based on their race.

Following the idea that race and gender matter in terms of mentoring experiences and can in fact enhance and strengthen a mentor-mentee relationship, a study done by Blake-Beard et al. (2011) further explored how students in STEM programs believed that having mentors of their own race and gender and being matched on those criteria alone mattered and enhanced their relationship with their advisor. Of specific importance within this study, the authors looked at how the effects of matching race and gender impacted academic outcomes such as GPA and student confidence. Results indicated that, even though race and gender did not directly impact academic outcomes (specifically student GPAs), other factors were found to have effects on these outcomes. The authors found that post-baccalaureate students had higher grade point averages than undergraduate students and had a significant effect on GPA,  $\beta = .34, p < .001$ . These results contributed to the pilot study of the present study by way of recognizing influences outside of mentorship having significant effects on student academic outcomes.

In terms of influence on academic outcomes, mentoring roles by faculty advisors and others have been researched with regard to different programs, students, and even the different ways by which students perceive they are mentored. Lunsford (2012) chose to

research doctoral students specifically with regard to their experience with mentoring and the behaviors they believed were associated with being mentored. Using the psychosocial development theory, Lunsford collected information related to students' perceptions of mentoring to satisfaction with their advisor as well as their progress toward degree. The author found that psychosocial and mentoring support were positively related to predict satisfaction with their advisor; however, progress toward degree was not related to this same satisfaction.

### **Attrition**

Comprehensive national data suggested that the long-term attrition rates of graduate degree programs was estimated to be 50% across the United States (Lovitts & Nelson, 2000). Equally important, there was very little information extant about the reasons students leave doctoral programs (Golde, 2005). Although consistently high levels of program attrition may point to underlying issues within a department, university, or discipline, there are significant costs, both economic and psychosocial, on the institution and student. The economic arguments focus on the waste of resources at the departmental level, institutional level, and even the state and federal levels, with dollars spent to admit and retain students that include instructional and per-student costs. These costs increase the later a student chooses to leave a program. Social and emotional costs are also abundant for students and faculty. The longer it takes to achieve a degree, the more frustrated and demoralized a student may become (Baird, 1990).

**Academic integration.** Doctoral students must not only be integrated into the university setting but also into both the discipline and the department. Lovitts (2001) elaborated on Tinto's (1993) student integration theory, stating that academic integration is

the most important factor for doctoral students, whereas social integration is not directly related to doctoral attrition rates (Lovitts, 2001; Golde, 2000). As Tinto (1993) asserted, “Graduate persistence is, at one and the same time, both more local and more national in character than is undergraduate persistence. It is local, because it is centered in an academic department, and it is national because the department is the local manifestation of a discipline” (p. 234). The department in which a doctoral student is enrolled significantly determines the policies and procedures that will affect a student’s life. Admissions, financial support, degree requirements, and the curriculum are all determined and controlled by the student’s specific degree program. In addition, the norms and cultural assumptions about doctoral education are dictated by the disciplinary norms and practice and, subsequently, the nature of the research and scholarship of the discipline (Becher & Trowler, 2001; Clark, 1997).

To further examine attrition as it relates to the role of the department or discipline, Golde’s (2005) research goal was to understand the ways by which an academic department or discipline made known and understood the departmental cultural norms and practices that could influence doctoral student attrition. By selecting four departments at one institution, the researcher was able to focus on the intricate details of each department that were either unique to it or connected to the norms of its discipline. After calculating attrition rates for each department and identifying which students left without a degree from the fall of 1984 to fall 1989, the researcher spent time as both an observer and interviewer learning what it was like to be a doctoral student in each department.

**Department culture and structure.** Working to understand the culture and structure of each department, Golde (2005) proceeded to interview 58 individuals who left the doctoral

program in each of the four departments. Analysis of the data showed six key themes related to department structure and culture, which included the following: (a) mismatch between student's strengths and research practices, (b) poor fit between student and department expectations, (c) mismatch between advisor and student, (d) student perceived research faculty life incompatible with personal goals, (e) student perceived poor job market, and (f) structural isolation of the student. Linking all of these themes was the concept that attrition can occur because of looming departmental requirements that students perceive as difficult hurdles. The idea of failing to reach milestones, such as advancing toward doctoral candidacy, caused many students to reassess their abilities and goals and to leave their doctoral programs. Although this may be a desirable effect for academic screening purposes, it is important to note that early attrition is preferable to late attrition. The research suggested that departments should be more proactive in helping potential students—to arm them with appropriate information, such as job placement rates and departmental missions, in advance, to assist the students if they chose to pursue a doctoral degree within a particular program (Golde, 2005).

To label students who leave doctoral programs as *dropouts* emphasizes the illusion that the departure, not the program, is an issue with the student (Lovitts & Nelson, 2000). This idea is further perpetuated by the way in which students leave—suddenly, silently, and without communication to faculty or program administrators regarding any issues with the program. Students who do not complete their degrees are no less talented or qualified than those who persist toward degree completion. Many faculty members assume that the solution to decrease program attrition is to admit better students when part of the solution may be to engage faculty and students in meaningful relationship to assist the student toward

degree completion. Lovitts and Nelson (2000) suggested that departure data that showcased the single most important factor in students' decision to leave or continue on in a program was the relationship they had with their faculty advisor. A concerned faculty member can be the person who is best poised to assess a student's progress and can also reinforce a student's abilities and self-worth in ways that others cannot (Lovitts & Nelson, 2000).

### **Persistence**

The decision to pursue a doctoral degree is exceedingly intricate and individualized. Researchers face a challenge when studying the experience of doctoral students, including the complexities that influence student enrollment, persistence, and degree completion (Holley & Caldwell, 2012). Research defined persistence as a continuance of a student's progress toward completing their doctoral degree (Bair, 1999). Golde (2000) stated, "Paradoxically, the most academically capable, most academically successful, most stringently evaluated, and most carefully selected students in the entire higher education system—doctoral students—are the least likely to complete their chosen academic goals" (p. 199).

**Personal, social, and institutional factors.** The backgrounds and responsibilities of doctoral students may contribute to higher attrition rates compared with other student populations. Given a likelihood of completion between 30% and 50%, research studies have looked to Tinto's (1993) student integration theory and theories of resilience to inform reasons for high attrition rates and subsequently search for ways to increase retention and persistence to degree completion. Student integration into the university is highlighted in the interactions students have with their environments, which foster stronger resilience and persistence (Tinto, 1993). As Tinto discussed, doctoral persistence is not the result of one



single factor but rather the intersection of multiple factors that are generally described as student-related or institutional factors.

In a study conducted by Spaulding and Rockinson-Szapkiw (2012), the relationship between personal, social, and institutional factors that contributed to the completion of a doctoral degree was analyzed through the use of a qualitative phenomenological approach. Using standardized open-ended questions, researchers were able to gather data from successful doctoral candidates about their graduate experience. From the thematic analyses created from the transcripts of 42 women and 34 men with earned doctorates, the authors identified key themes pertaining to *what* participants' experienced, *how* participants persisted, and the *essence* of their experiences.

Findings showed that there were not only personal sacrifices and intervening life experiences that impacted students' rate of completion but also dissertation challenges that presented barriers for them. For example, one challenge related to the forming of a committee and the need to obtain a chairperson. Many participants indicated that some chairpersons were very challenging or offered little to no guidance throughout the dissertation process. The participants also associated having a variety of both formal and informal support systems with their ability to persist toward degree completion. Many of the respondents cited the significant role of a supportive spouse, friend, or parent who played a role in helping them remain emotionally stable throughout their academic progress. Additionally, students cited choosing the right chairperson contributed significantly to their success (Spaulding & Rockinson-Szapkiw, 2012).

**Support systems.** Greene (2015) researched support for doctoral students in a study of specific support services available to doctoral students and the effects of these services on

persistence. Using a mixed-methods approach, the researcher found five emergent themes, which included the unclear role of institutional support and the support of others. Regarding institutional support, respondents interviewed indicated that, in general, they were not familiar with the various programs and services available to them through their academic departments or of the specific roles of each. Many of those interviewed also acknowledged that many great resources may have been available to them, but if those resources were not communicated to the students, it didn't matter whether they existed. In addition, many of those interviewed commented about a gap in the services offered to graduate students, specifically with regard to feeling a sense of support and belonging as a member of the graduate student population.

Greene (2015) reported that the level of support received from those in the program, such as faculty members, and support of family and loved ones outside of the program were most frequently cited by participants as the factors important in persistence. For several participants, the high level of faculty and supervisory support was an important factor that influenced them to continue on in their programs toward degree completion. One interviewee stated “[support from faculty] helped reel things back in. I think it was more a case of needing to feel assured that the work I was doing was valuable and...that people were paying attention.” (p. 510).

Greene (2015) confirmed the research of Boulder (2010) regarding the benefits of both internal and external sources of support for students to persist through their doctoral studies. Although research on the benefits of social support systems specific to doctoral students was not abundant, Jairam and Kahl (2012) sought to expand the understanding of social support by interviewing students who had completed their doctoral degree. Data

gathered from 31 participants identified three groups of social supports: academic friends, family, and doctoral advisers.

Participants specified emotional and professional support in their experience with doctoral advisers or faculty. Although they received these kinds of support from different faculty members, they indicated the most overwhelming support came from their doctoral advisers. Emotional support was provided through affirmation that a student's work was high quality and that the student belonged in the doctoral program. Even though this type of support was reported less frequently from faculty than from other support groups, it also centered on support through providing encouragement. Professional support from doctoral advisers who offered expertise and knowledge was also instrumental in helping students to successfully complete their programs, especially when students were writing their dissertations (Jairam & Kahl, 2012).

Advising and mentoring experiences offered benefits to students working to complete their degree by offering support through encouragement, advice, and expertise of faculty and other mentors. These positive experiences can lead to student retention and persistence toward degree completion, which is a gain not only for the student and the department but the institution as well. Doctoral attrition is costly to the student and the university (Rockinson-Szapkiw, Spaulding, & Bade, 2014). Research conducted at one institution estimated that a decline in doctoral attrition by 10% would reduce funds lost by the institution by nearly one million dollars per year (Smallwood, 2004). In this regard, understanding doctoral persistence can allow university and program administrators to set appropriate admissions standards, plan orientation events and resources, and develop curriculum. Therefore,

understanding of persistence can align doctoral programs with student needs to allow for a larger percentage of students to persist to degree completion.

Research on factors associated with persistence and degree completion can be used to inform selection of potential doctoral students and the design of program curricula. A qualitative study by Rockinson-Szapkiw et al. (2014) collected 89 randomly selected transcripts from participants who had completed their doctoral programs. The transcripts were analyzed for factors the respondents believed assisted them in completing their doctoral degree. The researchers found five key themes respondents believed important in helping them to persist including relationships with family, faculty, and peers. Although many participants cited the support of family relationships, the relationships built with faculty and peers was also widely discussed as contributing to their program completion.

Some individuals believed that being asked to assist faculty members with research projects and developing collegial relationships throughout the program created a sense of belonging and a sense of being connected to faculty. Additionally, these relationships built through research also helped students build their repertoire of skills for the dissertation process. Aware that faculty involved in research are better equipped to help guide students in conducting successful dissertation projects, Rockinson-Szapkiw et al. (2014) recommended that universities hire faculty with research expertise who would encourage the continuation of future research and that faculty schedules allow time to devote to effectively support and direct doctoral students.

The doctoral student-faculty member relationship is impacted by departmental factors that can positively or negatively impact a student's degree progress and completion. To this end, Ferrer de Valero (2001) sought to analyze three questions concerning the average time

to degree completion among PhD students: factors that students and faculty perceive to affect time to degree completion, the differences among departments, and how the differences affect students trying to complete their degree in a short amount of time. Due to the broad nature of the research questions, the researcher opted to conduct the study in two phases: The first phase calculated the median time to degree and median completion rates for doctoral students in science, engineering, and social science departments, and the second phase explored departmental factors affecting these rates.

Of 876 students enrolled, Ferrer de Valero (2001) found the median time to degree was 4.6 years, with times ranging from 3.3 to 6 years. In addition, the median completion rate for the departments studied was 57.1%, with rates ranging from 15.2% to 80.9%. Fifty-three percent of students completed their doctoral program, and another 2% were still enrolled. Although these rates are consistent with Nerad and Cerny (1993), who investigated doctoral attrition, it was startling that 45% of doctoral students failed to complete their doctoral degree, especially given the high cost of graduate education and ever-constrained budgets (Ferrer de Valero, 2001). In addition to completion rates, the researcher found that the departmental factors reported to promote student success were financial support, student-advisor relationship, departmental orientation and advising, peer support, and student-committee relationship. When asked to describe the student-advisor relationship, participants commonly used words such as excellent, nurturing, mentoring, caring, loving, and exceptional. These words align not only with the mentoring relationship between doctoral students and faculty members but also with the two aspects of mentoring noted by Kram (1988): career and psychosocial mentoring.

Creating relationships with faculty and having supportive resources outside of a doctoral program influence a doctoral student's ability and drive to persevere in completing their doctoral degree. Doctoral attrition affects not only the student but also the program and university. As a result, the persistence of doctoral students has become an area of research imperative to both student and institutional well-being.

**Three stages in the process of doctoral persistence.** Tinto's (1993) theory of doctoral persistence is modeled by the personal and academic interactions that occur between students and faculty and the various communities that comprise both the academic and social systems of higher education institutions. Tinto identified three stages that longitudinally outline the process of doctoral persistence: transition, candidacy, and completion (see Appendix E). Tinto noted that the stages are not defined as uniform in quality over time, but rather that doctoral persistence is marked by at least the three stages.

Transition, the first stage in the process of doctoral persistence, typically takes place over the first year of study. During this time, the doctoral student seeks to create their membership in both academic and social communities at their institution. Both formal and informal relationships take shape during this phase of persistence in both institutional communities and specifically in the student's chosen department or program. The transition stage will also be influenced by the connection made by the doctoral student between their academic program and reaching their career goals. These individual decisions about desire to continue membership in the program and the costs and benefits of continuing will influence a student's ability to persist.

Candidacy, the second stage in Tinto's (1993) model, includes the acquisition of knowledge and the development of competencies required for doctoral research, which

culminates in successfully completing the doctoral comprehensive exam. Development of abilities and competencies, rather than community membership, is the critical issue during this stage and thus plays a defining role in student persistence.

Completion is the final stage of the model that notes the completion of a doctoral dissertation and encompasses the period of time from acquiring candidacy through the completion of the doctoral research proposal and finally the successful completion and defense of the dissertation. As noted, this stage is likely to showcase not only the nature of individual abilities but also the direct role individual faculty play as mentors and adviser (Clewell, 1987). During the completion stage, relationships with faculty may decline from many to very few and may involve a central relationship between the doctoral candidate and one faculty member who takes on the role of dissertation chair and several other faculty members who serve on the dissertation committee. Persistence at the third stage may depend largely, if not completely, on the behavior of a specific faculty member (Tinto, 1993).

Tinto (1993) asserted that the academic and social interaction that takes place among doctoral program communities is inseparable, meaning the social interaction with faculty and peers “becomes closely linked not only to one’s intellectual development, but also to the development of important skills required for doctoral completion (p. 232). Wenger (1996) supported this statement by observations about learning and organization. He concluded that having informal social interactions are necessary in creativity, problem-solving, and knowledge-making. This theory of involvement provides a broad lens to explore doctoral education experiences and persistence outcomes.

Although Tinto’s (1993) theories have rarely been challenged, critics have opined that the theory fails to recognize the cultural assumptions that are embedded in its use, and that it

is particularly problematic when it is applied to various racial/ethnic minority students (Guiffrida, 2006; Hurtado et al., 2007; Tierney, 1999). Kuh and Love (2000) highlighted the cultural perspective on student attrition, during which the importance of cultural influences and communities in developing membership in a campus community was discussed. In addition, Hurtado and Carter (1997) asserted that the concept commonly missed in the application of Tinto's (1993) theory is a student's sense of integration, which is actually a psychological measure. Instead, the student's participation in campus activities is often how integration is operationalized instead of using a sense of belonging as a way to assess a student's psychological sense of affiliation with the institutional community. Groups who have historically been marginalized in higher education likely have a much different definition of integration than those students who have not been marginalized (Cole & Griffin, 2013).

**Program satisfaction.** Doctoral education has historically been defined as isolating and self-directed academic work. These attributes are so closely associated with pursuing a doctoral degree that they are not typically viewed as problems, but rather simply accepted as being the design of a doctoral program (Johnson, Lee, & Green, 2000). With such traits accepted as a given of a pursuing a doctoral degree, it is not surprising that nearly 50% of students who begin doctoral study will leave before completing their degree (Di Pierro, 2007). High attrition rates have powerful effects not only on the student but also the doctoral program and institution as well. As a result, retention and persistence to graduation are important issues to which to attend.

With regard to persistence, researchers have studied how doctoral student satisfaction can contribute to students not only remaining in their academic programs but also persisting



to program completion. Cockrell and Shelley (2010) conducted a study to determine which, if any, program structures promoted a doctoral student's perceived satisfaction and their intent to persist to program completion. As program structures are generally a combination of several components, the researchers chose to add additional variables to the study, including satisfaction in program, support and isolation, and knowledge of resources, expectations, and customs. Satisfaction was included in this study based on study findings by Tenenbaum, Crosby, and Gliner (2001), who discovered that mentors who offered psychosocial support to doctoral students increased their satisfaction with their program.

Using an adapted version of the Survey on Doctoral Education (Golde & Dore, 2001), researchers surveyed 141 doctoral students from a southeastern state. From the results, Cockrell and Shelley (2010) found significant correlations among all the responses from participants to all statements related to advisor satisfaction. However, doctoral satisfaction and self-reported intended persistence could not be addressed, as the pool of participants did not divide into distinct groups for analysis. Of the participants, 94.3% reported an intent to persist, which created a disproportionate number planning to persist compared with those who did not intent to complete their degree. However, the sample did report an exceptionally high degree of support as well as a related high intent to persist. Although the authors acknowledged this could be a result of the pool being more likely to respond to the survey, they also reported positive significant correlations between several advisor practices and student satisfaction with their advisor. This finding could be a contributing factor to the high rate to persist, but due to study limitations within the sample, a direct link could not be established.

Program attrition and feelings of dissatisfaction among doctoral students have been related to a litany of issues, which include a heavy workload, unclear program expectations, financial issues, and an overall lack of mentorship and support (Gardner, 2004). In a study by Wasburn-Moses (2008), which evaluated the strengths and weaknesses of special education doctoral programs and how satisfaction varied among individuals targeted for change by a prior study, 619 current doctoral students in special education doctoral program were surveyed. The Satisfaction Survey of Special Education was constructed using both the Survey of Doctoral Students in Special Education (Deutsch Smith, Pion, Chowdhuri Tyler, Sindelar, & Rosenberg, 2001) and the Survey on Doctoral Education and Career Preparation (Golde, 1998). Quantitative results indicated that more than half of participants responded that they were *mostly satisfied* or *completely satisfied* with their program. Furthermore, participants felt most satisfied with their advisor and, through qualitative responses, specified the importance of mentoring and support from their advisor and other faculty members. The study found satisfaction with advisors and other faculty to be highly related to overall satisfaction.

Within higher education, a greater overall satisfaction level with the academic experience is significantly predictive of a student's persistence (Fischer, 2007). To this end, Schreiner and Nelson (2013) investigated how student satisfaction contributed, or not, to persistence. Through their analysis, the researchers sought to explore how student satisfaction scale scores contributed to predicting if student's would choose their home institution again, given the chance, and to determine the predictive ability of student satisfaction scale scores for actual persistence the following academic year. Using data from the online Student Satisfaction Inventory (Schreiner & Juillerat, 1994), the researchers polled

a sample of 29,383 undergraduate students who were evenly distributed across the class levels for first-year, sophomore, and junior levels. Research analyses indicated across all class levels that the likelihood of persisting at the same institution the following academic year was significantly related with grade point average, selectivity of the institution, and satisfaction with the campus climate. Being the most significant predictor of student persistence campus climate indicates that respondents felt a sense of belonging on campus, were proud of the institution they were attending, enjoyed being a student, and felt welcome on their campus.

In addition to campus climate, a student's satisfaction with their academic program can also contribute to the completion of a doctoral degree (Skudlarek, 1992; Cooke, Sims & Peyrefitte, 1995; Lovitts, 1996). Results from a meta-synthesis of research by Bair and Haworth (2004) showed not only higher likelihood of doctoral completion with higher satisfaction but also the reverse. When students are disappointed or dissatisfied with their doctoral programs, they are more likely to leave their doctoral studies (Lovitts, 1996; Boozer, 1972). The researchers measured satisfaction based on: quality of the program, communication with students, fairness in requirements, consistency in the evaluation of students, concern for students as new professionals, and guidance (Bair & Haworth, 2004).

Each of these factors contributes not only to the satisfaction a student may experience, or not, but also to an individual's overall doctoral experience, which varies greatly from student to student. With the intent of looking at cases of students who left doctoral education, Golde (2000) hoped to illuminate the process of doctoral education students experience from their own personal lens. Through the use of qualitative techniques, the researcher interviewed three separate students who had made the decision to stop their

doctoral studies. While each respondent varied in their reasoning for moving away from doctoral education, one participant explained that there were many factors that played into her decision to leave, citing personal reasons, not having a support network, and having deeply rooted negative feelings toward her home department. Describing her home department as being “hellacious,” the respondent continued that she had been very disappointed in her department and did not feel the faculty had a lot of interest in graduate students; instead, the faculty were simply interested in their own research agendas as opposed to helping to nurture future academics. She ended her discussion citing her dissatisfaction with describing her home department as being an unhealthy place.

From an exploratory study designed to create a tracking database for doctoral students, Williamson et al. (2004) conducted a study to research barriers students experienced in completing their doctoral studies. Following a review of departmental and university documents and data analyses of survey and semi-structured focus group information, the researchers compiled information about program completion, an updated demographic profile of students, and information regarding student’s experiences while they were doctoral students that either assisted in their completion or hindered them and directed them toward a decision to leave the program (Williamson et al., 2004). From this data set, the researchers compiled information related to factors that impacted a student’s program pathway and discovered that those students who did not complete the doctoral program had a less positive view of the doctoral program as well as a less favorable view of faculty members. However, they did respond more favorably to questions regarding the university’s infrastructure. In addition to information regarding faculty members, those students who did not complete the program were consistently less positive in their viewpoints than those who

graduated from the program. Finally, the researchers found that those students who did not complete their degrees reported lower levels of having personal and professional support for completing the doctoral degree (Williamson et al., 2004).

### **Summary**

Literature related to the concepts of mentoring doctoral students and the characteristics and practices attributed to effective mentoring were reviewed in Chapter 2. The topic of attrition included discussion of academic integration and department culture and structure. This chapter concluded with a review of research of personal, social, and institutional factors; support systems; and stages in the process of persistence to complete the doctoral degree. Chapter 3 includes details of the methods approach to the research pertaining to characteristics that doctoral students believe to be desirable qualities in a mentor and the extent to which students believe a mentor is effective in assisting them in persisting to degree completion.

### **Chapter 3: Methods**

The purpose of this study was to examine the characteristics that doctoral students believe to be desirable in a mentor and the extent to which students believe a mentor is effective in increasing their perceived program satisfaction. The researcher used survey data and subsequent analysis to examine doctoral candidates' self-reported perceptions of advantageous mentor qualities and the benefits that mentors provide the candidate. Data about ideal mentor qualities and effective mentoring were analyzed by several demographic characteristics of the respondents.

Mentoring is a process that can have many definitions and meanings to individuals. For the proposed study, mentorship was defined as a developmental relationship in which an experienced person provides both technical (career) and psychosocial support to a less experienced person (Chesler & Chesler, 2002). Individuals are different, and each will have different needs when it comes to mentoring. Mentors bring their own personal experiences, backgrounds, and specific areas of growth upon which mentors seek to improve. By developing positive mentorship experiences that provide academic support and understanding of the doctoral students' chosen careers, institutions of higher education can better facilitate professional growth and confidence and increase student persistence to degree completion.

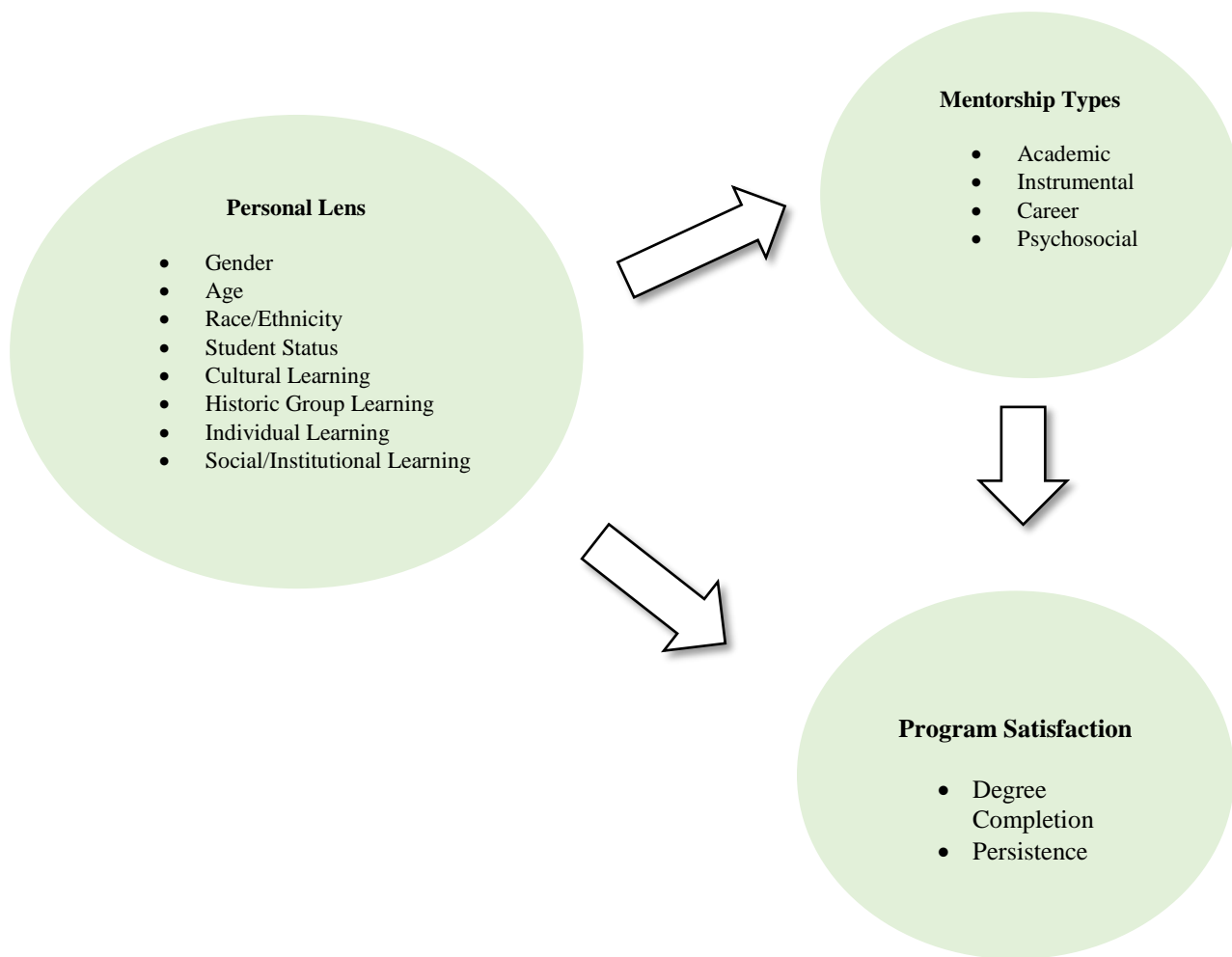
Quantitative data collected from an electronic survey instrument adapted specifically for the doctoral student population revealed the ideal qualities doctoral students seek in a mentor, described students' experiences with mentorship, and determined the impact those experiences have had. The overall research design, setting, sample, methods, validity, and

reliability for the instrument, and the data-collection procedures and analysis are described in further detail throughout this chapter.

### **Conceptual Framework**

The mentoring experience of doctoral students can be impacted by a variety of factors ranging from organizational availability of faculty mentors to doctoral students finding a mentor that allows them to grow personally and professionally and ultimately assist them in completing their doctoral degree.

The conceptual framework represented in Figure 1 begins with the attributes brought by a doctoral student to their academic program, the mentorship experience including the various aspects of career, instrumental, academic, and psychosocial mentoring, and culminates in the perception of program satisfaction a doctoral student experiences. This study examined the relationship between the mentorship experiences of doctoral students, the factors doctoral students seek in their ideal mentor, and the relationship of the mentorship experience to satisfaction with their academic program.



*Figure 1.* A conceptual framework.

### **Research Questions**

Two specific research questions were developed to guide the review of doctoral experiences with mentoring in various doctoral programs by students who have completed one year of coursework but have not yet completed their doctoral program:

**Q 1.** What are the qualities that are most beneficial in a mentorship relationship with currently enrolled doctoral students?



**Q 2.** What is the relationship between mentoring and a doctoral students' satisfaction with their program?

### **Research Design and Approach**

A descriptive, quantitative research design used an adapted electronic survey instrument to gather data from doctoral students who were enrolled in doctoral degree programs. Participants were recruited via various online doctoral groups through Facebook and LinkedIn, and the electronic survey was promoted three times every week for a two week time period.

The quantitative research design facilitates statistical analyses of numeric data scores from a Likert-scaled survey instrument to interpret the perceptions of mentoring from currently enrolled doctoral students at various institutions and doctoral programs. A numerical scale related doctoral students' perceptions of the importance of specific mentor traits and the students' experiences with faculty and advisor guidance. Further, the quantitative design of this study offered the opportunity to assign numerical values to a variety of doctoral students' perceptions of mentorship and to align those perceptions with their self-reported progress in their respective programs.

The quantitative method was appropriate and advantageous for the current study, as it permitted a well-rounded evaluation of the research questions in a design that was both accessible and easily understood by the survey participants. This method allowed for collection of self-reported doctoral student beliefs, values, and degree progress data from a large sample size of participants within a specific period of time. Further, generalizations were drawn from data gathered from the survey sample to doctoral student populations from various programs and institutions based on their institutional size and classification.

The survey instrument focused on gathering data from the following areas:

- Individual doctoral student demographic data including self-identified gender, self-identified race, years admitted in a doctoral program, current employment status, and self-reported phase of doctoral program.
- Individual doctoral student perception of most beneficial traits in a mentor.
- Individual doctoral student self-reported perception of mentoring benefits they have been afforded.
- Individual students who are receiving financial assistance for their doctoral program through a doctoral fellowship, teaching assistantship, or research assistantship and those students who are not.

### **Setting and Sample**

The sample for this study was drawn from currently enrolled doctoral students, with focus on those doctoral students who were enrolled in doctoral programs that were part of online doctoral forums found on the media sites Facebook and LinkedIn. This provided for a variety of institutional demographics and student characteristics. Participation in the study was voluntary and could be terminated at any point in the process. A total of 339 respondents participated in the study, which allowed the researcher to be able to fully examine the research questions and to have a statistically significant sample to survey the possible connections between variables of interest.

### **Data Collection Process**

The study and adapted survey instrument were submitted to the dissertation committee and the Eastern Michigan University's institutional review board (IRB). The adapted survey included a demographic section, the Ideal Mentor Scale (IMS), the Survey on

Doctoral Education, and the First Decade Study. After IRB approval, invitations containing the Google Doc link were used to recruit participants via Facebook, LinkedIn, and email (see Appendices A, B, and C).

One month prior to survey dissemination, the researcher completed an introductory process of joining 16 Facebook pages including AERA, ACPA, the National Association for Multicultural Education, Queer PhD Network, Black & Brown @ AERA, and Group of the American Educational Research Association. In addition the researcher joined LinkedIn pages that included the Association for the Study of Higher Education (ASHE), American Education Research Association, and the PhD Forum. These sites were visited and posted to every third day over a two-week period to raise awareness among their members to participate in the study.

The researcher selected these groups by using the search phrases doctoral student and doctoral support to look for groups related to doctoral study. Following this identification, each group was reviewed and, to ensure active members would see the requests for survey participation, joined only if the group was active and had a minimum of five new posts per month by group administrators.

This survey was administered using Google Forms, where a direct link to the survey was shared with participants who agreed to participate in the study. Within the letter of explanation and informed consent sections of the survey, the design of the survey was explained and the benefits of the current study and data obtained were described in further detail to each participant. Anonymity of participants was protected, as names were not matched to specific responses or data collected.

## **Instrumentation**

Data for this study were gathered through the use of three previously designed survey instruments. The researcher did not modify these instruments in any way and gained explicit permission to use the Ideal Mentor Scale, the Survey on Doctoral Education, and The First Decade Study (see Appendix F).

The Ideal Mentor Scale (IMS), developed by Rose (2005), was originally designed to be a psychometrically sound gauge of the mentoring preferences of doctoral students. The instrument was influenced by Anderson and Shannon's (1988) theoretical model of mentoring that identified five functions of a mentor including teaching, sponsoring, encouraging, counseling, and befriending (Rose, 2005). The creation of the IMS came out of a need to assess mentoring qualities viewed as ideal by doctoral students. The instruments that existed prior to the creation of the IMS were not appropriate in identifying student preferences because they looked at current relationships or because they had been created for some other population, such as faculty members. These previous instruments also were not applicable to students who did not have mentors and the measurement of mentor preferences of various populations would not be applicable because different populations were expected to have different needs (Green & Bauer, 1995).

Following surveys of three different samples of doctoral students and continually narrowing down the questions on the IMS from an originally 111 items, the resulting scale contained 34-items, which were unit-weighted with three subscales. The *integrity* subscale is measured by 14 items, the *guidance* subscale is measured by 10 items, and the *relationship* subscale is measured by 10 items. The researcher did not intend any adaptations to the 34-item questionnaire. The scale was used to identify the qualities doctoral students see as ideal

in a mentor and qualities they did not believe were beneficial. Participants were asked to rate the importance attributed to the 34 items. The instrument asked participants to rate only the importance of the attribute or factor of an ideal mentor, not a specific person in their life. The Likert scale identified the range of attributes from *not at all important* to *extremely important*.

The second instrument, the Survey on Doctoral Education, was constructed and used for a project entitled *At Cross Purposes: What the Experiences of Today's Doctoral Student Reveal About Doctoral Education*. Conducted by Golde and Dore (2001) in the latter part of 1999, the study was funded by The Pew Charitable Trust to answer questions of doctoral students regarding their career preparation, understanding of the doctoral program, expectations and meeting of program expectations, and understanding doctoral processes. The instrument surveyed doctoral students on five sections including a) experiences as a graduate student, (b) description of program and department, (c) career plans, (d) expectations of the faculty job, and (e) background information.

The survey instrument developed for the First Decade Study (Tracy, Williamson, Downing, & Brandon, 2003), asked doctoral fellows in the Leadership and Counseling Department at Eastern Michigan University to speak with other doctoral students. The doctoral fellows were asked to frame their conversations with other doctoral students around their experiences in the doctoral program and the issues they had faced or were currently facing. From these discussions, the survey questions were developed and crafted to design the survey instrument utilized for the study.

## **Pilot Study**

For the current study, the survey instrument consisted of questions from three separate studies. The researcher conducted a pilot survey after creation of a survey to be utilized in a Google Form that was accessed through a survey link. The researcher constructed an email explaining the purpose of the proposed study and asked for respondents to complete the study and provide feedback including positive, negative, and constructive comments about the survey instrument. In addition, participants were encouraged to time their responses to test for an average time of completion. The email was sent to nine students in the educational leadership doctoral program at Eastern Michigan University. Respondents were asked to provide their feedback within two weeks. Eight participants responded with feedback.

Each respondent indicated the survey took between 10 and 15 minutes to complete. From additional feedback provided, the wording of four questions was altered to provide clearer understanding of the question. A category for survey participants to identify race was adjusted to reflect current nomenclature. In addition, an informed consent form was included at the beginning of the survey explaining the intent and purpose of the study, contact information for the researcher, and an explanation that the study was entirely voluntary.

Following these adjustments, the researcher elected to add questions to the survey instrument related to a doctoral student's satisfaction with their academic program. The additions coupled with the adjustments made from the first pilot study warranted a second pilot study. The researcher constructed a new email advising the same eight participants of both the adjustments and addition of new questions and asked again for feedback and for the length of time the survey instrument took to complete. The participants were asked to

provide any feedback to the researcher within two weeks. Feedback indicated the survey took approximately 10 to 15 minutes to complete and the participants did not have any constructive feedback regarding adjustments or new questions.

### **Data Analysis**

Data generated from the main survey included participants' demographic data and individual perceptions of mentor qualities and doctoral program satisfaction. This information was entered into the statistical analysis software package, SPSS statistics. The data entered into SPSS, bivariate Pearson, and Spearman correlations were completed in addition to an ANOVA for regression using five scales. Finally, a stepwise multiple regression was conducted. The bivariate Pearson and Spearman correlations were used to look at the relationship between mentor behavior and satisfaction with the doctoral program scale and satisfied with program rating. An ANOVA for regression using five scales of mentor behavior, academic mentoring instrumental mentoring, career mentoring, and psychosocial mentoring was conducted to see what the levels of variability were or what percentage of mentor satisfaction were related to the types of mentoring participants indicated as important. A stepwise multiple regression was conducted to see what predictor variables should be added to or removed from those variables used to explain higher or lower program satisfaction. A standard alpha level of .05 was used to determine statistical significance.

Finally, the researcher analyzed the two open-ended questions by categorizing responses for both most beneficial and most challenging qualities of the mentor into easily identifiable themes. Once these qualities were initially categorized, the researcher looked for common themes or patterns among them. Among the 339 participant responses, many

multiple themes could be identified. As a result, the researcher created a grid with the identified themes for both the most beneficial and most challenging qualities indicated by respondents. Following the grid creation, participant responses were read again and each theme that applied to the response was coded individually. In total, 14 themes were identified for those responses categorized for the most beneficial qualities of the mentor and 17 themes were identified for responses reported as most challenging mentor qualities. In addition, the total of each theme identified in participants' responses was calculated and divided by the total number of responses to determine the percentage of how often each theme occurred within the data set. This allowed the researcher to showcase the most beneficial and most challenging themes identified from the qualitative analysis. These responses will be used to support the quantitative data from this study.

### **Summary**

In summary, this study used a survey instrument comprised of three separate previously utilized survey instruments to research the qualities that currently enrolled doctoral students found most beneficial in a mentoring relationship and what the relationship was between mentoring and a doctoral students' program satisfaction. The researcher joined doctoral student groups on both Facebook and LinkedIn to distribute the survey instrument. After completing a pilot survey of the instrument used, the researcher posted to the doctoral groups every third day for a two-week time frame and received a total of 339 survey responses. Bivariate Pearson and Spearman correlations, ANOVA for regression using five scales, and a stepwise multiple regression were used to analyze the data collected. Chapter 4 includes the demographic information for the sample of the study, the results of the data analyses, and additional findings of the current study.



## Chapter 4: Findings

### Introduction

The purpose of this study was to examine the characteristics that doctoral students believed to be desirable in a mentor and the extent to which students believed a mentor is effective in increasing their perceived program satisfaction. Survey data were gathered from 301 doctoral candidates to complete the study.

### Data Cleaning

A total of 339 participants began the online survey, but several participants left answers blank. For this reason, a decision was made to retain participants who had zero missing answers ( $n = 324$ ) or one missing answer ( $n = 11$ ). These respondents were included in the analysis for the survey questions that utilized a Likert scale. The responses for the 11 participants with one missing answer were estimated/imputed using the grand mean for all respondents. A series of box plots identified 29 univariate outliers in the first round followed by another four univariate outliers in the second round. After these outliers were removed, the final sample for this study was  $N = 301$ .

All 339 participants responded to the two open ended questions regarding most beneficial and most challenging mentor traits. As a result, all 339 survey respondents were included in the thematic analysis portion of this study.

### Description of the Sample

Table 1 shows the frequency counts for selected variables in the study. Most students were female (71.4%), followed by male (23.3%), and other orientation (5.3%). The most frequently represented ethnic/racial groups were African American/Black (41.9%) and White/Caucasian (32.9%), followed by Asian/Pacific Islander (15.6%). Ages ranged from 18

to 27 (11.3%) to over 57 (2.3%) with a median age of 32.5 years. Most students were currently enrolled at university (96.0%) and had earned masters' degrees before beginning their doctoral studies (93.7%). One hundred eighteen students reported having funding through a fellowship or a teaching or research assistantship (39.2%). Of the 301 participants, 226 were full-time doctoral students (75.1%); 75 were part-time doctoral students (24.9%). Most rated their satisfaction with their program as a 4 (46.2%) or 5 (25.6%) on a five-point scale. Almost all planned to complete the program (98.0%). More than a third of the participants (117) were students in the first or second year of doctoral study (38.9%), 137 students were in their third or fourth year (45.5%), and 47 students in their fifth year or beyond (15.6%). Doctoral program stages ranged from *taking coursework* (28.6%) to (9.0%) with the largest group *collecting dissertation data* (33.9%). *successfully defended but not yet graduated*

Table 1

*Frequency Counts for Selected Variables (N = 301)*

<b>Variable</b>	<b>Category</b>	<b>N</b>	<b>%</b>
Gender	Female	215	71.4
	Male	70	23.3
	Other	16	5.3
Race/Ethnicity	African American/Black	126	41.9
	American Indian or Alaskan Native	1	0.3
	Asian/Pacific Islander	47	15.6
	Hispanic	17	5.6
	White/Caucasian	99	32.9
	Two or more races	11	3.7

Table 1 *Continued*

<b>Variable</b>	<b>Category</b>	<b>N</b>	<b>%</b>
Age <sup>a</sup>	18-27	34	11.3
	28-37	133	44.2
	38-47	88	29.2
	48-57	39	13.0
	58+	7	2.3
Currently enrolled at university	Yes	289	96.0
	No	12	4.0
Earned masters before doctoral	Yes	282	93.7
	No	19	6.3
Receiving funding through fellowship, teaching or research assistantship	Yes	118	39.2
	No	183	60.8
Received support ( <i>n</i> = 236)	No	106	44.9
	Yes	130	55.1
Doctoral enrollment status	Full-time doctoral student	226	75.1
	Part-time doctoral student	75	24.9
Satisfied with program	1=Very Dissatisfied	5	1.7
	2	19	6.3
	3	61	20.3
	4	139	46.2
	5=Very Satisfied	77	25.6
Will complete program	Yes	295	98.0
	No	6	2.0
Time admitted into doctoral program	1-2 years	117	38.9
	3-4 years	137	45.5
	5+ years	47	15.6
Doctoral program stage	Taking my coursework	86	28.6
	Completed coursework	35	11.6
	Passed comprehensive exams	27	9.0
	My proposal has been approved	24	8.0
	Collecting dissertation data	102	33.9
	Successfully defended	27	9.0

After examining the demographic data, the researcher compared the sample from this study to data collected by the National Science Foundation (NSF, 2016) about the demographics of doctoral students across the country. The NSF reported 46% of all doctoral recipients in 2016 were women in comparison to the sample presented in this study with a larger proportion of 71.4% being women. In addition, the NSF reported that of the 59,904 doctoral recipients in 2016, only 2,868, or 5.2%, were Black or African American (NSF, 2016). This number is in contrast to the 41.9% of Black or African American participants who completed the current study. It was also noted by a study by Graduate Enrollment and Degrees (2007–2017) that across all institutions in the United States in the fall of 2017, a total of 57.5% of students indicated they were enrolled full time, which was below the average percentage of this study's sample of 75.1%.

Table 2 represents the psychometric characteristics for the six summated scale scores. The Cronbach  $\alpha$  reliability coefficients are used to measure internal consistency, or to what degree all questions were answered in the same fashion. In this study the Cronbach  $\alpha$  reliability coefficients ranged from  $\alpha = .65$  to  $\alpha = .92$ , with a median  $\alpha = .74$ . This suggested that all scales had adequate levels of internal reliability (Fraenkel, Wallen, & Hyun, 2015). The first four scales displayed in Table 2 reflect mentoring types including instrumental, academic, psychosocial, and career mentoring. Specific survey questions indicative of the definition of each area of mentoring and by which each mentoring type was analyzed are listed following Table 2 by the order of importance respondents believed each mentor trait to be.

Table 2

*Psychometric Characteristics for Summated Scale Scores (N = 301)*

<b>Score</b>	<b>Number of Items</b>	<b>M</b>	<b>SD</b>	<b>Low</b>	<b>High</b>	<b><math>\alpha</math></b>
Instrumental Mentoring	4	4.04	0.69	2.00	5.00	.65
Academic Mentoring	8	4.38	0.45	2.88	5.00	.73
Psychosocial Mentoring	20	3.81	0.37	2.95	4.80	.74
Career Mentoring	11	4.01	0.51	2.55	5.00	.73
Mentor Behavior	7	3.85	0.83	1.71	5.00	.87
Satisfaction with Doctoral Program	11	3.84	0.84	1.73	5.00	.92

Instrumental mentoring is defined as encompassing direct training in research methods, providing information about content, ethics, and procedures and ongoing efforts to confirm that the mentee was given opportunities to learn what they need to know (Blake-Beard et al., 2011).

Table 3 displays the four instrumental mentoring items sorted by the highest importance rating. Highest rated items were Item 4, “Help me to maintain a clear focus on my research objectives” (92.03%) and Item 1, “Show me how to employ relevant research techniques” (79.40%).

Table 3

*Instrumental Mentoring Items Sorted by Highest Importance Rating (N = 301)*

<b>Item</b>	<b>M</b>	<b>%</b>
Help me to maintain a clear focus on my research objectives.	4.50	92.03
Show me how to employ relevant research techniques.	4.09	79.40
Give proper academic acknowledgement to graduate students	4.13	78.07
Give me specific assignments related to my research problem	3.43	53.82

Academic mentoring is described as a positive role model supporting a mentee by giving academic advice, sharing resources, and being concerned with the students' success (Blake-Beard et al., 2011). Table 4 displays the eight academic mentoring items sorted by the highest importance rating. Highest rated items were Item 8, "Be experienced in their field" (92.69%), and Item 10, "Treat research data in an ethical fashion" (92.36%).

Table 4

*Academic Mentoring Items Sorted by Highest Importance Rating (N = 301)*

<b>Item</b>	<b>M</b>	<b>%</b>
Be experienced in their field.	4.55	92.69
Treat research data in an ethical fashion.	4.58	92.36
Be available to students to discuss academic problems.	4.52	91.36
Have a lot of intellectual curiosity.	4.33	86.38
Respect the intellectual property rights of others.	4.39	86.05
Challenge students to explore alternative approaches to a problem.	4.29	85.38
Be generous with time and other resources.	4.27	85.38
Meet with me on a regular basis.	4.08	75.75

Psychosocial mentoring is described as including encouragement and support as a mentee learns and survives through times of doubt and failure (Blake-Beard et al., 2011). Table 5 displays the 20 psychosocial mentoring items sorted by the highest importance rating. Highest rated items were Item 31, “Communicate openly, clearly, and effectively (98.34%)” and Item 26, “Value me as a person (98.01%).”

Table 5

*Psychosocial Mentoring Items Sorted by Highest Importance Rating (N = 301)*

<b>Item</b>	<b>M</b>	<b>%</b>
Communicate openly, clearly, and effectively.	4.72	98.34
Value me as a person.	4.71	98.01
Express a belief in the student's capabilities.	4.62	97.34
Treat me as an adult with a right to be involved in decisions that affect me.	4.70	96.68
Believe in me.	4.71	96.68
Advocate for my needs and interests.	4.53	93.36
Inspire me by their example and words.	4.49	92.36
Generally try to be thoughtful and considerate.	4.39	91.03
Be calm and collected in times of stress.	4.35	89.37
Be a role model.	4.45	87.71
Work hard to accomplish their goals.	4.31	86.71
Prefer to cooperate with others than compete with them.	4.27	83.72
Be a cheerful, high-spirited person.	3.59	55.15
Be interested in speculating on the nature of the universe or the human condition.	3.18	44.52
Rarely feel fearful or anxious.	3.28	43.19
Relate to me as if they are a responsible, admirable older sibling.	2.90	35.22
Be seldom sad or depressed.	3.02	34.55
Have coffee or lunch with me on occasion.	2.34	18.94
Talk to me about their personal problems.	1.94	9.63
Take me out for dinner and/or drink after work.	1.65	6.31

Finally, career mentoring, although closely related to instrumental mentoring, encompasses a mentor agreeing to share their skills, knowledge, and professional networks with a mentee and is available to help guide them when making career decisions (Blake-Beard et al., 2011). Table 6 displays the 11 career mentoring items sorted by the highest importance rating. Highest rated items were Item 36, “Provide honest feedback (both good and bad) to students about their work” (98.67%), and Item 35, “Always be counted on to follow through when he or she makes a commitment” (93.69%).

Table 6

*Career Mentoring Items Sorted by Highest Importance Rating (N = 301)*

<b>Item</b>	<b>M</b>	<b>%</b>
Provide honest feedback (both good and bad) to students about their work	4.73	98.67
Always be counted on to follow through when he or she makes a commitment.	4.54	93.69
Recognize my potential.	4.49	91.36
Brainstorm solutions to a problem concerning my research project.	4.32	88.37
Help me plan a timetable for my research.	4.20	80.40
Provide information to help me understand the subject matter I am researching.	4.14	79.40
Help me investigate a problem I am having with research design.	4.09	79.40
Accept me as a junior colleague.	3.78	68.11
Help me plan the outline for a presentation for my research.	3.77	64.45
Help me to realize my life vision.	3.66	59.47
Keep their workplace neat and clean.	2.40	22.92



## Answering the Research Questions

**Research Question 1.** “What are the qualities that are most beneficial in a mentorship relationship with currently enrolled doctoral students?” Table 7 shows the ratings of mentor qualities items sorted by highest mean. These ratings were given using a five-point metric: 1 = *Not at all Important* to 5 = *Extremely Important*. The highest levels of importance were for *Communicate openly, clearly, and effectively* ( $M = 4.70, SD = 0.60$ ), *Believe in me* ( $M = 4.68, SD = 0.63$ ), *Treat me as an adult who has a right to be involved in decisions that affect me* ( $M = 4.68, SD = 0.61$ ), *Provide honest feedback (both good and bad) to students about their work* ( $M = 4.66, SD = 0.66$ ), and *Value me as a person* ( $M = 4.66, SD = 0.64$ ). The lowest levels of importance were for *Take me out for dinner and/or drink after work* ( $M = 1.71, SD = 1.07$ ) and *Talk to me about their personal problems* ( $M = 2.00, SD = 1.18$ ).

Table 7

*Ratings of Mentor Qualities Items Sorted by Highest Mean (N = 339)*

<b>Item</b>	<b>M</b>	<b>SD</b>
Communicate openly, clearly, and effectively	4.70	0.60
Believe in me.	4.68	0.63
Treat me as an adult who has a right to be involved in decisions that affect me.	4.68	0.61
Provide honest feedback (both good and bad) to students about their work	4.66	0.66
Value me as a person.	4.66	0.64
Express a belief in the student's capabilities	4.59	0.62
Treat research data in an ethical fashion	4.54	0.73
Always be counted on to follow through when he or she makes a commitment	4.49	0.73
Be experienced in their field	4.49	0.78

Table 7 *Continued*

<b>Item</b>	<b><i>M</i></b>	<b><i>SD</i></b>
Advocate for my needs and interests.	4.48	0.76
Inspire me by their example and words.	4.47	0.71
Be available to students to discuss academic problems	4.47	0.83
Recognize my potential.	4.46	0.85
Help me to maintain a clear focus on my research objectives.	4.43	0.79
Be a role model.	4.41	0.84
Generally try to be thoughtful and considerate.	4.37	0.74
Respect the intellectual property rights of others	4.34	0.94
Be calm and collected in times of stress.	4.31	0.79
Have a lot of intellectual curiosity	4.29	0.88
Work hard to accomplish their goals	4.29	0.87
Brainstorm solutions to a problem concerning my research project.	4.29	0.85
Challenge students to explore alternative approaches to a problem	4.24	0.93
Be generous with time and other resources.	4.23	0.80
Prefer to cooperate with others than compete with them	4.23	0.98
Help me plan a timetable for my research.	4.16	1.05
Provide information to help me understand the subject matter I am researching.	4.10	1.01
Give proper academic acknowledgement to graduate students	4.08	1.04
Meet with me on a regular basis.	4.07	0.92
Help me investigate a problem I am having with research design.	4.06	0.98
Show me how to employ relevant research techniques.	4.03	1.05
Help me plan the outline for a presentation for my research.	3.76	1.19
Accept me as a junior colleague.	3.75	1.17
Help me to realize my life vision.	3.67	1.29
Be a cheerful, high-spirited person.	3.59	1.12
Give me specific assignments related to my research problem	3.38	1.27
Rarely feel fearful or anxious	3.30	1.18
Be interested in speculating on the nature of the universe or the human condition	3.19	1.35

Table 7 *Continued*

<b>Item</b>	<b><i>M</i></b>	<b><i>SD</i></b>
Be seldom sad or depressed.	3.02	1.27
Relate to me as if they are a responsible, admirable older sibling.	2.95	1.34
Keep their workplace neat and clean	2.43	1.39
Have coffee or lunch with me on occasion.	2.39	1.27
Talk to me about their personal problems	2.00	1.18
Take me out for dinner and/or drink after work.	1.71	1.07

*Note.* Ratings based on a five-point metric: 1 = *Not at all Important* to 5 = *Extremely Important*.

**Most beneficial mentor qualities.** In addition, qualitative responses were collected regarding what aspects were most beneficial about their mentor (see Table 8). The frequency counts for the category themes are from the 339 respondents' responses to Question 77, "What did you find most beneficial about your mentor?" sorted by highest frequency. An example of a typical response for "Motivating or inspiring for success," "Expertise or experience," "Good communication or feedback," "Similar background," and "Advocacy" included the following:

My mentor advocates for me "behind the scenes" (for example, made sure I was enrolled in practicum so that I could stay on track with completing my coursework in a given timeline). My mentor graduated from the same doctoral program, and thus was able to give helpful, knowledgeable feedback about what classes to take and when, registration for practicum and internship, etc. My mentor is also an African-American woman and understands the struggles and challenges of navigating a PhD program at a PWI.

The following is another example of a typical response for “Motivating or inspiring for success,” “Challenging for the better,” “Research match,” “Similar background,” and “Advocacy”:

My mentor's research interests are aligned with my own and my dissertation topic. She is also a woman of color with a Ph.D. and is working at an Ivy League institution doing research as her primary role. She recently earned her PhD almost 2 years ago, so the experience is relatively fresh; she's eager to bring other women of color along and raises tough (good) questions for me that move my thinking forward.

In addition, an example of a typical response for “Availability,” “Advocacy,” and “Good ethics or temperament” was “My advisor is my mentor and she is compassionate and always available. She is also resourceful which has been my saving grace. My dissertation committee is horrible and she is stepping up and filling in their gaps.”

Table 8

*Frequency Counts for Qualitative Responses to Most Beneficial about Mentor (N = 339)*

Variable	Category	N	%
Most beneficial about mentor			
	Expertise or experience	82	24.2
	Good communication or feedback	73	21.5
	General help, support, or guidance	69	20.4
	Motivating or inspiring for success	66	19.5
	Availability	45	13.3
	Strong or positive relationship	44	13.0
	Good ethics or temperament	28	8.3
	Challenging for the better	14	4.1
	Research match	14	4.1
	Thesis writing or co-writing	14	4.1
	Grants or networking opportunities	13	3.8
	Similar background	8	2.4
	Advocacy	8	2.4
	N/A (no themes)	7	2.1

**Most challenging mentor qualities.** This study asked respondents about the most challenging aspects about their mentors. The most challenging themes were *too busy or unavailable, poor communication, and slow timing or lateness* (see Table 9). The category themes from the responses of the 339 respondents to Question 78, “What did you find the most challenging about your mentor?” were sorted by highest frequency. An example of a typical response for “Poor communication,” “Lack of rapport,” “Hostile or impersonal culture,” and “Microbarriers” included the following:

Most challenging has been the need to separate my personal life from my scholarly development and lab duties. Producing quality work has been the most important thing to evaluate my progress, but my whole person has not been taken into consideration. As a student of color, I've had to navigate this PWI mostly alone, and it's been hard to navigate the social life; but mostly importantly, to navigate my program and the faculty-student interactions. I don't know how to diplomatically respond or how to speak with other faculty appropriately; it seems like there is a culture of speaking very formally to one another and overall keeping personal [life] out of academia. It's been hard to navigate and, frankly, understand especially since so many of my life experiences bleed into my work daily.

Another example of a typical response for "Lack of research or mentoring experience" and "Lack of topic knowledge" was "Although her doctorate was in the same field, our specializations differed so she does not always understand my program's methodology." In addition, another response for "Personal boundaries," "Lack of rapport," "Too demanding or challenging," "Hostile or impersonal culture," "Microbarriers," "Won't adapt to new ideas," and "Disengaged from students" was, "They are constricted in a White supremacist capitalist patriarchy (Hooks, 1994) that is the ivory tower." Similar concerns were shared by another student, whose response had themes of "Lack of topic knowledge," "Hostile or impersonal culture," "Microbarriers," "Won't adapt to new ideas," and "Personality conflicts":

At times my dissertation appears outdated and stuck in the time period he completed his doctoral degree (1987). At times, he remains adamant that his way is the correct

way. Given our differences in race, gender, age, and class, I often wonder if other factors are involved aside from research time evolution.

Table 9

*Frequency Counts for Qualitative Responses to Most Challenging about Mentor(N =339)*

<b>Variable</b>	<b>Category</b>	<b>N</b>	<b>%</b>
Most challenging about mentor	Too busy or unavailable	92	27.1
	N/A (no themes)	48	14.2
	Poor communication	45	13.3
	Slow timing or lateness	30	8.8
	Lack of rapport	25	7.4
	Too demanding or challenging	21	6.2
	Lack of topic knowledge	20	5.9
	Lack of research or mentoring experience	16	4.7
	Distance or online only	16	4.7
	Hostile or impersonal culture	15	4.4
	Micro barriers	13	3.8
	Disengaged from students	13	3.8
	Personality conflicts	11	3.2
	Personal boundaries	9	2.7
	Won't adapt to new ideas	7	2.1
	Sabbaticals	5	1.5
	Disorganized	5	1.5

**Research Question 2.** “What is the relationship between mentoring and doctoral students’ satisfaction with their program?” Table 10 shows the bivariate Pearson and Spearman correlations for the satisfaction scores with the mentor behavior scale. The researcher used Pearson and Spearman correlations to examine the reported satisfaction with the doctoral program and the scores for the mentor behavior scale. The Spearman correlation

measured the degree of association between the variables and the Pearson correlation measured the strength of the association between the variables. Spearman correlations were included for additional verification and due to the ordinal level metric (1 = Very Dissatisfied to 5 = Very Satisfied) for one of the satisfaction ratings. Overall, similarly sized coefficients were found using the two correlational methods. Of the two Pearson correlations, both were significant at the  $p < .001$  level. Specifically, mentor behavior had a significant positive correlation with satisfaction with doctoral program scale ( $r = .43, p < .001$ ) and satisfied with program rating ( $r = .44, p < .001$ ). Of the two Spearman correlations, both were significant at the  $p < .001$  level. Specifically, mentor behavior had a significant positive correlation with satisfaction with doctoral program scale ( $r_s = .43, p < .001$ ) and satisfied with program rating ( $r_s = .39, p < .001$ ).

Table 10

*Pearson and Spearman Correlations for Satisfaction with Mentor Behavior Scale (N = 301)*

<b>Mentor Behavior Scale</b>				
<b>Variable</b>	<b>Pearson</b>		<b>Spearman</b>	
Satisfaction with Doctoral Program Scale	.43	****	.43	****
Satisfied with program <sup>a</sup>	.44	****	.39	****

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .005$ . \*\*\*\*  $p < .001$ .

<sup>a</sup> Satisfaction: 1 = *Very Dissatisfied* to 5 = *Very Satisfied*.

### **Additional Findings**

Table 11 shows the bivariate Pearson and Spearman correlations for selected variables with satisfaction with doctoral program. These variables represent each trait that



was examined in the survey instrument. Testing for both the degree of association between the variables using the Spearman correlation and for the strength of association between the variables using Pearson correlation, similarly sized coefficients were found using the two correlational methods. Of the nine Pearson correlations, three were significant at the  $p < .05$  level. Specifically, satisfaction with doctoral program had significant correlations with mentor behavior scale ( $r = .43, p < .001$ ), being black ( $r = .15, p = .01$ ), and not receiving funding through fellowship, teaching or research assistantship ( $r = -.15, p = .008$ ). Of the nine Spearman correlations, four were significant at the  $p < .05$  level. Specifically, satisfaction with doctoral program had significant correlations with the mentor behavior scale ( $r = .43, p < .001$ ), being black ( $r = .12, p = .03$ ), being older ( $r = .12, p = .03$ ), and not receiving funding through fellowship, teaching, or research assistantship ( $r = -.14, p = .02$ ).

Table 11

*Pearson and Spearman Correlations for Selected Variables with Satisfaction with Doctoral Program (N = 339)*

Variable	<u>Satisfaction with Doctoral Program</u>	
	Pearson	Spearman
Mentor Behavior Scale	.43 ****	.43 ****
Female <sup>a</sup>	.04	.03
Black <sup>a</sup>	.15 **	.12 *
White <sup>a</sup>	-.08	-.06
Age	.08	.12 *
Receiving funding through fellowship, teaching or research assistantship <sup>a</sup>	-.15 **	-.14 *
Doctoral enrollment status	.01	.01
Time admitted into doctoral program	-.02	.00
Doctoral program stage	-.01	.00

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .005$ . \*\*\*\*  $p < .001$ .

<sup>a</sup> Coding: 0 = No 1 = Yes.

Table 12 includes the results of the stepwise regression model that predicted the satisfaction with doctoral program scale based on nine selected variables. The nine variables were Mentor Behavior Scale, female; Black; White; age; receiving funding through fellowship, teaching or research assistantship, doctoral enrollment status; time admitted into doctoral program; and doctoral program stage. These variables were chosen because they represented every candidate that responded to the survey instrument. The researcher elected to use a stepwise regression in order to identify a useful subset of predictor variables. A stepwise regression does multiple regression multiple times, with each time removing the weakest correlated variable. The final two-variable model, consisting of the Mentor Behavior Scale and if the respondent reported receiving financial funding, was statistically significant ( $p = .001$ ) and accounted for 20.8% of the variance in the dependent variable. These two variables were used after completing the stepwise regression model that found them to be significant independent variables in relation to the reported satisfaction with a doctoral program. Specifically, satisfaction with the doctoral program was related to higher mentor behavior scale scores ( $\beta = .43, p = .001$ ) and not receiving funding through fellowship, teaching, or research assistantship ( $\beta = -.16, p = .003$ ).

Table 12

*Prediction of Satisfaction with Doctoral Program Based on Selected Variables: Stepwise Regression (N = 301)*

<b>Variable</b>	<b>B</b>	<b>SE</b>	<b>β</b>	<b>p</b>
Intercept	2.26	0.21		.001
Mentor Behavior Scale	0.44	0.05	.43	.001
Receiving funding through fellowship, teaching or research assistantship <sup>a</sup>	-0.27	0.09	-.16	.003

*Note.* Final Model:  $F(2, 298) = 39.24, p = .001. R^2 = .208.$  Candidate variables = 9.

<sup>a</sup> Coding: 0 = No 1 = Yes.

### **Summary**

In summary, this study analyzed survey data for all Likert scale questions from 301 doctoral students to examine the characteristics that doctoral students believed to be desirable in a mentor and the extent to which students believed a mentor was effective in increasing their perceived program satisfaction. Thematic analysis analyzed data for two open-ended questions from 339 respondents. Research Question 1 (beneficial qualities in mentorship relationship) identified several qualities and themes that the students rated more frequently as beneficial. These qualities and themes included *expertise and experience, good communication or feedback, and general help, support, or guidance.* Research Question 2 (mentoring and satisfaction with program) found significant correlations between the Mentor Behavior Scale and the students' satisfaction with their program. In the final chapter, these findings are compared to the literature, conclusions and implications are drawn, and a series of recommendations is suggested.

## Chapter 5: Discussion and Conclusions

### Introduction

The results of this study and links of those results to prior research are discussed in this chapter. Conclusions, implications, and recommendations for policy-practice are included as well as areas for future research.

Through mentorship, doctoral students receive important feedback on their performance, encouragement when they need it, and information about how to gain skills, values, and norms of their chosen field (Corcoran & Clark, 1984; Austin, 2002; Dixon-Reeves, 2003). Because of the importance of mentorship, the subject has been researched, programs have been implemented, and strategies have been put in place to assist students in identifying mentors and mentor programs that can aid them throughout their academic process and successful completion of doctoral degrees. Although prior research examined many aspects of mentorship, few studies focused on the experiences of currently enrolled doctoral students.

The findings of the current study will add to the literature base by identifying the specific needs for both academic and instrumental mentoring by those students who are currently progressing through a doctoral program. While the types of mentorship have remained the same, the identification of specific needs of today's doctoral students provides input to faculty, academic departments, and institutions to begin to frame mentorship that can provide assistance for students. This guidance for students can not only foster a sense of belonging in their departments but also provide support for them to persist toward degree completion.

The current study focused analysis on the mentoring functions that currently enrolled doctoral students believed to be most beneficial and addressed whether a relationship existed between those identified qualities and students' perceived satisfaction with their doctoral program. Understanding current doctoral students' need for mentoring and the attributes they view as most beneficial offers higher education professionals the opportunity to improve support systems within doctoral programs that can benefit both the student and the department.

Finally, by understanding perceived mentoring functions and whether a relationship exists between those functions and program satisfaction, departments and institutions have an opportunity to not only aid their students in having a more positive academic experience but also allow for their program to provide professional and personal growth opportunities to their students. This may assist in increases in program satisfaction and completion rates while simultaneously decreasing program attrition.

The purpose of this study was to identify the mentor qualities that were perceived by currently enrolled doctoral students to be most beneficial in a mentor relationship with and what the relationship is between the qualities of the mentoring experience and a doctoral students' satisfaction with their doctoral program. The results shown in Chapter 4 indicated that doctoral students perceived mentor quality items such as *Communicate openly, clearly and effectively* and *Believe in me* highest rated, whereas the lowest rated items were the mentor traits *Take me out for dinner and/or drink after work* and *Talk to me about their personal problems*. Mentor behavior was found to have a significant positive Pearson correlation with doctoral program satisfaction scale ( $r = .43, p < .001$ ) and the satisfied with program rating ( $r = .44, p < .001$ ). In addition, satisfaction with doctoral program was related

to higher mentor behavior scale scores ( $\beta = .43, p = .001$ ) and not receiving funding for their program through a fellowship, teaching or research assistantship ( $\beta = -.16, p = .003$ ).

## **Discussion of Findings**

**Research Question 1.** “What are the qualities that are most beneficial in a mentorship relationship with currently enrolled doctoral students?” The results indicated that currently enrolled doctoral students reported the highest ratings of mentor qualities for *Communicate openly, clearly, and effectively; Believe in me; Treat me as an adult who has a right to be involved in decisions that affect me; Provide honest feedback (both good and bad) to students about their work; and Value me as a person (see Table 7)*. In reverse, participants reported the lowest levels of importance of mentor qualities were *Take me out for dinner and/or drink after work* and *Talk to me about their personal problems*.

The present study found that qualities associated with academic and instrumental mentorship were perceived most beneficial by currently enrolled doctoral students. Blake-Beard et al. (2011) defined academic mentoring as a positive role model supporting a mentee by giving academic advice, resources, and being concerned with the students’ success. Additionally, instrumental mentoring is defined as encompassing direct training in research methods; providing information about content, ethics, and procedures, and ongoing efforts to confirm that the mentee was given opportunities to learn what they need to know (Blake-Beard et al., 2011).

Earlier, Clark et al. (2000) found that although psychosocial mentoring functions were rated highly by mentees, the most highly rated functions of mentors were direct training, acceptance and support, and role modeling. The use of academic support functions to sharpen skills and knowledge in preparation for a career was found to be highly supported

by academic programs as well as by respondents of a study conducted by Welton et al. (2015).

The constructs of academic and instrumental mentoring support being most highly rated were also supported through the research study of Welton et al. (2014) wherein respondents found crucial qualities of a mentor to be providing constructive feedback to them as well as encouraging research idea formation, providing professional support, and assisting them with networking opportunities. Although other factors that revolved around psychosocial support were also found to be important, the qualities of role-modeling and instrumental support were most highly rated. One respondent cited the benefits of their mentor:

She involves me in multiple research projects that all relate back to skills development in my general research area. She is also a tireless advocate for my academic training, and that has resulted in my successfully authoring multiple publications, being grant funded, and attending competitive funded training institutes.

Although the present study found the academic and instrumental support qualities to be most highly rated, Tenenbaum, Crosby, and Gliner (2001) found that psychosocial mentorship qualities were most important regarding students' satisfaction with their program. These qualities could involve the values of empathy, support, communication, prudence, and ethics. Greene (2015) also found that the participants who were asked about support systems and services offered in their academic programs and universities cited a gap in services—feeling a sense of support and belonging as a graduate student as important but lacking from

their perception of their graduate experiences. Describing the most challenging aspect of their mentor, one respondent indicated,

Most challenging has been the need to separate my personal life from my scholarly development and lab duties. Producing quality work has been the most important thing to evaluate my progress but my whole person has not been taken into consideration. As a student of color, I've had to navigate this PWI mostly along, and it's been hard to navigate the social life, but mostly importantly, to navigate my program and the faculty-student interactions. I don't know how to diplomatically respond or how to speak with other faculty appropriately – it seems like there is a culture of speaking very formally to one another and overall keeping personal out of academic. It's been hard to navigate and frankly understand...

**Research Question 2.** “What is the relationship between mentoring and doctoral students' satisfaction with their program?” To verify and account for the ordinal level metric that was included with the Likert scale ratings, Spearman correlations were included in addition to Pearson correlations. Results found significant positive Pearson correlations for both mentor behavior and satisfaction with the doctoral program scale ( $r = .43, p < .001$ ) as well as the satisfied with program rating ( $r = .44, p < .001$ ). Spearman correlations also found mentor behavior had a significant positive correlation with satisfaction with the doctoral program scale ( $r_s = .43, p < .001$ ) and satisfied with program rating ( $r_s = .39, p < .001$ ).

The more positive experience reported between student and mentor, the more satisfied the doctoral students reported being with their doctoral program. Prior research confirmed that the more satisfied students are with their advisor or mentor the more satisfied the students are overall with regard to their program and experience (Wasburn-Moses, 2008).



Satisfaction with the academic program can also contribute to students' completion of their doctoral degree (Skudlarek, 1992; Cooke et al., 1995; Lovitts, 1996). Bair and Haworth (2004) agreed that doctoral students are more likely to persist and report higher program satisfaction if they engage with a faculty mentor or advisor in a meaningful way.

***Additional findings.*** Additional findings were supported by the literature with regard to race and circumstances of funding for a doctoral program. Prior research conducted by Felder (2010) found that data collected from African American doctoral graduates indicated agreement that faculty mentoring and support were of great importance in promoting socialization, scholarship, and research and career development following degree completion. Consistent meetings with their faculty mentors was also cited as valuable.

This study found that students who were receiving funding reported being less satisfied with their doctoral programs. Hayes and Koro Ljungberg's (2011) earlier research supports this finding in their study that looked at the obstacles that hindered degree progress for female doctoral students. Trying to balance other commitments outside of their doctoral programs was noted as a barrier by the doctoral students. Specifically, a response given by one the students indicated that she felt as though her mentor would have been happy if she never graduated so that she could continue working for the mentor instead of the mentor assisting her in progressing toward degree completion. Work responsibilities, whether through a doctoral fellowship, research, or teaching assistantship can hinder progress to degree and program satisfaction if the student feels unsupported by their mentor.

### **Implications for Practice**

This research was conducted at an important time in higher education, particularly in the United States where doctoral attrition rates remain between 40 and 60% (Cochran et al.,

2014). There is a pervasive need to both acknowledge and address ways by which doctoral programs can make strides in not only improving their retention rates but also in terms of preparing and mentoring students for life after the classroom. It is more than a notion of feel-good academics, but one of cost-effectiveness and program survival and promotion.

The support doctoral students receive through mentoring relationships not only affects their persistence and program satisfaction but also impacts the ways in which norms, values, and expectations of an academic field are conveyed and learned through the socialization process (Weidman & Stein, 2003). Utilizing mentor relationships as a conduit for the socialization of doctoral students into their chosen fields promotes a safe environment with a faculty mentor or advisor that allows for students to gain regular mentoring with a trusted role model (Austin, 2002). In addition, the constructive feedback from a mentor relationship offers guidance with regard to research opportunities, emotional support, and navigating professional networks (Blake-Beard et al., 2011).

It was important to classify student benefits of academic, instrumental, career, and psychosocial mentoring functions by most to least important (Rose, 2005). Given the course and advising loads most doctoral faculty member's experience, the rating of mentor functions identified by currently enrolled doctoral students, can assist faculty members and academic programs to focus on the areas that doctoral students distinguish as paramount to their educational experience.

Research conducted by Jairam and Kahl (2012) recommended that the needs of doctoral students can vary widely, and therefore, students may require multiple mentors within their networks and throughout their program to support their academic experience due to each individual's complex life roles and learning needs. Thus, it may be unrealistic to

expect one mentor to be able to meet the variation of a mentee's needs (Tierney & Bensimon, 1996). The current research found that participants identified academic and instrumental mentoring qualities to be most beneficial to students. This information can provide for faculty, academic departments, and institutions to work toward incorporating support constructs for these specific mentoring needs into their existing structures and appropriately train mentors how to provide these qualities in academic settings and other interactions with doctoral students.

In addition, the implementation of specific support practices in regard to mentorship can also affect a student's satisfaction with their doctoral program. The results of the current study found that the happier a doctoral student was with their mentor positively related to how satisfied they were with their academic experience. In addition, this study also found that the more positive the mentoring experience, the more likely a student is to remain in their program and progress to degree completion, thus saving the department and the institution alike both the instructional and per-student costs associated with a doctoral student's academic training.

A mentorship relationship with doctoral students requires awareness of the areas in which students feel they need to be supported as well as how this support can positively impact overall program satisfaction. The results from the current study supported the need to refocus energy on the positive impact mentoring can have and how to build more positive support systems. The next sections provide recommendations for what can be done moving forward with research, policy, and practice in order to achieve positive results.

## Recommendations for Future Research

Prior studies on mentorship have discussed the need for additional research on the relationship between what mentoring was desired and what mentoring was, in fact, received by doctoral students (Rose, 2005). Currently the word *mentor* has several meanings and, specifically in higher education, can be deemed synonymous with the word *advisor* or *faculty* (Brill et al., 2004). Future research is needed to specify the difference between the terms and identify if the mentorship relationship provides a different experience based on the role identified by the doctoral student.

The current study looked specifically at currently enrolled doctoral students at a specific point in time. Continued research is needed to better understand how or if a mentoring relationship changes over time. A longitudinal study would aid in this understanding to determine if the qualities a mentee desires change with progress made through the doctoral program and whether satisfaction with the mentor and the academic program shifts as students experience the various stages of a doctoral program.

Future research is also needed to look for the frequency of the various mentorship qualities doctoral students experienced to view a direct link to program satisfaction. For example, asking a doctoral student how many times their mentor meets with them in a semester may show a connection between a mentor action and a student's satisfaction with their doctoral program. By changing the range of *important* to *not important* in current mentorship types scales of academic, instrumental, career, and psychosocial to *often* or *never*, future researchers could get a better idea of the mentoring qualities that are actually taking place within a mentorship relationship and note the frequency of each quality experienced. In the current study, satisfaction was based on what extent an individual felt that his or her

expectations were met. As result, this study was not able to gain an understanding of frequency of mentoring occurred or how often specific ideal qualities of mentoring took place.

The sample of this current study is not representative of the national demographic studies of doctoral studies (NSF, 2016). National averages for doctoral recipients in 2016 were represented by a female population of 46%, and of the 59,904 doctoral recipients in 2016, the National Science Foundation reported that only 2,868 or 5.2% were Black or African American (NSF, 2016). The respondents in the current study were more likely than the national demographics of doctoral students to be female and Black or African American, with female representation of (71.4%) and Black or African American (41.9%). It was also noted in a study by Graduate Enrollment and Degrees (2007–2017) that across all institutions in the United States in the fall of 2017, a total of 57.5% of students indicated they were enrolled full time, which was below the average percentage of this study's sample of 75.1%. This substantial difference between the current study and national demographics may have altered the data found in the current study for several reasons. The mentorship experiences of both female and Black/African American students may be inherently positive, and these groups may seek mentorship experiences in different ways. In addition, the types of mentorship sought by these groups may not be representative of all students and, as a result, may have skewed the data found in this study. Future research could expand the sample to a national level for a more representative sample that more closely matches the national demographic statistics.

Future research may include adapting this method to an email survey format to members of the American Educational Research Association or other research organizations

whose members include a variety of educational backgrounds. This would permit a diverse group of participants with a potential for classifying them by social science or hard science background, which could lead to further distinction between the mentorship they experience or seek. Furthermore, data could be collected through specifying doctoral mentor programs at higher education institutions and requesting survey participation that could also include a qualitative component requiring interviews to delve further into the benefits and challenges students experience with mentorship. As in the data collection method in the current study, extended research through online social media groups could collect data based on doctoral students who naturally seek out support.

Anecdotal data collected from this study's open-ended questions supported quantitative findings showing that doctoral students who receive funding for their program were less satisfied with their doctoral program than those who did not receive funding. A suggestion for future research would be to study this finding and look for reasons that may lead to this finding, and research could include looking for differences in satisfaction specifically between hard science programs and social science programs. Alternatively, future research could also investigate the relationship between student satisfaction and receiving funding and any correlations to the length of time to completion versus those students who did not receive funding.

In a study by Barnes and Randall (2012), researchers discovered that students in a humanities program reported being less than expected being satisfied than their physical science doctoral counterparts with the financial resources they received. However, the researchers also found that although the findings suggested that financial assistance is important to doctoral students' success (Nettles and Millett, 2006), whether a student was

satisfied or not with the funding structure they received did not have a strong effect on the student's decision to complete their doctoral degree (Barnes and Randall, 2012). For many doctoral students who are working as a teaching or research assistantship, the often excessive time demands and menial duties may lead the students to question whether the benefits of the position are worth the added workload (Ethington & Pisani, 1993). In addition, Baird (1990) advised that students may be more concerned with pleasing faculty members than with furthering their own professional goals.

In regard to the financial underpinnings of a doctoral student's satisfaction, many studies have indicated a strong correlation between students receiving funding through a research, teaching, or doctoral fellowship and having higher rates of degree completion (Boozer, 1982; Huang, 1995; Benkin, 1984).

The role of the dissertation committee may also be an area for future research. Examining the various roles of mentorship each committee member plays could lead to research identifying the mentorship experience that doctoral students have at the latter stages of their academic program. The mentorship needs of students may be different at the end of their doctoral program than at the beginning. In addition, this research area could identify if there is intentionality in the selection of the committee chair and members in relation to the kind of mentorship each individual student is seeking or believes will be most beneficial in the completion of their doctoral degree. If a student identifies committee members or a dissertation chair by selecting someone with whom they have already built a mentorship relationship, researchers may be able to better understand what role the dissertation committee members have in a doctoral student's degree completion.

Through qualitative responses, some participants of the current study indicated belief that newer professors were more positive mentors versus respondents who indicated they believed their “tenured professors” held them back by making them adhere to “archaic” literature and ways of completing their degrees. A future research area may identify the rank of mentors, whether they are assistant professor, full professor, or tenured faculty, and seek to determine if doctoral students believe that variable in the mentorship relationship influences satisfaction in the way students believe they are being mentored and how their mentorship needs are being met.

Changing the method of research is a suggestion for future research. A qualitative approach may allow for future researchers to inquire about the details of mentorship relationships and discover specific areas that students believe are important or possibly missing from their current doctoral experience. Future research questions include, “What are doctoral students’ experiences with mentoring in their program?” “What is the relationship between mentoring experiences and persistence of doctoral students?” “Can approaching this study from a qualitative design reveal nuances of the mentorship relationship?” “What are the best practices of faculty mentoring?”

### **Recommendations for Policy**

According to the Council of Graduate Schools (2018), attrition in graduate programs in the United States is a tremendous waste of financial and human resources. The increasing demand for workers who have advanced training at the graduate level has become a growing concern in the workforce as it relates to the competitiveness of the U.S. economy (Council of Graduate Schools, 2018). The improvement of completion rates for doctoral students is imperative to meet our country’s current and future workforce needs.



As a response to the growing concern, a PhD Completion Project was developed that researched issues surrounding doctoral completion and attrition and developed intervention strategies for assisting students in completing their degree programs. Mentorship was noted as one of the six key factors that influence the likelihood a student will ultimately complete their doctoral programs (Council of Graduate Schools, 2018). Noting the importance of mentoring support for program completion and the severe cost to institutions and academic departments for every student lost, educational policy development may elect to see the benefit in designing mentoring programs at institutions of higher education; to invest monies into the training of mentors and forums to allow for open discussion for mentors, mentees and peers; and to build in opportunities for faculty to earn release time or tenure credits by setting aside time for them to invest in mentoring relationships as part of their expected faculty loads.

Research One institutions such as the University of Michigan (2016) have recognized the importance of developing mentoring programs that not only assist in the retention of students but also save on the instructional and economic costs of partially training and then losing a student from the program. Although it may require change at the state or national level to advocate for the design and implementation of mentoring programs at the doctoral level, the economic and educational benefits for the institution and the state budget would far outweigh the up-front investment required to implement this type of support program.

### **Recommendations for Practice**

Few doctoral programs have created and implemented programs designed to facilitate mentoring as part of a doctoral students' academic support experience. Developing programs for mentoring experiences or facilitating mentoring as part of a faculty members workload

can assist doctoral students in navigating the academic program and in feeling a sense of belonging and connectedness to both the academic department and faculty member(s). Current practices do not allow for a broader conversation about the institutional, department, and student benefits of mentorship. Instead of assuming that doctoral students will or know how to seek out their own mentorship, we should help them to find or create opportunities to locate a mentor and allow and reward potential mentors to assist future doctoral practitioners and faculty members on their academic journey. The support functions mentorship offers benefit the institution, department, and student through program satisfaction, retention, and ultimately in completion (Bair & Haworth, 2004; Gardner & Barnes, 2007).

This study confirmed that the happier students are with their mentor the more satisfied they are with their doctoral program. It also confirmed that students seek out academic mentoring opportunities that offer them guidance in navigating their programs and the doctoral experience. To address this need and subsequently create positive impact, university academic department leaders could make great strides by creating and allowing opportunities for faculty to have time available to step into mentoring roles that allow them to mentor students on a consistent basis. Currently, common practice for faculty members to earn academic leave or move forward on the tenure track is by chairing dissertations, serving on committees, publishing research, and teaching courses (McLaughlin, 2010). However, little time is awarded for faculty advisors to meet with students on a one-on-one basis. From a student perspective, the most common complaint voiced in this research was that the mentor was unavailable or hard to reach. It is assumed faculty members know *how* to mentor students; the truth is that, on many occasions, this assumption is incorrect.

Changing both the tenure track process and the case load distribution for faculty members would allow time to mentor doctoral students through the socialization process and to assist them in achieving their academic milestones and ultimately complete their degrees. Creating a mentor training would also allow faculty to choose to gain information on mentoring tactics, how to engage and facilitate various types of mentoring relationships, and how to move the mentoring relationship forward past that of simply an advisory role.

### **Summary**

The mentorship of currently enrolled doctoral students not only improves satisfaction with their academic program but also stands to improve retention and completion rates and increases a sense of belongingness to the program and to the academy. Prior studies on mentorship have discussed the need for additional research on the relationship between what mentoring was desired and the specific nature of the mentoring that was received by doctoral students (Rose, 2005).

The current study examined the ideal mentoring qualities students believe to be of importance and looked at how a mentorship experience impacted students' overall program satisfaction. Utilizing pre-existing survey instruments, 339 currently enrolled doctoral students responded to an online survey instrument presented through doctoral groups on Facebook and LinkedIn and were evaluated by ideal mentor traits and their perception of program satisfaction.

Results indicated that students who indicated that they had a good mentor also indicated a higher level of program satisfaction. In addition, participants identified academic and instrumental mentoring qualities as the highest in terms of most desirable mentor attributes. Analysis of data collected in this study suggested that the mentorship experience

does have a positive impact on a students' overall satisfaction if the relationship with the mentor is a positive one. The outcomes of training for mentors and planned mentoring programs may include a decrease in program attrition and an increase in overall student satisfaction and degree completion rates. Students are not the only stakeholders who stand to gain from mentorship experiences; the academic program, department, institution, and workforce all benefit from these forward-thinking efforts.

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## Appendices

## Appendix A: Invitation and Informed Consent Form

Project Title: Mentorship Experiences of Doctoral Students:  
Principal Investigator: Alicia Apperson, Eastern Michigan University  
Faculty Advisor: Dr. Ronald Williamson, Eastern Michigan University

### **Invitation to participate in research**

You are invited to participate in a research study. In order to participate, you must be a currently admitted into a doctoral program in Educational Administration or Educational Leadership. Participation in research is voluntary. Please ask any questions you have about participation in this study

### **Important information about this study**

- The purpose of the study is to research the qualities doctoral students find most beneficial in a mentor and how those experiences have impacted them throughout their degree.
- Participation in this study involves completing an online survey that will take approximately 15 – 20 minutes.
- The investigator will protect your confidentiality by having no personal identifiable information collected. Each survey response will be randomly assigned a code for data identification.
- Participation in this research is voluntary. You do not have to participate, and if you decide to participate, you can stop at any time.

### **What is this study about?**

The purpose of the study is to investigate doctoral student experiences with mentoring and what qualities doctoral students believe are ideal in a mentor. The study also seeks to view how mentoring does or does not impact degree progress.

### **What will happen if I participate in this study?**

Participation in this study involves

- Completing an online survey that will take approximately 15 – 20 minutes
- Once complete, you will submit the survey and be thanked for your participation.

### **What are the expected risks for participation?**

There are no expected physical or psychological risks to participation.

The primary risk of participation in this study is a potential loss of confidentiality.

Some of the survey questions are personal in nature and may make you feel uncomfortable. You do not have to answer any questions that make you uncomfortable or that you do not want to answer. If you are upset, please inform the investigator immediately.

### **Are there any benefits to participating?**

You will not directly benefit from participating in this research.

Benefits to society include understanding ideal qualities doctoral students prefer in mentors which can inform graduate programs with necessary information to assist in building mentor programs to work with graduate students to progress to degree completion.

### **How will my information be kept confidential?**

We plan to publish the results of this study. We will not publish any information that can identify you.

We will keep your information confidential by using a code to label data with the code linked to identifiable information in a key stored separately from the data Your information will be stored in a password-protected file on a password-protected computer.

We will make every effort to keep your information confidential, however, we cannot guarantee confidentiality. Other groups may have access to your research information for quality control or safety purposes. These groups include the University Human Subjects Review Committee, the Office

of Research Development, the sponsor of the research, or federal and state agencies that oversee the review of research, including the Office for Human Research Protections and the Food and Drug Administration. The University Human Subjects Review Committee reviews research for the safety and protection of people who participate in research studies.

**Storing study information for future use**

We WILL NOT store your information to study in the future. Your information will be labeled with a code and not your name. Your information will be stored in a password-protected or locked file.

We may share your information with other researchers without asking for your permission, but the shared information will never contain information that could identify you.

**What are the alternatives to participation?**

The alternative is not to participate.

**Are there any costs to participation?**

Participation will not cost you anything.

**Will I be paid for participation?**

You will be given a \$5.00 Amazon gift card for completing this study.

**Study contact information**

If you have any questions about the research, you can contact the Principal Investigator, Alicia Apperson at aapperso@emich.edu or by phone at (734)487-3148. You can also contact Alicia Apperson’s adviser, Dr. Ronald Williamson at rwilliams1@emich.edu or by phone at (734)487-0255. For questions about your rights as a research subject, contact the Eastern Michigan University Human Subjects Review Committee at human.subjects@emich.edu or by phone at 734-487-3090.

**Voluntary participation**

Participation in this research study is your choice. You may refuse to participate at any time, even after signing this form, without repercussion. You may choose to leave the study at any time without repercussion. If you leave the study, the information you provided will be kept confidential. You may request, in writing, that your identifiable information be destroyed. However, we cannot destroy any information that has already been published.

**Statement of Consent**

I have read this form. I have had an opportunity to ask questions and am satisfied with the answers I received. I give my consent to participate in this research study.

**Signatures**

\_\_\_\_\_  
Name of Subject

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

I have explained the research to the subject and answered all his/her questions. I will give a copy of the signed consent form to the subject.

\_\_\_\_\_  
Name of Person Obtaining Consent

\_\_\_\_\_  
Signature of Person Obtaining Consent

\_\_\_\_\_  
Date

## Appendix B: Eastern Michigan University's Institutional Review Board Approval

Thu, Sep 20, 2018 at 10:22 AM

human.subjects@emich.edu <human.subjects@emich.edu>

To: aapperso@emich.edu, rwilliams1@emich.edu

Sep 20, 2018 10:22 AM EDT

Alicia Apperson  
ORDA, Leadership and Counsel

Re: Exempt - Initial - UHSRC-FY18-19-75 Mentorship Experiences of Doctoral Students: Effects on Program Satisfaction and Ideal Mentor Qualities

Dear Alicia Apperson:

The Eastern Michigan University Human Subjects Review Committee has rendered the decision below for Mentorship Experiences of Doctoral Students: Effects on Program Satisfaction and Ideal Mentor Qualities. You may begin your research.

Decision: Exempt

Selected Category: Category 2. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Renewals: Exempt studies do not need to be renewed. When the project is completed, please contact human.subjects@emich.edu.

Modifications: Any plan to alter the study design or any study documents must be reviewed to determine if the Exempt decision changes. You must submit a modification request application in Cayuse IRB and await a decision prior to implementation.

Problems: Any deviations from the study protocol, unanticipated problems, adverse events, subject complaints, or other problems that may affect the risk to human subjects must be reported to the UHSRC. Complete an incident report in Cayuse IRB.

Follow-up: Please contact the UHSRC when your project is complete.

Please contact human.subjects@emich.edu with any questions or concerns.

Sincerely,

Eastern Michigan University Human Subjects Review Committee

## Appendix C: Adapted Survey Form

### **DOCTORAL STUDENT MENTORSHIP EXPERIENCE SURVEY**

Thank you for your participation in this survey. Please take a few moments to provide honest feedback about your experiences as a doctoral student and mentorship.

This survey is comprised of the following sections:

1. Informed Consent
2. Doctoral Student Mentorship Experience
3. Mentor Qualities
4. Mentor Behavior
5. Satisfaction with Doctoral Program
6. Mentor Benefits and Challenges

\* Required

### **DOCTORAL STUDENT MENTORSHIP EXPERIENCE SURVEY**

#### **INFORMED CONSENT FORM FOR ADULT SUBJECTS**

Informed Consent Form Project Title: Mentorship Experiences of Doctoral Students:  
Principal Investigator: Alicia Apperson, Eastern Michigan University  
Faculty Advisor: Dr. Ronald Williamson, Eastern Michigan University

Invitation to participate in research

You are invited to participate in a research study. In order to participate, you must be a currently admitted into a doctoral program. Participation in research is voluntary. Please ask any questions you have about participation in this study.

- 1) Important information about this study
  - The purpose of the study is to research the qualities doctoral students find most beneficial in a mentor and how those experiences have impacted them throughout their degree.
  - Participation in this study involves completing an online survey that will take approximately 10 – 15 minutes.
  - The investigator will protect your confidentiality by having no personal identifiable information collected. Each survey response will be randomly assigned a code for data identification.
  - Participation in this research is voluntary. You do not have to participate, and if you decide to participate, you can stop at any time.
- 2) What is this study about?



The purpose of the study is to investigate doctoral student experiences with mentoring and what qualities doctoral students believe are ideal in a mentor. The study also seeks to view how mentoring does or does not impact degree progress.

3) Types of Data Collected:

We will ask questions about your experience in your doctoral program, opinions about mentoring, and your satisfaction with your program. We will also ask for information about your gender and ethnic origin.

4) What will happen if I participate in this study?

Participation in this study involves

- Completing an online survey that will take approximately 10-15 minutes
- Once complete, you will submit the survey and be thanked for your participation.

5) What are the expected risks for participation?

There are no expected physical or psychological risks to participation. The primary risk of participation in this study is a potential loss of confidentiality. Some of the survey questions are personal in nature and may make you feel uncomfortable. You do not have to answer any questions that make you uncomfortable or that you do not want to answer. If you are upset, please inform the investigator immediately.

6) Are there any benefits to participating?

You will not directly benefit from participating in this research. Benefits to society include understanding ideal qualities doctoral students prefer in mentors which can inform graduate programs with necessary information to assist in building mentor programs to work with graduate students to progress to degree completion.

7) How will my information be kept confidential?

We plan to publish the results of this study.

We will not publish any information that can identify you. We will keep your information confidential by using a code to label data with the code linked to identifiable information in a key stored separately from the data. Your information will be stored in a password-protected file on a password-protected computer.

The principal investigator will have access to the information you provide for research purposes only. They may share your information with other researchers outside of Eastern Michigan University. If we share your information, we will remove any and all identifiable information so that you cannot reasonably be identified. De-identified information will be transferred by email.

We will make every effort to keep your information confidential, however, we cannot guarantee confidentiality. Other groups may have access to your research information for quality control or safety purposes. These groups include the University Human Subjects Review Committee, the Office of Research Development, the sponsor of the research, or federal and state agencies that oversee the review of research, including the Office for Human Research Protections and the Food and Drug Administration. The University Human Subjects Review Committee reviews research for the safety and protection of people who participate in research studies.

8) Storing study information for future use

We WILL NOT store your information to study in the future. Your information will be labeled with a code and not your name. Your information will be stored in a password-protected or locked file.

We may share your information with other researchers without asking for your permission, but the shared information will never contain information that could identify you.

9) What are the alternatives to participation?

The alternative is not to participate.

10) Are there any costs to participation?

Participation will not cost you anything.

11) Will I be paid for participation?

You will not receive compensation for participation in this survey.

12) Study contact information

If you have any questions about the research, you can contact the Principal Investigator, Alicia Apperson at [aapperso@emich.edu](mailto:aapperso@emich.edu) or by phone at (734)487-3148. You can also contact Alicia Apperson's adviser, Dr. Ronald Williamson at [rwilliams1@emich.edu](mailto:rwilliams1@emich.edu) or by phone at (734)487-0255.

For questions about your rights as a research subject, contact the Eastern Michigan University Human Subjects Review Committee at [human.subjects@emich.edu](mailto:human.subjects@emich.edu) or by phone at 734-487-3090.

13) Voluntary participation

Participation in this research study is your choice. You may refuse to participate at any time, even after signing this form, without repercussion. You may choose to leave the study at any time without repercussion. If you leave the study, the information you provided will be kept confidential. You may request, in writing, that your identifiable information be destroyed. However, we cannot destroy any information that has already been published.

14) Statement of Consent

I have read this form. I have had an opportunity to ask questions and am satisfied with the answers I received. I give my consent to participate in this research study.

**DOCTORAL STUDENT MENTORSHIP EXPERIENCE**

1. What is your gender? \*

Mark only one oval.

- Female
- Male
- Transgender
- Gender Variant/Non-Conforming
- Other
- Other:

2. Which race/ethnicity best describes you? (please choose only one).

Mark only one oval.

- American Indian or Alaskan Native
- Asian/Pacific Islander
- Hispanic
- African American/Black
- White/Caucasian
- Two or more races

3. What is your age? \*

Mark only one oval.

- 18-27
- 28-37
- 38-47
- 48-57
- 58+

4. Are you currently enrolled at your university

Mark only one oval.

- Yes
- No

5. Did you earn a masters degree prior to beginning your doctoral degree?

Mark only one oval.

- Yes
- No

6. Are you receiving funding for your doctoral program through a doctoral fellowship, teaching assistantship or research assistantship?

Mark only one oval.

- Yes
- No

7. If yes, what type of support are you receiving?  
Mark only one oval.

- Research Assistantship
- Teaching Assistantship
- No support being received
- Other:

8. How would you classify your doctoral enrollment status?  
Mark only one oval.

- Full-time doctoral student
- Part-time doctoral student

9. How satisfied are you with your program?  
Mark only one oval.

1 2 3 4 5

Very Dissatisfied

Very Satisfied

10. Do you think you will complete your program?  
Mark only one oval.

- Yes
- No

11. How long have you been admitted into your doctoral program?  
Mark only one oval.

- 1-2 years
- 3-4 years
- 5+ years

12. What stage are you at in your doctoral program?  
Mark only one oval.

- I am taking my coursework
- I have completed coursework
- I have passed my comprehensive exams
- My proposal has been approved
- Collecting dissertation data
- Successfully defended

13. Who do you consider a mentor for your doctoral studies?  
Mark only one oval.

- Faculty member in my home department
- Faculty member outside of my home department

- Another person at my university
- Family member
- Friend
- Other:

**MENTOR QUALITIES**

Please rate the following items according to how important that mentor attribute is to you now, at your current stage of your doctoral program.

Please rate an actual person in your life (if you currently have a mentor). Please indicate how important each attribute or function is to your definition of your mentor.

Answer each item by selecting a number 1 (not important at all) through 5 (extremely important):

**AT THIS STAGE OF MY PROGRAM, MY MENTOR WOULD:**

14. Show me how to employ relevant research techniques. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

15. Give me specific assignments related to my research problem \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

16. Give proper academic acknowledgement to graduate students \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

17. Help me to maintain a clear focus on my research objectives. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

18. Respect the intellectual property rights of others \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

19. Meet with me on a regular basis. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

20. Be generous with time and other resources. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

21. Be experienced in their field \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

22. Have a lot of intellectual curiosity \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

23. Treat research data in an ethical fashion \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

24. Be available to students to discuss academic problems \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

25. Challenge students to explore alternative approaches to a problem \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

26. Take me out for dinner and/or drink after work. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

27. Prefer to cooperate with others than compete with them \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

28. Be a role model. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

29. Be calm and collected in times of stress. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

30. Be interested in speculating on the nature of the universe or the human condition \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

31. Treat me as an adult who has a right to be involved in decisions that affect me. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

32. Inspire me by their example and words. \*

Mark only one oval.

1 2 3 4 5





Not at all important

Extremely important

40. Have coffee or lunch with me on occasion. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

41. Believe in me. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

42. Relate to me as if they are a responsible, admirable older sibling. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

43. Work hard to accomplish their goals \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

44. openly, clearly, and effectively \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

45. Express a belief in the student's capabilities \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

46. Help me plan a timetable for my research. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

47. Provide information to help me understand the subject matter I am researching. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

48. Always be counted on to follow through when he or she makes a commitment \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

49. Provide honest feedback (both good and bad) to students about their work \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

50. Brainstorm solutions to a problem concerning my research project. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

51. Help me plan the outline for a presentation for my research. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

52. Help me investigate a problem I am having with research design. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

53. Accept me as a junior colleague. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

54. Keep their workplace neat and clean \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

55. Recognize my potential. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

56. Help me to realize my life vision. \*

Mark only one oval.

1 2 3 4 5

Not at all important

Extremely important

### **MENTOR BEHAVIOR**

Many students consider other faculty members to be their mentors. For each of these statements, indicate the extent that it DESCRIBES THE BEHAVIOR of your mentor(s). Select the number that best applies.

57. My mentor(s): Are available to me when I need help with my research.

Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

58. My mentor(s): Are available to me when I need to talk about my program and my progress in the program.

Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

59. My mentor(s): Give me regular and constructive feedback on my research.

Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

60. My mentor(s): Provide me with information about ongoing research relevant to my work.

Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

61. My mentor(s): Teach me survival skills for this field.

Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

62. My mentor(s): Help me develop professional relationships with others in the field.

Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

63. My mentor(s): Care about me as a whole person - not just as a scholar.

Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

## **SATISFACTION WITH THE DOCTORAL PROGRAM**

Please rate each of the following statements using the scale indicated.

64. Degree requirements were clear and understandable

Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

65. Coursework is/was appropriately rigorous

Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

66. Procedures were understandable for core coursework  
Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

67. Core courses were available  
Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

68. Programming was flexible and met my needs  
Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

69. Guidance and advising in coursework was adequate  
Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

70. Faculty were accessible to support my learning  
Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

71. Program faculty were responsive to student needs  
Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

72. Program faculty provided useful feedback to your work  
Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

73. Program faculty demonstrated interest in your professional development  
Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

74. Program faculty encouraged me to contribute to my profession  
Mark only one oval.

1 2 3 4 5

Strongly Disagree

Strongly Agree

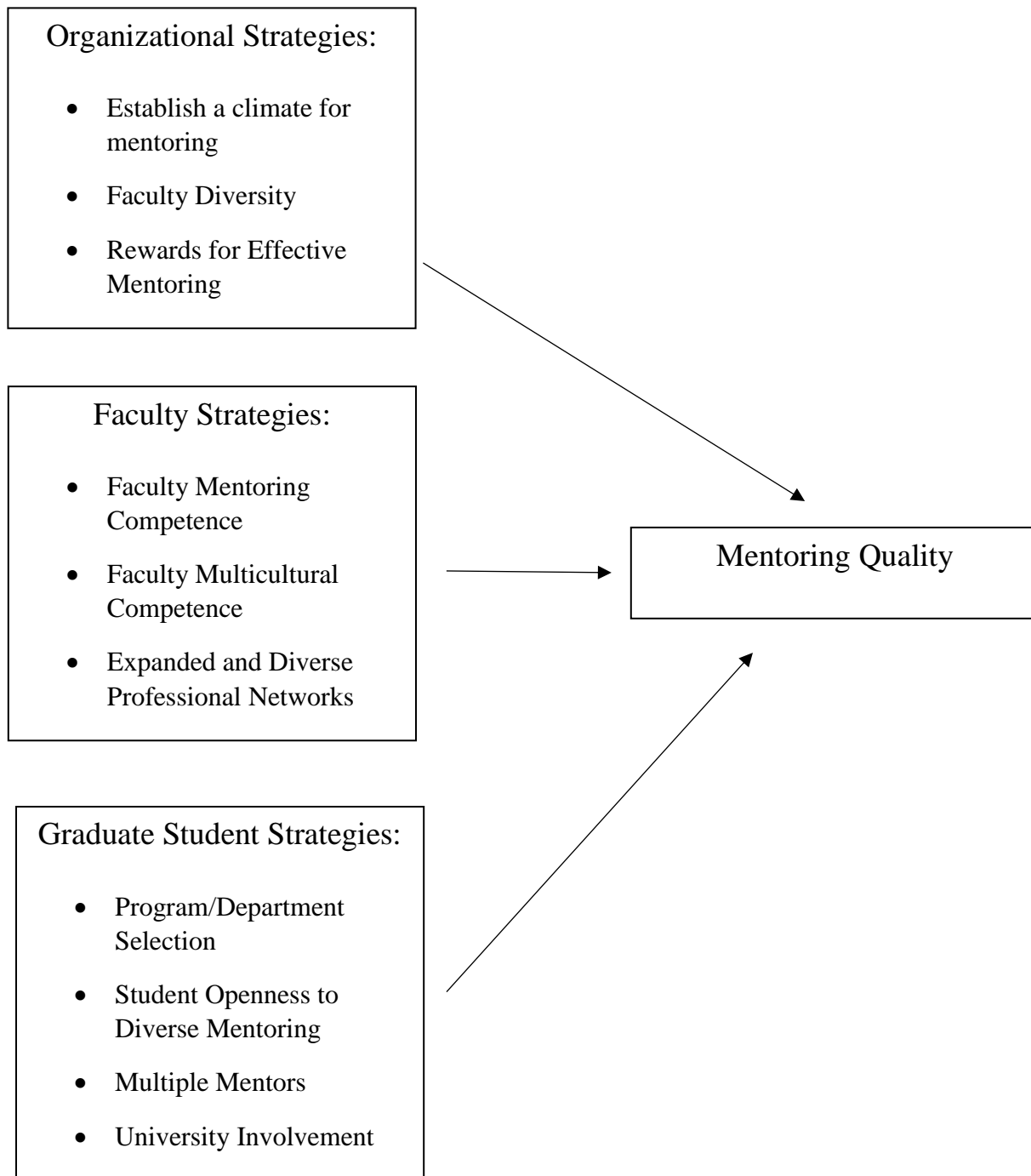
**MENTOR BENEFITS AND CHALLENGES**

75. What did you find most beneficial about your mentor?

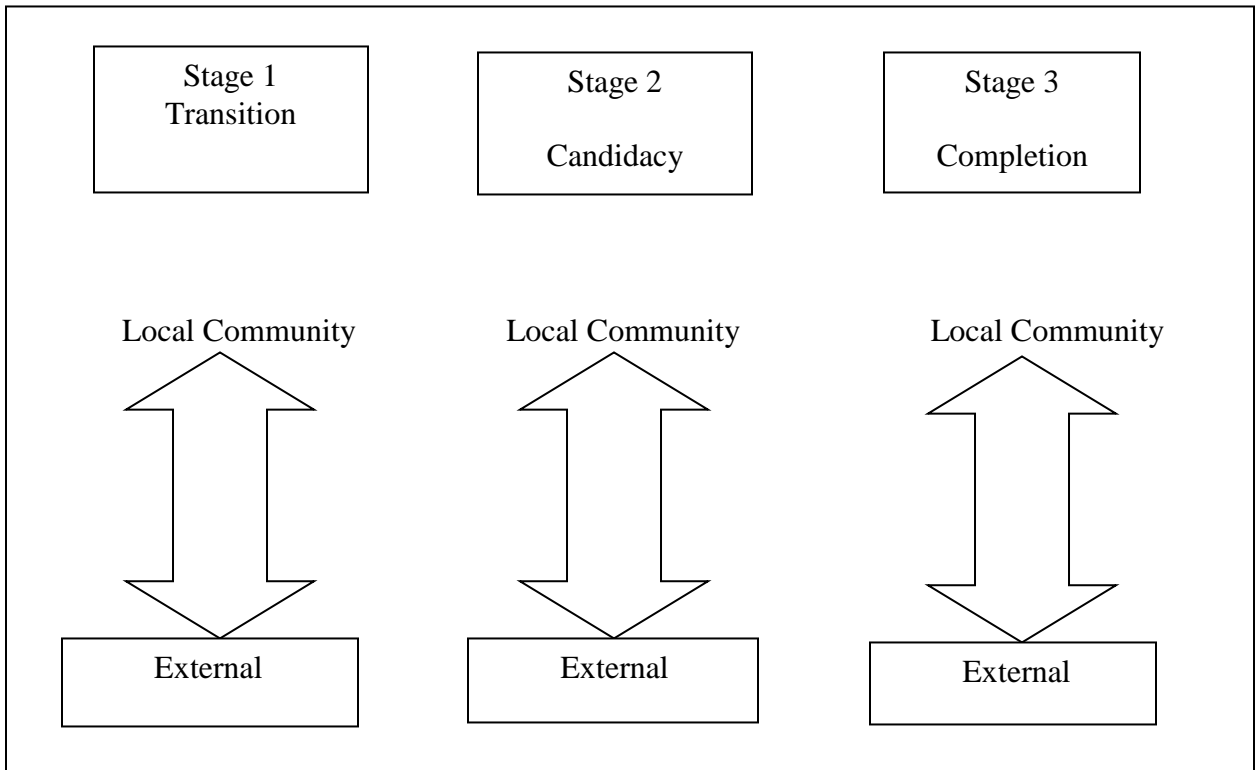
76. What did you find the most challenging about your mentor?

**THANK YOU FOR COMPLETING THE SURVEY!**

Appendix D: Strategic Tools for Mentorship Quality\_ (Thomas, Willis, & David, 2007)



Appendix E: Stages of Doctoral Persistence (Tinto, 1993)





## Appendix F: Permissions for Use of Survey Instruments

### **Ideal Mentor Scale**

Rose, Gail L. <Gail.Rose@uvmhealth.org

6/15/2018

Hello Alicia!

Sorry for the delay in responding to your request.

You are definitely allowed to use the instrument. Since you are using it to measure *existing* mentoring it is very important for you to ADD IN THE CORE ITEMS from the cover page of the instrument. i.e., the 9 bulleted attributes. You'll just need to add them in somewhere, maybe at the beginning or end of the instrument. The reason this is important is that the IMS was not designed to measure actual mentoring. In describing their *ideal* mentor, students had almost 100% agreement that those core items were very important. However, if you're measuring actual mentoring you can't assume that all students are getting that kind of mentoring. Let me know if this doesn't make sense.

Best of luck with your research.

Gail

## Survey on Doctoral Education and Career Preparation

Chris M. Golde

6/13/18

Alicia,

You are welcome to use the survey instrument. Be advised that we never did any formal validity or reliability testing with it. Some of the items also proved quite difficult to analyze. It is a very long survey, so you may wish to only use parts of it.

With those caveats, I am happy to grant you permission to use it. Best wishes with your research. I would be interested to learn what you do and what you find.

Chris

Chris M. Golde, PhD

Assistant Director of Career Communities for PhDs &  
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