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Working Relationships Among Supervisors and Interns in Virtual Internships

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Recommended Citation

WORKING RELATIONSHIPS AMONG SUPERVISORS
AND INTERNS IN VIRTUAL INTERNSHIPS

by

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A DISSERTATION

Presented to the Faculty of the University of the Incarnate Word
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF THE INCARNATE WORD

May 2020

ACKNOWLEDGMENTS

Arriving at this point is really the product of a lifetime of influences and decisions, but I will acknowledge a few people who were key to my ability to initiate this process and to sustain the effort to complete it. First, I acknowledge my mother, Lee Youngblood, whose life inspired me to succeed and whose unwavering support helped me to do so. Likewise, I am especially grateful to my wife, Deb Youngblood, who shared the highs and lows of this journey with me and whose encouragement and love helped me to find clarity of purpose throughout.

I could never have succeeded without both the professionalism and humanity of my dissertation committee. My profound appreciation goes to Dr. Stephanie Hartzell, my Chair, who never gave up on me and was an expert in the push-pull tension of knowing when and how to apply caring support and strong nudging when needed. My respect goes to Dr. Alfredo Ortiz Aragón for sharing his expertise and for demanding nothing but the best I could do. A sincere thank you also to Dr. Nürşen Zanca, fellow Fulbright scholar and colleague, who provided extra encouragement to see me through. In the same light, I might never have finished without the emotional support of fellow PhD Peeps Tricia Noske, PhD, Patty Davis, PhD, Kimvy Calpito, PhD, Vidya Ananthanarayanan, and Sara Emami. Thank you so much.

Finally, I would like to acknowledge my advisor, Dr. Norman St. Clair, who guided my path and decisions along the way, Dr. Sharon Welkey, Dean, for understanding my need to finish a lifelong ambition despite the impact on my job, and Dr. Audra Skukauskaite, who challenged my way of thinking and showed me how to view research from different perspectives.

Phillip D. Youngblood

WORKING RELATIONSHIPS AMONG SUPERVISORS
AND INTERNS IN VIRTUAL INTERNSHIPS

Phillip D. Youngblood, PhD

University of the Incarnate Word, 2020

Requiring experience to get a job is a familiar adage because employers want to know that new hires can not only work but can relate with others in a specific environment. This qualitative, multi-method, interpretive study explored the virtual internship as an option to the in-person internship that also enables employers and students to work with others anywhere in the world.

Intern supervisors and student interns experiencing virtual internships were invited to share the breadth of their experiences in an online survey. Analysis of survey data provided interview topics and a prioritized list of candidates who might provide the richest and deepest account of their experiences during ensuing interviews. Interpretative phenomenological analysis was applied to survey and interview data to deduce how participants related during internships.

The principal contribution of this study is realizing that virtual internships are a meeting of cultures, the academic and working worlds, that student interns and supervisors may have differing perceptions about the internship and each other that needs reconciling to avoid conflict and to fulfill individual interests. A close working relationship is not required for easily definable work. When it is required, participants must take efforts to understand each other's perspective, recognize they are not their role but are individuals, and that their relationship is part of a larger working community. It is incumbent therefore that they develop a relationship that works for all concerned, regardless of whether they are in-person or communicating via technology.

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Introduction: Working Together in a Virtual Internship

The familiar adage of needing experience to get a job, and a job to get that experience, is nearly a rite of passage for students and as relevant now as ever. Over the last few decades, employers and students alike have widely accepted the internship as a method for students to gain work experience and sample employers, and for prospective employees to demonstrate they can both perform work and relate with others in a work environment, thereby increasing the likelihood of them being offered the type of job they want after finishing school (Eneriz, 2019; National Association of Colleges and Employers, 2019; Parker, 2019).

Over the last decade, the virtual internship has proven to be a viable alternative to interning in-person, providing some solutions to many of the issues faced by employers and students engaged in traditional internships, and expanding internship opportunities for interns and the choice of interns for employers from those found within the radius of a local commute to nearly anywhere in the world. A virtual internship however has its own issues, not the least of which is establishing and sustaining a working relationship when participants do not interact in-person, when communications are mediated via technology, and when interns are unfamiliar with the specific work environment.

The annual Job Outlook survey for 2019 conducted by the National Association of Colleges and Employers (2019) revealed that over 90% of employers prefer job candidates with work experience. Furthermore, when they compare candidates, they look for internship experience over a candidate's major, GPA, school attended, and extracurricular activities. Given the need for prospective employees to have relevant work experience, and the opportunities and solutions that virtual internships offer over traditional ones, research is needed to fill the gap in knowledge about this largely unstudied phenomenon to provide guidance for internship

developers and prospective participants to increase the likelihood of establishing and sustaining working relationships, reducing conflict, and accomplishing work together while interning in a virtual environment.

Background

From the employer's perspective, the goal of the hiring process is to locate, identify, and hire someone with the knowledge and skills needed to perform the job and the ability to work with a supervisor and co-workers in a specific work environment. From the students' perspective as prospective employees, the purpose of the hiring process is to locate, identify, and secure jobs that match the knowledge and skills they possess with an employer of interest.

The process of hiring. Employers use tools such as resumes, exams, or professional certifications to identify prospective employees who possess the required knowledge and skills to be successful in a job. Prospective employees gain the knowledge and skills for the jobs they want through educational or vocational options. Educational options include formal learning at accredited institutions, non-formal learning through certification, licensure, and continuing education, and informal learning through life experiences and self-directed education (Merriam, Caffarella, & Baumgartner, 2007). Work is a type of non-formal or informal learning experience that may be conducted part- or full-time, be paid or unpaid, and conducted with employers of interest, with employers in the same field of study or practice, with employers unassociated with desired jobs, or associated with self-employment (Batsleer, 2008). Not all educational or work options are viable to gain the type of knowledge and skills that employers need. For example, a prospective software designer can learn on their own by volunteering for work projects, but this would not be a viable option for a prospective surgeon.

The most visible element of the hiring process is employers and prospective employees seeking to connect and to solve the issue of employment. Underlying the visible aspects of an employer asking for a resume, and a student trying to fulfill what the employer is looking for on that resume, are less visible layers of anxiety, uncertainty, doubt, and need that drive the hiring process. Figure 1 depicts the relationship between these visible and less visible layers for employers and for students as prospective employees in an adaptation of an iceberg metaphor envisioned to explain communications (Scott, Stanzler, & Goodman, 2000). As the figure suggests, students and employers have parallel concerns. At the base of these concerns is uncertainty. For employers, it is the uncertainty of hiring someone who will assimilate well into the organization. For students as prospective employees, it is the uncertainty of life and the concept that securing a good job will make life less uncertain.
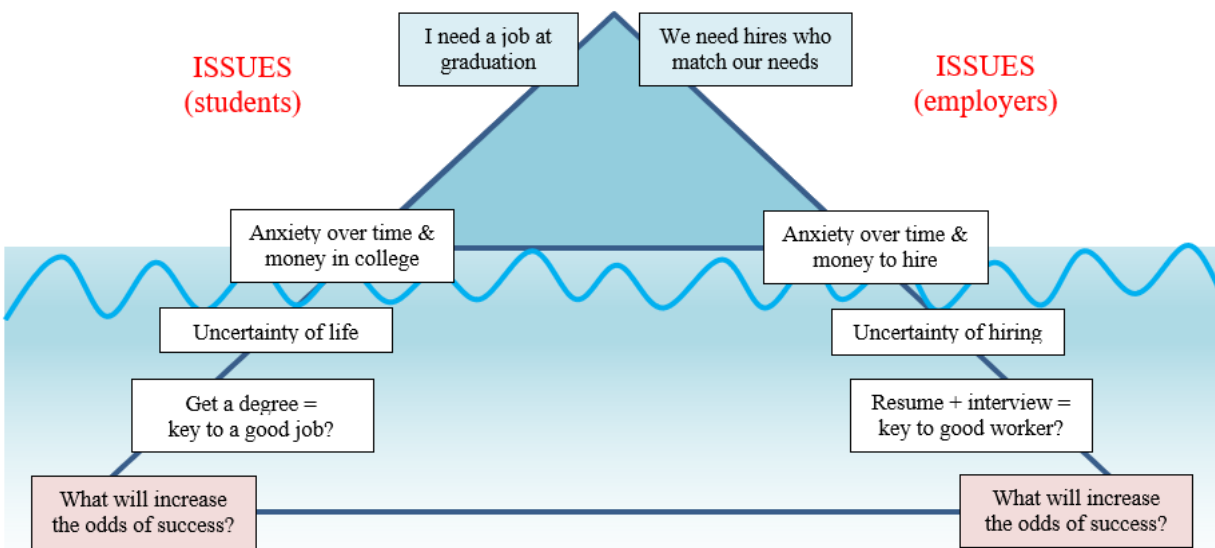
Figure 1. Hiring process from the perspectives of employers and students. Visible drivers and underlying concerns are depicted.

Uncertainty leads to anxiety. For employers, this anxiety is over return on investment of time and money spent to locate, identify, and hire a new employee. For students who want to be

that new employee, it is anxiety over return on investment of time and money spent to gain the knowledge and skills that employers require for the jobs that students want to secure.

Uncertainty stems from doubt. For employers, this doubt is over whether the tools or methods used in the hiring process will yield desired outcomes, namely employees who will work well with them. For students, the doubt is over whether a college education will yield the outcome they want, namely a good paying job in their field of study. In both cases, I contend that the driving factor is a desire to increase the likelihood that an investment will yield desired returns, making the hiring process successful for both parties.

The importance of work relationships. A resume, skills test, or certification may indicate that a prospective employee has acquired the knowledge and skills required for a job, but these are not good indicators of how well a prospective employee will interact with a supervisor or others in a work environment, which is a factor of equal or greater importance to work success than knowledge or skills (Gabarro, 1987). Employers use a variety of methods to address this less measurable but critical aspect of the hiring process, including contacting references about past work performance, conducting background checks, requiring cover letters to get a feel for personality and writing skills, conducting personality tests, social media checks, and various types of interviews (Society for Human Resource Management, n.d.). When deciding on an appropriate approach, employers must weigh return on investment of time and money associated with each option because the hiring process for professional jobs may take months to years to complete and cost up to tens of thousands of dollars, and a wrong decision may cost much more in terms of lost work, social disruption, and replacing the new hire (Parker, 2019; Williams, 2012).

Each method of selection is limited in how well it can determine what the employer really wants to learn, which is how well a new hire will fit into their organization. A common and inexpensive method is a proxy evaluation of prior work. Prior work experience, even if unassociated with the field of work, may still be a better indicator of how well a prospective employee relates to others in a work environment than an interview or skills test (National Association of Colleges and Employers, 2017).

An approach that is more reliable than other methods is to have a prospective employee work for a trial period in a setting close to that of the desired position. Employers have several options using this approach. Part-time work may inform employers of a candidate's suitability better than an interview would, but this option entails paying and supervising each candidate, and part-time work may not show how well a candidate works in the environment for which they are being scrutinized. Volunteer work is a less expensive option but is not as subject to supervisory control and candidates may not be as committed to the work if they are not paid. It is logical then that an apprenticeship or internship may be more reliable options than part-time or volunteer work because they can provide employers with a directly observable measure of how well prospective employees relate with others with whom they would likely to work.

Apprenticeships. Young people throughout history have learned by observing and working with family or community members until they became knowledgeable or skilled enough to work on their own. Modern apprenticeships are a formal arrangement in which apprentices have the status as a paid employee. This arrangement includes on-the-job training or instruction for 1 to 6 years, at which time the apprentice earns a nationally recognized credential that is transferable to other employers in the field (U.S. Department of Labor, n.d.). Skilled jobs such as carpenters, electricians, ironworkers, plumbers, and sheet metal workers have long required

recruits to undergo a formal apprenticeship (Torpey, 2017). Apprenticeships are also common approaches for training teachers, scientists, engineers, and medical professionals.

Internships. The internship is more flexibly defined than the apprenticeship, but the distinction may also be in the worker's status, the duration of the agreement, the intern's compensation, whether an educational or instructional component is included, and the outcome. An apprenticeship is a long-term commitment with the aim of providing a paid employee with the knowledge and skills required to perform a type of skilled job with a nationally recognized credential attesting to attaining a degree of expertise (Blakely-Gray, 2016; Torpey, 2017). By contrast, an internship is a short term (typically months-long) work relationship with a variety of possible aims defined by its participants, with no required outcome. An internship may involve part- or full-time work. An intern may be a student or not. An intern may be paid or may simply be compensated by the work opportunity (U.S. Department of Labor, n.d.). I contend that while an internship may be more vaguely defined than an apprenticeship, this vagueness can provide employers and interns with flexibility to meet the interests of all parties.

The academic internship. It is my experience from teaching internship courses that internships, like apprenticeships, frequently do have an educational or instructional component, though the nature of that component is more flexible than in an apprenticeship. For the academic internship, an educational component is critical to the purpose of the internship which is to give students an opportunity to apply what they are learning in school, or at least to observe how theory is applied in a work environment. To ensure that the student intern gets an opportunity to meet specified learning objectives, representatives of the educational institution with which the student is associated may communicate with representatives of a sponsoring organization about this requirement.

Students may be required to engage in an internship as part of their degree curriculum or it may only be an option or recommendation. The internship may be a component of a for-credit course, or a student may receive credit for completing an internship. If the internship is part of a course, the instructor may work closely with the intern's supervisor. If a college or university encourages students to pursue work experience while in school, I have observed that institutions often establish a program with personnel who work with outside organizations to help students to find internship and other work opportunities and may assist students in learning how to find work, write resumes and cover letters, and to gain interviewing skills.

Co-operative education. Working full-time as an intern while being a full-time student as well can be challenging, so students may intern during the summer or periods between academic terms. Some institutions have arranged agreements with organizations for cooperative education, a hybrid between an internship and apprenticeship, that enables students to work full-time as a paid employee for a semester or more (Northeastern University Cooperative, n.d.; Cooperative Education and Internship Program, n.d.). However, this compromise arrangement may extend the time required to earn a degree.

Virtual internships. I propose that a virtual internship may be a viable alternative to the in-person internship. By enabling participants to work from anywhere, a virtual internship provides students with a range of opportunities not limited to commuting distance and provides employers with a greater range of interns from which to choose.

Creating a Work Community

On the surface, the alternative of engaging in an internship while located anywhere in the world, as opposed to commuting to and from the physical site of the sponsoring organization, may appear to be a solution to several issues that employers and students face with in-person

internships, including transportation to and from the site, finding a place to work, wearing professional dress, restricting access to some spaces and activities, and possible issues of time management. However, employers and new employees may still need to establish and sustain a working relationship to be able to conduct and accomplish work. It is logical to propose that no matter how much work experience a new employee has that a new job requires learning a new culture and learning to relate with members of a new community. I found that this kind of transition can be challenging for seasoned workers and even more challenging for college students who may have little work experience.

Academic orientation. It is my experience that colleges and universities are aware of the need to orient new students to the culture of the academic community, both to increase the likelihood that the transition and experience is successful and to retain students through graduation. Prospective students learn about facilities, policies, standards, the workplace (classrooms), the nature of the work and its context (the degree plan), the work schedule (class schedule), available resources (physical spaces on campus, textbooks, and links), and what success looks like (grading criteria). They also meet their supervisors (instructors), co-workers (fellow students), and others to whom they can turn for assistance.

Orientation of workers, apprentices, and interns. It is my understanding that apprentices as paid employees and inexperienced workers would receive some manner of orientation to enable them to coordinate work with others. However, due to the loosely defined nature of the internship, the intern's status, and the shorter duration of the relationship, the degree to which an intern receives orientation may vary considerably.

Online classes and work. It is my experience that classes taught partially or completely online require the instructor find ways to communicate even more clearly with students about

policies, conduct, expectations, work, and schedules than in the in-person classroom environment (MarylandOnline, 2018). Even then, students can draw on years of experience with instructors in-person and so interpret what to expect in an online course in the same way that teleworkers can draw from years of experience working with others in-person.

On the other hand, students who have little experience in a business environment or who have only worked part-time may not have the background to imagine an unknown environment. The situation may be exacerbated when students cannot see or hear or get a feel for a work environment or meet with a supervisor or co-workers in-person, and when working relationships must be established and sustained through remote communication technologies alone. For student interns then a thorough orientation seems imperative, as does continued effort to sustain interactions between the supervisor and others, if working relationships are to be successful in accomplishing work goals and for participants to have a satisfactory experience.

Statement of the Problem

The cost of hiring new employees can be expensive but making the wrong choice may be more so (Williams, 2012). Employers need a reliable method to identify prospective employees who are most likely to work well with them. The cost of preparing for and going to work can also be expensive. Students need a reliable method to demonstrate that they are the person an employer is seeking to identify. A trial work period such as an internship can be a reliable method to demonstrate and directly observe how a prospective employee works in a specific work environment.

Conducting a remote internship can provide employers and students with opportunities unconstrained by geography while easing requirements such as finding a place to work, commuting, and time management issues. However, a virtual internship may have issues

associated being unfamiliar with a work community but unable to join that community physically, and the need for supervisors, interns, and co-workers to establish and sustain a working relationship while being unable to meet in-person.

The issue of how participants of virtual internships can develop and maintain a remote working relationship via telecommunications technology with strangers in an unfamiliar work environment is a real concern for employers, academics, and students. Internships are a flexible and proven method to enable students to gain work experience, learn about a prospective employer, and demonstrate they can apply knowledge and skills and work well with others, while providing employers with a way to directly observe interns working in an organization-specific environment.

While virtual internships can offer advantages over other in-person trial work, they are not well studied (Jeske & Axtell, 2013). Research is needed concerning the nature of this relatively new phenomenon. Research is also needed concerning how participants establish and sustain working relationships remotely because this is an even less studied aspect of the phenomenon, even as it is crucial to the internship's success. This study addresses both these research needs, first by surveying a wide range of participants about their internship experiences and then by using what is learned from the survey to guide in-depth conversations with a select few supervisors and interns about their work relationships.

Figure 2 shows how an internship brings employers and students together by providing the work experience that employers need from new hires and an opportunity for students to gain this in school. The uncertainty of the internship is how it can be justified since interns are not employees, may not be paid, and there is no required outcome. This uncertainty can lead to anxiety over dealing with issues of in-person work.
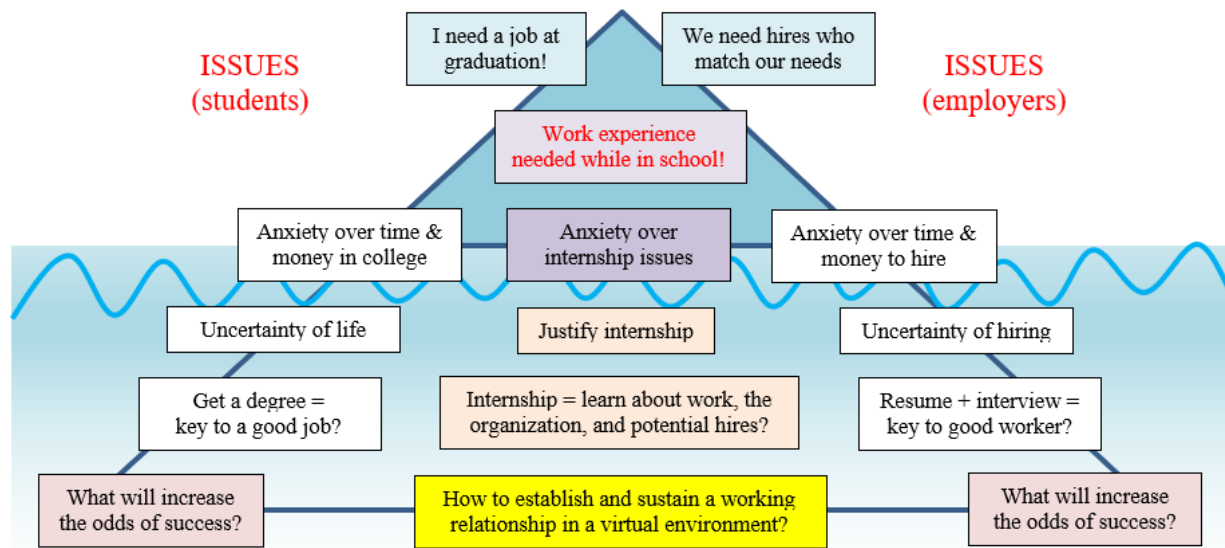
Figure 2. Internship issues from the perspectives of employers and students.

With internships, the uncertainty stems from doubt about its utility to enable employers to learn about interns as potential hires and for student interns to learn what they want about work and the internship-sponsoring organization. The driving factor is how to increase the likelihood of success. For virtual internships, that likelihood is increased by determining how to communicate without the benefit of meeting in person or being present in the unique work environment and establishing and sustaining a working relationship, the problem that this study addresses.

Depicted in Figure 3 as the intellectual connection of this study. The approach in prior studies has been to view the internship from the student's perspective as a vehicle to gain work experience, so prior studies tended to focus on what to do to help interns succeed and to have a satisfying experience (Franks & Oliver, 2012; Gardner, 2013b). The methodology was typically positivist in its epistemology in that interns' experiences were gathered and factors of success or satisfaction identified so that the next developers and practitioners could combine the right mix of factors to increase the likelihood of success and satisfaction (Franks & Oliver, 2012; Gardner,
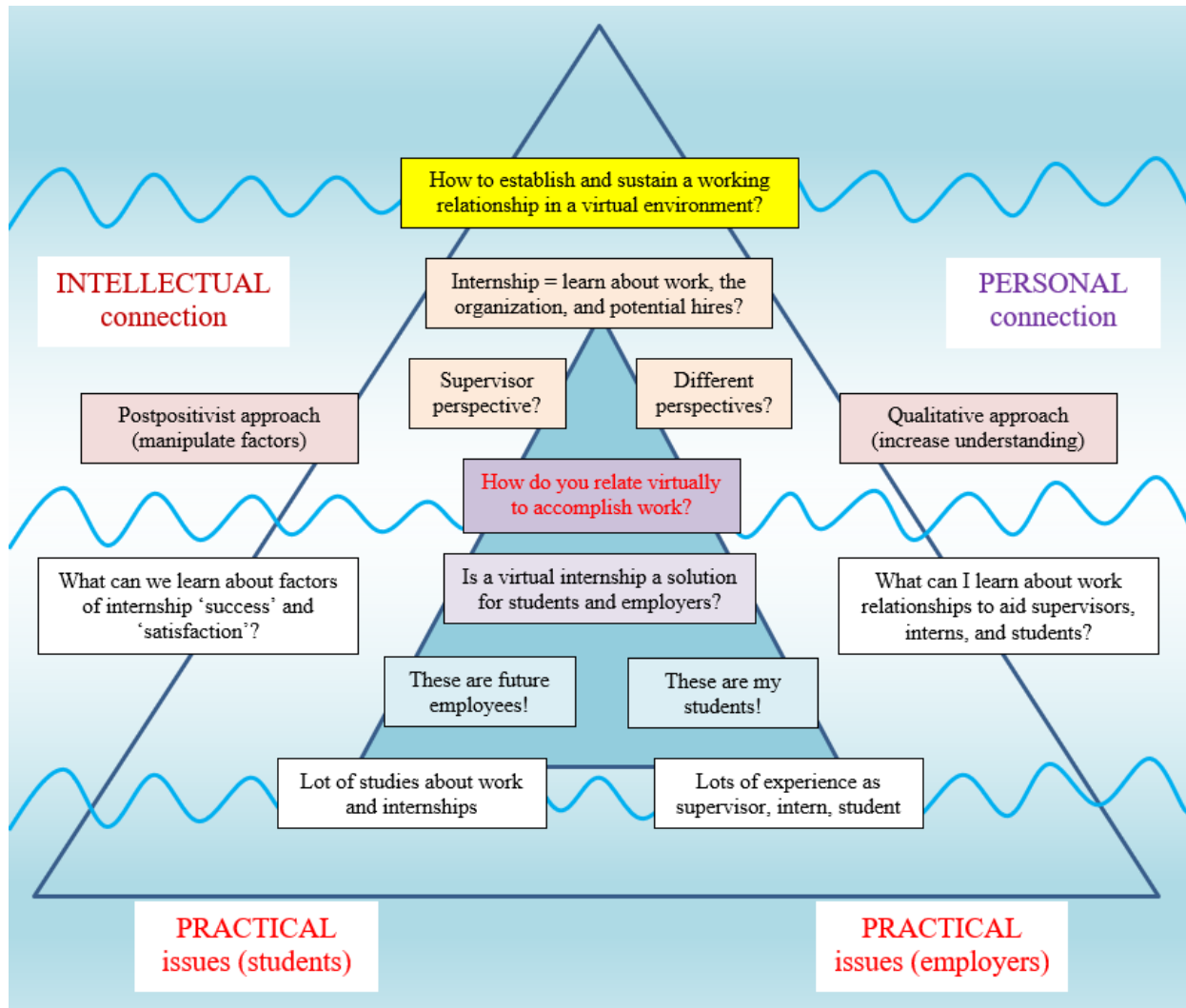
Figure 3. Virtual internships from three perspectives. Iceberg model extended as an overhead view of the three faces of the research iceberg, that is practical, intellectual, and personal.

2013b; Greer, 2013). Few researchers studied work relationships (Waters & Russell, 2016).

Though experts have concluded that human relationships are critical to work (Gabarro, 1987)

and previous studies agreed that a good working relationship is an important factor for success

and satisfaction, few studies explored relationships deeply. Fewer studies explored virtual

internships, and fewer still included the supervisor's perspective (Bradbury & Koballa, 2008;

Gibson, 2004; Greer, 2013; Hudson, 2013; Knemeyer & Murphy, 2002).

Purpose of the Study

The purpose of this basic, interpretive, qualitative study was to explore experiences of virtual internships from the perspectives of student interns and intern supervisor participants, then to interpret from their experiences how participants communicated remotely for the purpose of establishing and sustaining work-related interpersonal relationships.

Prior internship studies involving students have focused on the student intern and on factors that appeared to promote success or satisfaction from the intern's perspective (Beard & Morton, 1998; Franks & Oliver, 2012; Gardner, 2013b; Greer, 2013; Jeske & Axtell, 2013; Williams, 1976). Literature is lacking about the intern's supervisor's experience and about underlying issues that may greatly affect success or satisfaction from the perspective of both interns and supervisors, particularly on interpersonal working relationships among internship participants (Gardner, 2013b). Literature on virtual internships, and specifically on how student interns and intern supervisors can establish and sustain a working relationship by communicating via remote communications technologies, is virtually nonexistent. This study will fill in those gaps and contribute to understanding in this area that is of importance to a wide range of theorists, researchers, businesses, academic institutions, and practitioners.

Research Questions

The question of "How did student interns and intern supervisors describe their experiences in virtual internships?" was a broad and open question that guided the first phase of research, was in keeping with theories and procedures of phenomenological research, and for which an answer was readily attainable (Smith & Osborn, 2003). This study obtained evidence to answer this question directly from students and supervisors who experienced at least one remote

internship facilitated by the same program in which I was a virtual intern and had access to participants through program coordinators.

The central question. The question that guided the outcome of this study was, "How did virtual internship participants relate via mediated communication?" The intent of this question was to discover how virtual internship participants communicated the information they needed to work together using remote communications technologies when interns were unfamiliar with the culture of the supervisor's work community, with the goals and work to be accomplished, and with those with whom the intern must work to accomplish internship goals and work. Part of the answer could be obtained directly from participants and the rest from interpreting elements of relationship from shared experiences. Sub-questions were considered to learn how participants related remotely. These questions are classified by whether answers could be derived directly from data or interpreted from analysis.

Category 1 sub-questions. Answers could be derived directly from data.

***What information did supervisors think was necessary to convey to interns to do work*?**
Sub-Questions: What information did supervisors convey to interns about the organization?
About work? About themselves? What information did interns ask about this?

How did supervisors and interns resolve the ambiguities associated with internships?
Sub-Questions: What evidence was there of how supervisors and interns set internship goals, work goals, objectives, schedules, and tasks? Meeting days and times?

What communications technologies did supervisors use to communicate with interns?
Sub-Questions: How did supervisors and interns communicate remotely? How and why did they select and use those technologies? Did they express anything about the effectiveness of using these technologies to conduct work or work-related interests?

What did participants bring to the internship that may have influenced perspectives?

Sub-Questions: What evidence was there of academic preparation, work experience, or prior experiences with virtual or traditional internships?

What kind of relationship did supervisors and interns have with their counterparts?

Sub-Questions: What evidence was there for how participants described their relationship with supervisors, interns, co-workers, and any others associated with the internship?

Category 2 sub-questions. Answers could be interpreted from analysis of data.

Were there repercussions for not conveying information participants needed to work?

Sub-Questions: What evidence was there of consequences when information typically associated with orientation was not conveyed to interns? How did this affect work relationships? How did supervisors or interns compensate for lack of information?

Were there repercussions with communicating remotely rather than in -person?

Sub-Questions: How well were supervisors and interns able to accomplish work via remote communications? Was there evidence of any consequences for not communicating in-person? Was their evidence of any aspects of typical face-to-face communications missing in participant experiences? How did this influence work relationships?

Did supervisors and interns have personal issues that influenced work relationships?

Sub-Questions: What evidence was there of personal goals or expectations for the internship or other participants? Did supervisors and interns have the same or different goals or expectations? Was there evidence of why supervisors or interns participated in a virtual internship? How did participants convey time conflicts and how did they compensate for these? What evidence was there that any significant differences between supervisors and interns influenced work relationships?

Did supervisors and interns reflect on how they would have changed experiences?

Sub-Questions: What evidence was there of how participants would have changed the circumstances of their experiences? Prepared differently? Planned differently? Acted differently?

Limitations of personal testimony. Participant perspectives of work and relationships were derived from how each individual filtered what they saw, heard, did, learned, and felt about past experiences, how they later recalled elements of the experience, how their recollection evolved over time, how the reality of their experiences met expectations, what they read about or heard from others before and after their experience, and from biases and other influences brought to the internship before it began.

I did not and could not directly observe each experience because it took place through remote communications and in the minds of participants. The closest I could get to the reality of each experience was through personal accounts, which are inherently limited. Keeping this in mind, it became apparent to me that I would first have to collect direct personal accounts of a variety of experiences which together could provide the information I needed about the nature of virtual internships, and then interpret from my own experiences how participants interpreted their experiences. This approach is known as interpretative phenomenological analysis. The validity of the interpretations increases with the amount and variation of experiences the researcher has in the roles and experiences that participants are likely to share (Smith, 1996; Smith & Osborn, 2003).

Role of the Researcher

Before engaging in this study, I had 50 years of experience in full-time, part-time, and volunteer work environments, over 40 years communicating remotely in the military and online communities, 40 years of supervisory experience at work, 35 years as a registered student, over

20 years teaching undergraduate and graduate courses in traditional and virtual classrooms, over 15 years of experience developing degree curricula that included internships, and 10 years teaching internship courses. I had supervised two graduate and one undergraduate student interns, participated in two in-person internships associated with the doctoral degree program, and a virtual internship facilitated by the same program as the study's participants so I could share an experience with them. I had also conducted scholarly research for 50 years in areas ranging from plant pathology to distance learning, had published a small number of co-authored peer-reviewed articles, given presentations to admirals and generals and at domestic, regional, and international conferences both in-person and via remote communication technologies, and had supervised graduate and undergraduate research. On the other hand, I had minimal experience conducting research in the social sciences and no experience with qualitative research or research on internships or relationships.

Familiarity and experience with work, internships, and virtual environments led to benefits of being able to understand participant experiences from different viewpoints, which enabled me to guide interviewees to share rich descriptions of their experiences. It also made me feel more confident employing interpretative phenomenological analysis as an approach to interpret how participants interpreted their experiences and created meaning about their work relationships. However, this same familiarity and experience made it more difficult for me to suspend preconceptions about familiar activities and phenomena.

I decided early on to be as involved in the research process as practical, so I collected all data and performed analysis on it myself, with the exception of locating and selecting an existing online survey instrument, modifying and hosting it with an online service (SurveyMonkey, https://www.surveymonkey.com), downloading collected data in spreadsheet format, using

software to record audio and video interviews, and corresponding with participants via telephone, email, and a videoconferencing service (Zoom, https://zoom.us).

Significance of the Study

The outcome of this study was rich testimonies from student interns and intern supervisors about their experiences with virtual internships and working relationships. My interpretation of their interpretation of their experiences will contribute to the body of literature and aid internship developers and practitioners to understand the role of relationships in virtual internships and apply what is learned to their situation. Insights into the nature of virtual internships will help internship developers to decide whether this alternative to in-person internships applies to them and to help in planning and conduct of virtual internships.

From this researcher's perspective as academic program coordinator, student advisor, and internship instructor, achieving a better understanding of how virtual internships work and how supervisors, interns, and co-workers learn to communicate in a virtual environment (Figure 3) may lead to a breakthrough alternative for my students. Many of them are comfortable relating to family and friends in virtual environments but struggle financially and have family and life commitments. Conducting virtual rather than in-person internships could help them and other students to gain work experience while being better able to concentrate on schoolwork before they must solve the issues of full-time employees working in-person away from home. A qualitative study such as this that focuses on communications and working relationships would probe the underlying issues associated with success and satisfaction rather than just searching for factors to add or adjust in the attempt to improve the mix.

Initial Literature Review: Related Theory and Research

This chapter describes a need for research and how this study responded to that need. The primary purpose of an internship for students and employers is to learn. This chapter contains theories about learning relevant to interning. The internship as a method for young people to learn about work is a relatively recent phenomenon, though with ancient roots. A brief history about how we learn to work is included in this chapter. Internships focus on learning about work and the environment in which work is conducted. Internship learning is not accomplished alone, but through a relationship with someone who guides the learner. Theories of communication, interaction, and perception may help to explain experiences that this study's participants share as they learn to relate to each other and work together.

The modern internship had its origins 50 years ago. Its focus and practice have changed over the decades and the focus of prior studies mirrored those changes. A selection of prior studies of internships is presented, particularly those that through reflection on my own experiences guided decisions about how to approach and conduct this study (Maxwell, 2013).

Need for Research on Work Relationships in Virtual Internships

Interns learning about work and other workers. An internship is a short-term trial work period that a non-employee engages in with employees of a working organization. The purpose that an employer may have for creating an internship or an intern for participating in it may vary widely, but internships have become accepted and even desired methods by which an employer can directly observe how someone works and relates to others in a work environment.

For a student who does not yet have the knowledge and skills to perform the work, or who does not have experience working with others in a work environment, an internship can provide that experience. For interns who have prior work experience, interning represents an

opportunity to learn about a specific work environment and about the people who work at a specific organization. The short-term and flexible nature of an internship enables many students to gain work experience so they can increase their likelihood of becoming employed soon after they complete formal education.

Advantages and challenges associated with virtual internships. A traditional in-person internship shares many of the same logistical characteristics as regular work, which students with commitments to school and other life commitments may not yet have learned to negotiate. Conducting an internship via communications technologies can reduce the issues faced by both employer and student associated with the need to be physically present at a worksite, while providing students with a wider selection of internships and employers with a wider selection of interns. However, conducting a remote internship adds complications associated with establishing and sustaining a work relationship when an intern is unable to join the community physically or work with a supervisor in person and is unfamiliar with the specific work environment or community.

Work relationships: a gap in the literature. An employer wants to know whether a prospective employee can do the job for which they may be hired. There are several ways they can learn this, ranging from accepting proxy evaluations by former supervisors to validated resumes or certifications. Learning whether prospective employees can work well with the people with whom they would work is far less measurable, which may account for why prior studies have dwelled on determining measurable factors of success and satisfaction. Work relationships within internships have not been well studied, especially from the supervisor's perspective, and studies of virtual internships are almost non-existent (Bradbury & Koballa, 2008; Gibson, 2004; Greer, 2013; Hudson, 2013; Knemeyer & Murphy, 2002).

Research is needed about the nature of this relatively new phenomenon, especially about how participants establish and sustain working relationships critical to work success (Gabarro, 1987) when their relationship is restrained communicating remotely. It is a need for developers in work communities to justify investing in developing and implementing internships. It is a need for administrators at academic institutions who require that students conduct internships, for administrators who work with organizations to sponsor internships, for instructors who teach internship classes, and for academics who wish to assist students to prepare for work after graduation. Research into working relationships in virtual internships is a practical issue for employers and students because of the advantages of this type of internship.

How We Learn

An internship is a learning opportunity. Regardless of whether the internship has formal educational objectives, it is an opportunity for the employer to learn about interns and interns to learn about the employer, work, the work environment. An internship always involves learning but may also be an educational experience, depending on how the intern and supervisor relate. Education is the process of providing knowledge, skills, values, and attitudes through teaching, while learning is an intentional attitude to acquire what education can provide. Education and learning may be classified as formal, non-formal, or informal (Merriam et al., 2007).

Formal, non-formal, and informal learning. Formal education is systematic and structured. It is typically associated with a teacher-oriented approach that assumes the teacher possesses what students want and can learn this through assimilation. Formal education is institutionalized, formally recognized, and used historically to standardize people. Before the last century, most people received little formal education. Non-formal learning is voluntary and typically associated with learning from experts in a semi-structured manner. This is the type of

education experienced in apprenticeships, storytelling, certification, academic internships, and adult learning classes. Informal learning is what we do every day when we encounter new experiences and try to understand from the perspective of our prior experiences.

Constructivism versus behaviorism. Another way to view learning is by contrasting behaviorism versus constructivism as epistemological models of knowing. Behaviorism, from a pedagogical point of view, is a rigid, procedural approach to learning that assumes knowledge is objective, is transmitted from teachers to students in discrete units, and that student behavior is measurable. Constructivism, on the other hand, is a student-centered approach that views knowledge as connected and integrated and students as active elements in the learning process (Hassad, 2011). Constructivists can view learning as cognitive (Piagetian constructivism), that is, the individual learner is seen as changing her mental model of the world to accommodate new experiences, or as a social process (Vygotskian constructivism) by which learning takes place through constructing understanding and individual meaning from social interactions that can be mutually beneficial for all participants. Both views of learning can occur during internships as all participants learn from their experiences, with Piagetian constructivism associated with interns learning about work and the work environments and Vygotskian constructivism associated with the intern learning how to work with others.

Other styles of learning. From an educational viewpoint, didactics is based on the concept of improving baseline knowledge using a content-centered approach. The didactical theory of education includes normative aspects that describe educational objectives and their attainment, and formative aspects associated with developing knowledge, understanding, skills, and behaviors (Beard, 2010). An academic internship that includes educational objectives includes aspects of didactic education. Other styles of learning include dialectical discourse

aimed at establishing truth through reason, active learning in which the learner analyzes and evaluates a situation and then synthesizes a solution, service learning in which community service can play a part in the learning process, and situated learning in which the learner gains skills in a natural setting, which describes the learning that takes place during an apprenticeship or internship (Hanks, 1991).

How We Interact

Internships require interaction with others because interns unaware of the work that needs doing, how it is conducted, what policies regulate it, or the personnel and other resources that may be required to conduct the work. An internship therefore is not just work. The intern must communicate with established workers to learn these things. Even before they start communicating, indeed so they can communicate, established workers and interns have a preconception about the work and the roles they and other workers will play in conducting work, likely based on prior direct or secondhand experience in like situations.

Theories of communication within organizations. There are eight approaches or perspectives that researchers have taken in studying communications within organizations. The postpositivist perspective extends the scientific concepts that objects can be observed, measured, and evaluated, to include human behavior, while the postmodern perspective questions a researcher's ability to conduct an objective study or interpret the results of postpositivist studies objectively. This leads to interpretive studies which focus on exploring a subject or resolving interpretations of ambiguity, both approaches found in this study (Deetz, 2001).

Other approaches to communications include social constructionism, structuration, and globalization. The social constructionist perspective views the world as jointly constructed by its participants, such as by a supervisor and intern. Structuration, a dualist viewpoint between a

positivist approach and social constructionism that holds that structure can determine behavior, would apply to this study if the work environment determined how the supervisor and intern relate with each other rather than them creating their own reality within it (Giddens, 1984; May & Mumby, 2005). Globalization may have some application considering how virtual internships can bring together people anywhere in the world to work with the other (Giddens, 1984).

Additional perspectives include how communication develops, how information transfers within an organization, and how communication creates the social structure, knowledge, activities, and psychological state of community members (Deetz, 2001). These approaches are relevant to this study in how information needed for the new intern to work is transferred to them by established workers, and how the way a supervisor and intern communicate influence the structure of the group, its activities and how members feel about the internship.

Theories of perception and interaction. To be able to communicate and interact with others, we must have a preconception of who the other person is and how to communicate with them. As we start to communicate, we develop perceptions of each other's personality and their motivation for communicating. These perceptions can influence how we, and in turn they, behave and communicate further with us, thereby influencing our interpersonal relationship with them (Duck & Pittman, 1994).

Reflecting on my own experiences, preconceptions and subsequent perceptions could play an inordinately large part in establishing a relationship if visual, aural, and other cues received during in-person encounters were lacking as they might be in a virtual internship. The more that preconceptions and perceptions differ among participants, the further apart would be their individual constructions of reality. Unless this gap is addressed through effective communication, the more likely ensuing interactions and the relationship would be affected.

Theory-theory. At the root of developing preconceptions about a future environment is Theory-theory, a theory of the mind from the field of psychology with the premise that we have an implicit or naïve view of the world that we create to make sense of the desires, beliefs, and emotions of others in it. That is, we mentalize about others to explain and predict their potential thoughts, intentions, and behaviors so we can create a reality of the world around us. At first, our preconceptions of the world are a reflection of us, but then we observe facial gestures, eye direction, body movements, and visual, aural, and sensual cues from others and the world around us and start to make judgments about feelings and intentions (Gallagher, 2004). Relevant to this study, many of these cues may be missing in a virtual internship, so participants must construct meaning about the work environment and others who they encounter from other constructs.

Applying interpretative phenomenology analysis. Researchers, including the author of this study, cannot really know what others are thinking, however familiar the situation appears. Interpretive phenomenological studies employ mentalizing to construct meaning from what participants share about their experiences (Röska-Hardy, 2009). This form of mind-reading views the other almost like a third party, which can also occur in poor relationships when interaction must include a predictive component rather than being more solidly based on contextual or environmental factors. Therefore, the validity of mentalizing about another person to predict their thoughts and behavior is greater the more knowledge or experience the researcher is with similar situations or roles. Otherwise, predictions of intent or behavior is tantamount to guessing (Gallagher, 2004).

How We Learn to Work: The History of the Internship

Throughout the millennia, we have learned how to work by observing others and trying to do what they do, often under the watchful eye of an experienced practitioner who provides

feedback to foster improvement. Figure 4 encapsulates the development of learning options from this style of one-on-one experiential learning to the modern internship.

      Early apprenticeships and universities. The modern internship can trace its roots to apprentice training in medieval guilds. A guild was a work community whose most experienced members possessed a collective knowledge and mastery of skills in a field of study and practice such as crafts or trades (Sheilagh, 2004). Guild members took in young people who wanted to learn a craft or trade as apprentices. Apprentices observed and practiced the art under the close tutelage of a master of the art, typically for a period of up to 10 years, until the apprentice demonstrated the proficiency to practice the art on his own (Spradlin, 2009).
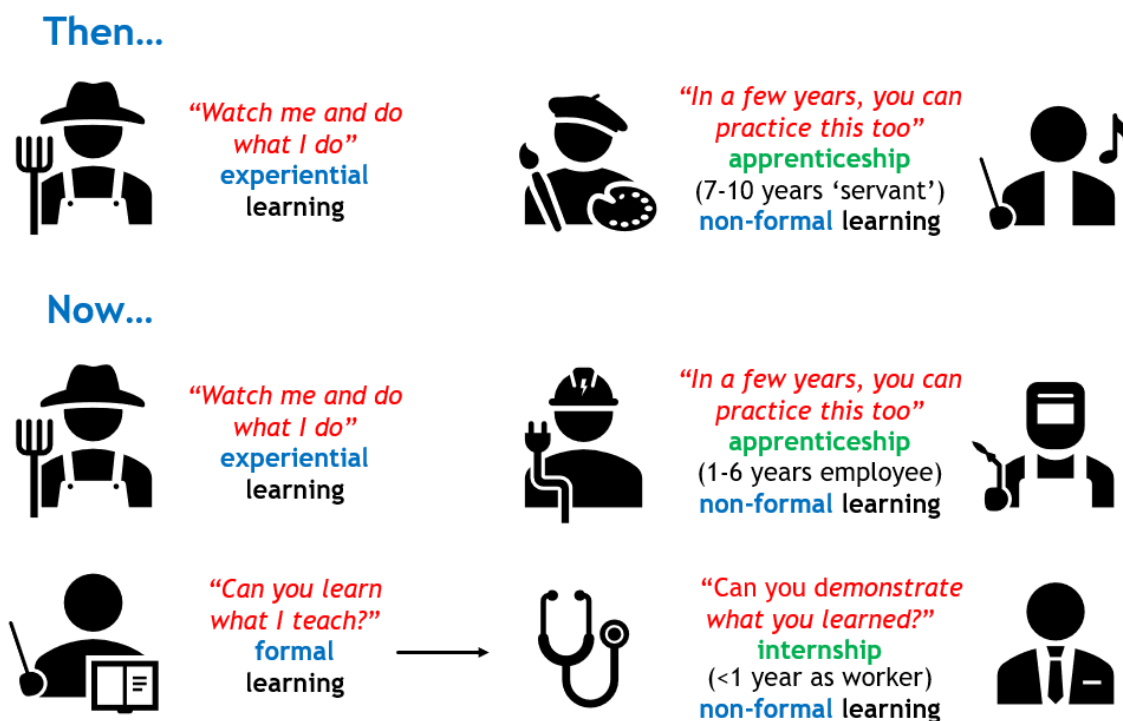
Figure 4. How we have learned to work over the centuries.

      Early universities such as those at Bologna (1088), Oxford (1096), and Paris (1150) began as association of masters of the arts teaching young apprentices for the purpose of regulating the quality and practice of the arts in their surrounding area. The Bachelor of Arts

degree was an indicator that a student had completed lower level training and was prepared to become a master of the arts. A master's degree, originating from a Papal bull in 1233, signaled that the person who attained it had a recognized degree of proficiency and could teach the art at another university. The doctoral degree, which typically took 7 to 8 years for a master to attain, evolved in the 15th century as an indicator that a teacher could teach at higher levels of instruction. (Hastings, 1895; Hay, 1989).

Experiential work options today. Young people today have many of the same options for learning how to work that young people have always had. They can still learn from family or others in their community. Formal educational institutions can provide a learning environment in which to learn from experts in a variety of fields of study. Formal education may include experiential learning (Kolb, 2015), but employers may require that prospective employees demonstrate that they can apply what they have learned in the classroom to real-world problems or in the employer's specific work environment.

Modern apprenticeships. Apprenticeships have received recent attention as an alternative or supplement to formal education. Today there are many skilled jobs that require apprenticeship training to earn a license to practice. These non-formal learning environments, in which apprentices work as paid employees, may last from 1 to 6 years. The National Apprentice Act of 1937 promoted apprenticeships in craft and utility jobs, while the Registered Apprentice Programs extended this to health and safety jobs such as first defenders.

Apprenticeships received presidential attention in the 2010s, first by President Obama and then by President Trump, due to their high rate of employment upon completion (over 90% in the mid-2010s) and return on investment for employers (Zients & Perez, 2016). In 2016, there were 21,000 registered apprenticeship programs in the United States, training over 500,000

apprentices (U.S. Department of Labor, n.d.; Wang, 2019). Presidential executive order 3245 (dated June 15, 2017) called for a task force to examine apprenticeships in American business and for businesses to promote apprenticeships as an alternative to the formal educational system so students could be connected to the workforce. The executive order broadened the definition of apprenticeship to be "an arrangement that includes a paid-work component and an educational or instructional component, wherein an individual obtain[s] workplace-relevant knowledge and skills" (Sec. 3(a), Trump, 2017). This broader definition has blurred the differences between apprenticeships and internships, the latter defined as "a period of time during which a student works for a company or organization to get experience of a particular type of work" (Cambridge English Dictionary, 2019), that is, a full or part-time, paid or unpaid, short-term, non-employee position for the purpose of gaining general work experience (Blakely-Gray, 2016).

Medical, government, and business internships. In the years leading up to World War I, doctors who completed a formal medical education were required to demonstrate that they could apply what they learned in a real work environment before they were granted a license to practice. First-year medical trainees were referred to as "interns" until 1975 when the term was replaced by "resident" (Accreditation Council for Graduate Medical Education, 2018).

The concept of the internship to train young men in a less formal manner was adopted by government agencies, academia, and commercial institutions in the early 20th century. The accounting department of the University of Cincinnati offered the first academic internship. Northeastern University instituted the first co-operative internship in 1909. Newspaper and garment businesses employed young boys to perform basic tasks and become familiar with how companies operated. The U.S. Congress hired page boys as messengers and interns to learn how the nation's law-making bodies worked, a system that was discontinued by the U.S. House of

Representatives in 2011, though the U.S. Senate still maintains this practice (Cain, 2016; Haire & Olloffson, 2016; Newhauser, 2011; Wentz & Ford, 1984).

Modern internships. The modern internship had its origins in the 1960s, though internships continued to be rare until the 1980s. During the 1970s, institutions of higher learning began to promote for-credit academic internships to increase their competitiveness during a downturn in enrollment. Students in the 1980s viewed the internship more popularly when business became the most popular major, a status it continues to hold today. Students also began to view internships as a method for sampling different types of jobs and potential employers, unlike the 1970s in which they were more likely to intern with a company where they wanted to work (Spradlin, 2009).

The way internships were viewed and practiced did not change much for decades. Gross (1981) predicted that the only way that internships would change was through changes in technology. In the 1980s, businesses began to promote internships as a recruiting tool due to an increased need for knowledge workers during the advent of the personal computer age. In the late 2000s, the increased sophistication and availability of communications mediated by technology enabled teleworkers to stay connected to main offices and collaborate with co-workers from anywhere in the world. Coupled with the downturn in the worldwide economy and resultant need to cut costs, this change in technology and business needs brought about the initiation of the virtual internship (Franks & Oliver, 2012).

A review of virtual internships posted online in the early 2010s (Jeske & Axtell, 2013) revealed 187 programs worldwide, including 54 each in the United States and the United Kingdom, 25 in India, 13 in France, 12 each in Romania and the Ukraine, and fewer than a half dozen each in Canada, Russia, Malaysia, and Australia. This type of internship is most frequently

referred to as "virtual" in the United States and Malaysia, as either "telework" (English) or "teletravail" (French) in Canada, and the language equivalent of "work from home" in Russia, Romania, the UK, India, and Australia. Forty percent of internship-sponsoring organizations offer virtual internships to help them with marketing, 25% to produce information technology (websites, graphic design, or computer programs), 18% to post information, and 10% to enlist the assistance of people with specialized skills. My experience would be best classified as an internship requiring specialized skills, primarily in online research.

Prior Studies of Internships

An analysis of literature about internships over the last four decades is summarized in Figure 5. I classified these studies by the approach (quantitative or qualitative), methodology (instruments such as survey, observation or interview, and analysis), and principal findings. Based on this analysis, it appeared that until recently most studies have been quantitative in approach and that qualitative studies tended to be case studies in which researchers observed participants. Not until the 2000s were there examples of studies in which participant were interviewed. The focus of prior studies also appeared to be on the intern and on predicting internship success or intern satisfaction with the internship experience.

A more detailed examination of three studies provides a sampling of representative research in this area of study. Besides these three, I was unable to find others that had similarities to this study. Findings will be shared elsewhere in this report.

Franks and Oliver (2012) conducted a survey of 303 graduate students enrolled in virtual internships in library studies associated with an online course the primary researcher taught. A student assistant embedded in the class helped with data collection, supervisors and interns were invited to complete surveys at the end of the internship, and supervisors were invited to sit on a
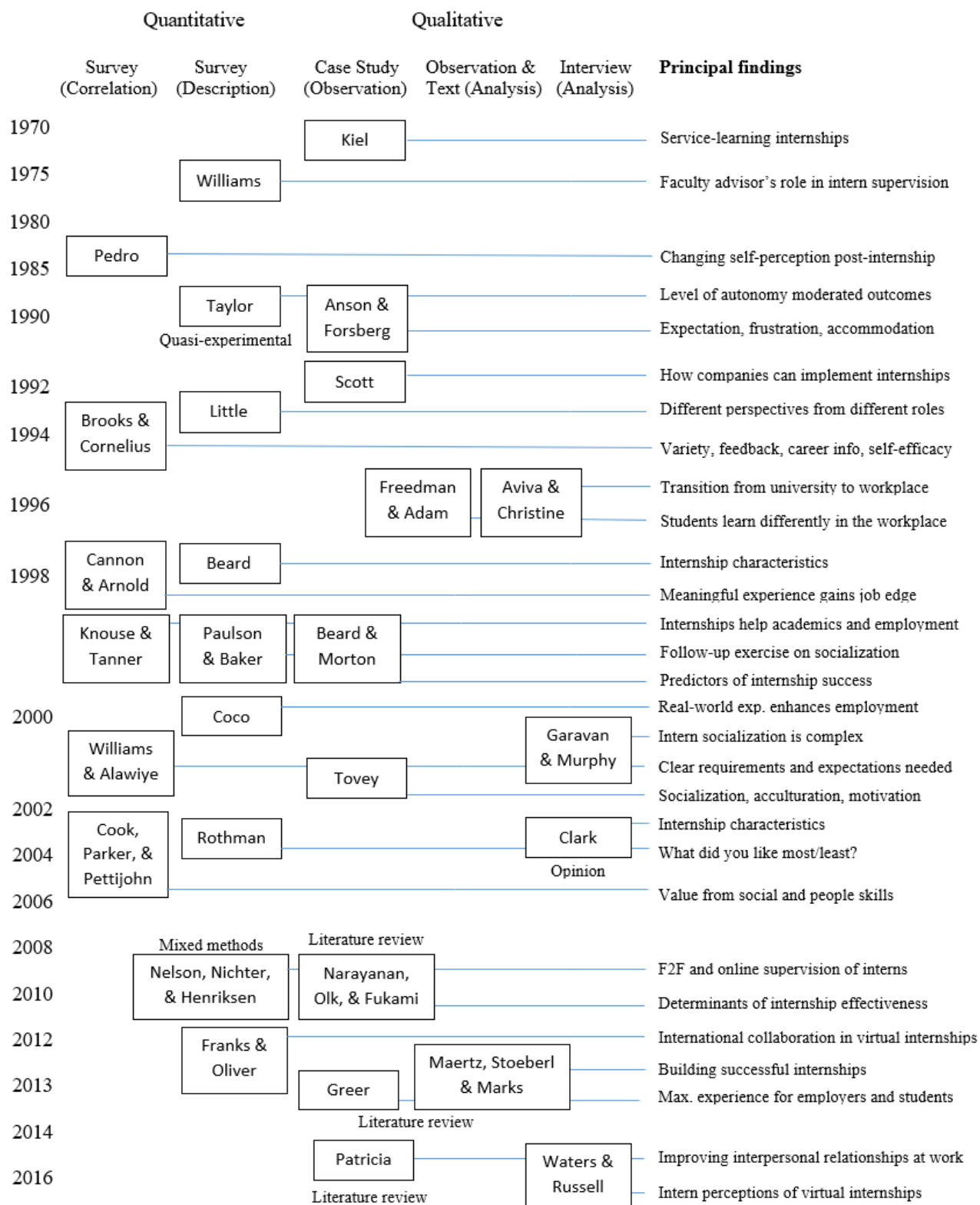
Figure 5. Classification of representative literature on internships (1970-2019).

panel to share information which was applied to improving the course and virtual internship program. Ninety-two percent of supervisor-intern teams used email or phone to communicate and 42% used Skype. Eighty percent of students earned course credit, while 10% withdrew early, and another 10% failed the course.

An exploratory study with similarities to this study was conducted to learn about how interns learn (Holyoak, 2013). Six interns and their supervisors were interviewed 6 to 8 months after their internship experiences. Another study explored how intern teams communicated while working on complex engineering projects during simulated virtual internships (Hartung, 2016).

Study Approach

Phenomenology and the interpretive qualitative approach. Phenomenological studies develop understanding of a phenomenon by bracketing the researcher's preconceptions and focusing on descriptions of conscious experiences (van Manen, 1990). Postmodern perspectives question the objectivity of researchers and participants (Deetz, 2001) so that phenomenological research may be questioned as not entirely able to remove the researcher from their work or able to interpret what participants experienced objectively. What was needed were ways to interpret what participants meant from what they did (Schwandt, 2001) or else for researchers to acknowledge they are part of the research and to discover meaning by interpreting what participants share about thoughts and experiences (Lincoln & Guba, 1985). Therefore, ethnographic researchers try to understand participant experiences by studying a participant's culture (Alvermann & Mallozzi, 2010).

Interpretative phenomenological analysis. While it shares the concept and methods used in phenomenological research by exploring participant experiences with phenomena, interpretative phenomenological analysis acknowledges that research is a dynamic process in

which the researcher plays an active role in developing meaning from what participants share (Smith, 1996; Smith & Osborn, 2003). Since the researcher cannot enter the participant's mind, the researcher must draw from their own experience and conceptions to interpret what participants are trying to interpret about their experiences.

Interpretative phenomenological analysis assumes that there is a connection between what people say and what they are thinking or feeling, even when limited experience may limit their understanding of an experience. Research questions therefore are open and broad, with the objective to explore topics. Sample size for research applying interpretative phenomenological analysis ranges from 1-15, with five to six participants optimal, three recommended for inexperienced researchers, and participants selected purposively (Smith & Osborn, 2003). Interviews using a semi-structured and open protocols are recommended, and data collected by funneling from general to specific questions, with flexibility to follow the interests of interviewees. Therefore, the researcher primarily needs to establish a rapport with interviewees and the order in which questions are asked or even the completeness of asking all questions is secondary. The aim is to collect rich and contextual data. Interviews should be taped so that transcription can be created, starting at the semantic level. The researcher should then read the transcript several times to discover insights into meaning, looking for tension and conflict, themes and categories, finally translating the themes into a narrative account of the experience (Smith & Osborn, 2003; Smith, Jarman & Osborn, 1999).

How This Study Addressed the Need for Research

Three representative studies conducted decades apart revealed that what makes an internship successful is not solely the result of the attitude or activities of any person playing a specific role. Nor is it the product of only what occurs during the internship. The results of these

studies revealed that people in at least five roles are involved in creating a successful outcome, namely the student intern, the student's academic advisor, the intern's work supervisor, and administrators at school and at the worksite who make decisions about the design and conduct of the internship (Beard & Morton, 1998; Greer, 2013; Williams, 1976).

Analysis of the three representative studies resulted in identifying three categories of factors that the authors of the three studies concluded had influenced the outcome of the internships they studied. Two of the categories involved pre-internship planning and the third could not be planned because it had to do with the behavior of participants when they interacted. Therefore, it could be argued that good planning alone could not predict the outcome of the internship, but that relationship factors played a significant part.

Table 1 depicts a dozen or so factors from analysis of these studies classified by category. The first category of Internship Policy included planning decisions concerning the intern such as the type of work the intern would perform, how the intern was compensated and evaluated, supervisor-related decisions about how the supervisor was selected, and how the supervisor conducted the internship. The intern is included as a participant in this category not because they were involved in planning but because they could determine success or satisfaction by how they complied or reacted to planning decisions. The second category of Preparation also contained pre-internship issues such as the objectives of the internship, the supervisor's background, and the intern's academic preparation. The third category of Social Behavior included factors associated with social behavior, which could also be called relationship. These included attitudes, approach to the internship and work, how supervisors supervised, and how interns interacted with other interns.

Table 1

Factors of Internship Success by Participant Roles

	School Environment			Work Environment	
	Intern	Advisor	Administrator	Supervisor	Manager
INTERNSHIP POLICY					
Policies and Conduct [b]	X		X	X	X
Intern Compensation [b c]	X		X	X	X
Type of Intern Work [c]	X			X	
Supervisor Selection [c]				X	X
Evaluative Criteria [a]	X	X	X	X	X
PREPARATION					
Goals & Objectives [a]	X	X	X	X	X
Academic Preparation [b]	X	X	X	X	
Supervisor Background [b]				X	X
SOCIAL BEHAVIOR					
Attitude about Internship [a]	X			X	
Approach to Work [a d]	X			X	
Advisor Contact [a e]	X	X			
Intern-Intern Interaction [c]	X		X	X	X
Type of Supervision [b]	X			X	

[a] Williams (1976)
[b] Beard & Morton (1998)
[c] Greer (2013)

Methodology: Study Design and Implementation

The purpose of this basic, interpretive, qualitative study was to explore experiences of virtual internships from the perspectives of student interns and intern supervisor participants, then interpret from their experiences how participants communicated remotely for the purpose of establishing and sustaining work-related interpersonal relationships. This chapter contains details of the approach used to research the relatively recent phenomenon of the virtual internship, including a phased plan to collect data from participants, a multimethod plan to analyze the data, ethical considerations regarding working with participants and data, and an explanation for how this design creates trustworthy findings.

Designing the Study

Study approach. The design of the study includes the setting and selection of participants and a research plan to collect and analyze data to achieve the study's purpose. This study employs a qualitative, multiphase approach to obtain both broad and rich descriptions of participant experiences and interpret them to learn how participants experienced working relationships. I took a rationalist approach to what will be found through research, contending that supervisors and interns bring both *a priori* and *a posteriori* knowledge to an internship, that is, participants bring with them expectations of what the internship and the people with whom they will work should be like to be able to achieve desired outcomes, but that these expectations can be influenced by prior experiences. Expectations and experiences are expected to color how participants form relationships with others, at least in the beginning. It follows that epistemologically the study's overall design is constructivist, that is, based on the theory that meaning is subjectively constructed by participants during experiences.

Data collection is loosely based on phenomenological methodology, which is shared by other traditions, in which the researcher conducts in-depth, guided interviews to learn about how participants constructed meaning through their individual interpretations of a lived experience (Creswell, 2013; Crotty, 2015). However, having learned as an educator that knowledge changes in diverse and wondrous ways from teacher to students, I make no pretense to be able to mine nuggets of knowledge unchanged by the tools used to mine them and left unscathed from oral conversation to written transcript, nor be able to "strip away the surface of conscious experience… preferably with computer programs" (p. 48) as research interviewers do (Kvale, 2007). Rather, I identify more with the traveler who journeys in search of a particular type of story, exploring mapped and unknown terrain, holding conversations with locals, encouraging them to talk about their world, and interpreting what I heard through my experiences but also seeking to change what I know through reflection about my travel experience and the perspectives of others (Kvale, 2007).

Data analysis is based on hermeneutical phenomenology, in which the researcher reflects on essential themes found within what participants share of their experiences (van Manen, 1990). However, I understand from experience that what is essential in in the mind of the experiencer, so will practice interpretative phenomenological analysis (Smith & Osborn, 2003; Smith, 1996; van Manen, 1990). This will be accomplished by establishing a relationship with the interviewee so as to guide the conversation and use knowledge and prior experience in a double hermeneutical fashion to interpret how participants interpreted their experiences from what they shared and what they did not share. This approach is necessary to learn how participants described relationships as they share what they experienced during the internship. A preliminary

literature review found that this approach was unusual for doctoral studies because most students did not have an extensive practical background in the topic, unlike this case.

Study plan. Because virtual internships are not well studied, the research plan was two-phased. The first phase of the plan involved conducting basic research to obtain broad knowledge of the phenomenon of virtual internships, then applying what was learned in a second phase of exploratory research to obtain deep knowledge of internship experiences. The first phase of the study started with designing an online instrument to survey virtual internship participants whose primary role was supervisor or intern. This phase concluded with a semantic and thematic analysis of survey data. The second phase began with prioritizing potential interviewees using the results of the survey data analysis to select both desired interviewees and topics of discussion for use within interviews. This phase concluded with analyzing and interpreting survey and interview data to understand how participants related to others associated with their virtual internships. Figure 6 depicts the described study plan.
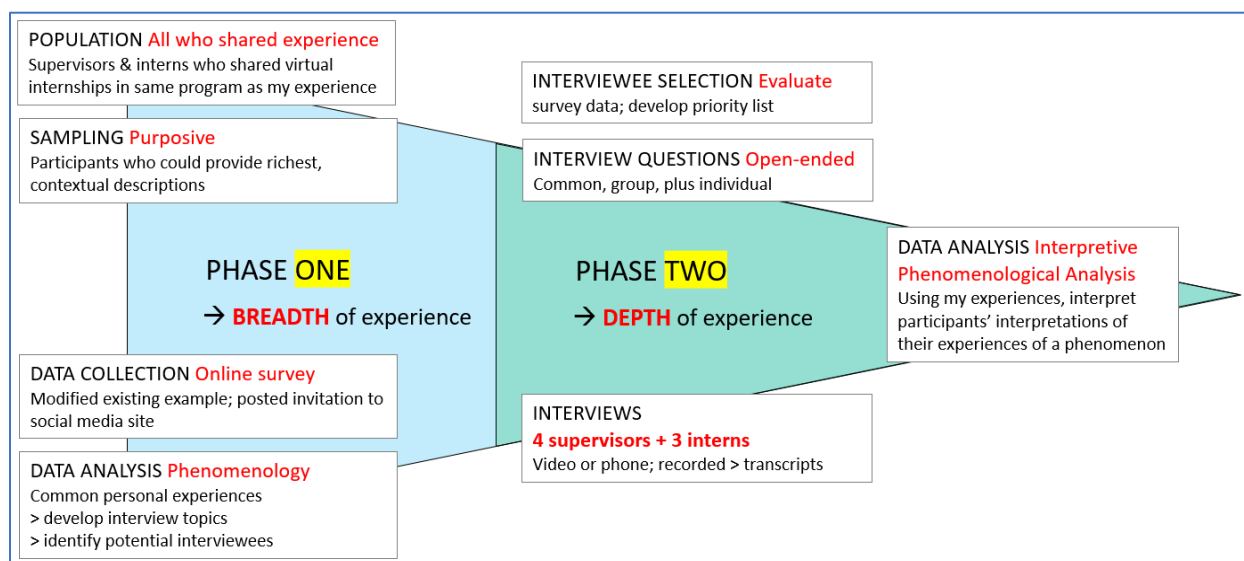
Figure 6. Overview of the two-phased study plan.

While the Institutional Review Board assessed this study to be "exempt" from board review as the study posed minimal or no risk to participants, this chapter addresses ethical considerations of participants and data. Also, I had considerable familiarity and experience with several perspectives with the topic of internships and virtual communications, which both aided and complicated the study procedurally and ethically, and the chapter addresses those issues.

Designing the Research Plan

The design for research included a plan to collect and analyze data required to answer the research questions that guided this study. The principal question was, "How do student interns and intern supervisors describe their experiences in virtual internships?" Literature abounds on factors that researchers attribute to a feeling of success or satisfaction on the part of interns, but there are few studies about work relationships in internships, particularly from the viewpoint of supervisors, and fewer still about work relationships in virtual internships (Gardner, 2013b). Secondary sources from the literature include news articles or short testimonies by virtual interns posted to school websites, and information-oriented websites hosted by programs facilitating matching interns to internship opportunities, but these do not provide detailed, complex, and contextual information from which to draw inferences about working relationships. Primary sources were required for a more in-depth analysis.

The research design for this study included collecting data from virtual internship participants in two phases. The goal of the first phase was to obtain information from as many supervisors and interns who volunteered to answer an online survey, with the objective of learning the breadth of experience about the phenomenon of virtual internships from those who experienced one. This phase would result in two sets of responses, a response from interns and a response from unrelated supervisors. The goal of the second phase was to explore the depth of

experience by obtaining rich and thick information from participants through in-depth interviews. This phase would result in a set of data from which to draw inferences about working relationships. Figures 7 and 8 detail both phases of the study's research plan.

Setting, Population, and Sampling

  Setting and population. The study population was students and organization employees acting in the role of intern supervisors who chose to engage in virtual internships facilitated by a well-established U.S.-based program. Program coordinators had worked with mostly large, U.S. organizations for nearly a decade, over 35 at the time of this study, and was among the first internship programs in the world to sponsor virtual internships. Many of these organizations have offices located throughout the world, and were seeking adults who were U.S. citizens and students enrolled in institutions of higher learning to work with them for up to a year-long internship with the expectation that interns would commit to an average of about ten hours per week on projects that would assist the organizations. Each organization posted a project title, identifier, and description online, with required or desired intern qualifications. Prospective interns applied online for up to three projects. Organization representatives choose from among those who applied, with the option to interview candidates. Program coordinators informed students if they were selected or not, for which project, requested that selected students accept the project, and notified them that an organization representative would contact them.

likely to have a wide range of experiences. The second reason was that I participated as a virtual intern with an organization coordinated by the same program, providing me with an experience shared by the study's participants. This helped me to better understand and to interpret how participants created meaning from their experience. The third reason was that by selecting participants within the program with which I was affiliated as a virtual intern, access to interns
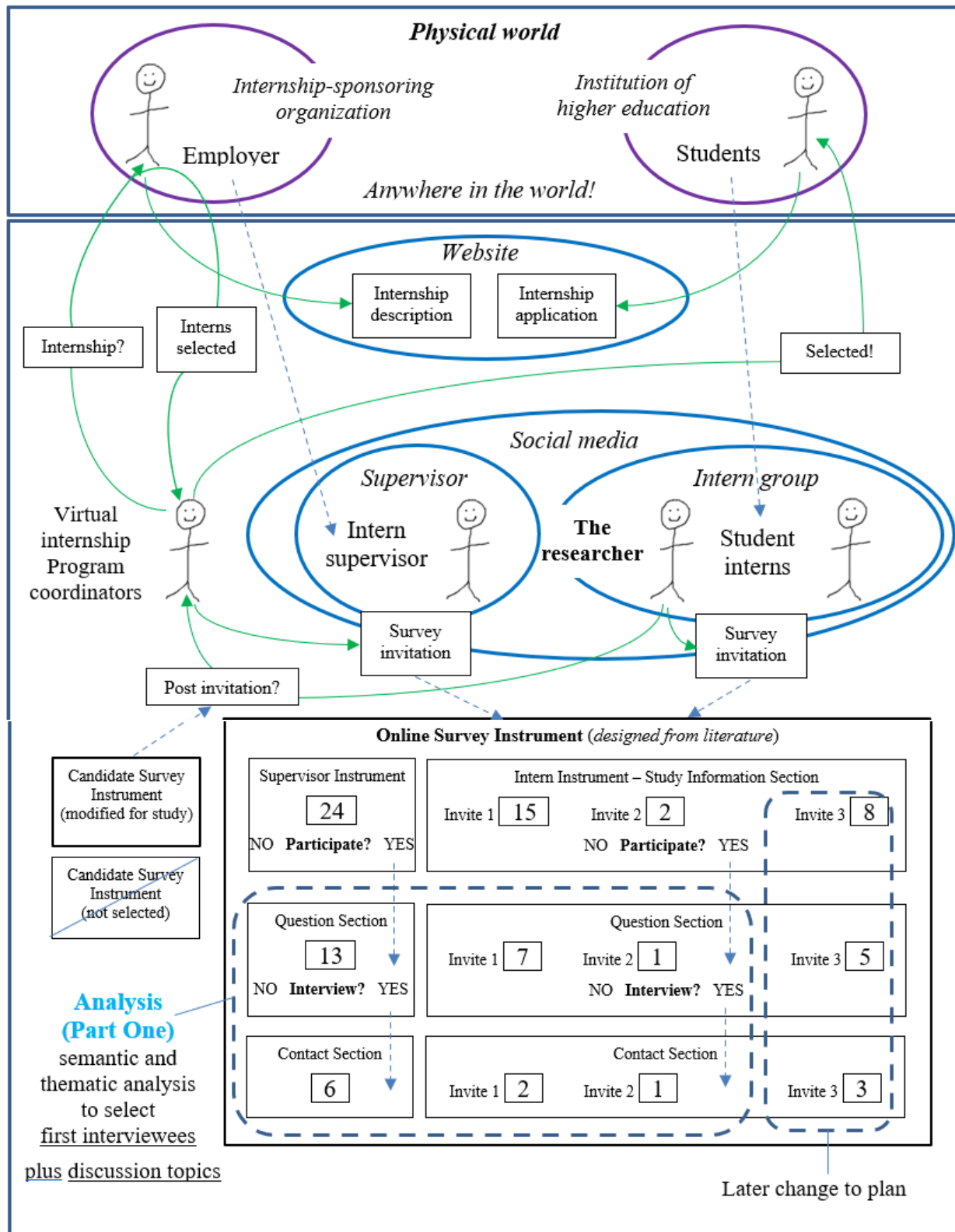
Figure 7. Phase One of the Research Plan, including changes to data collection.
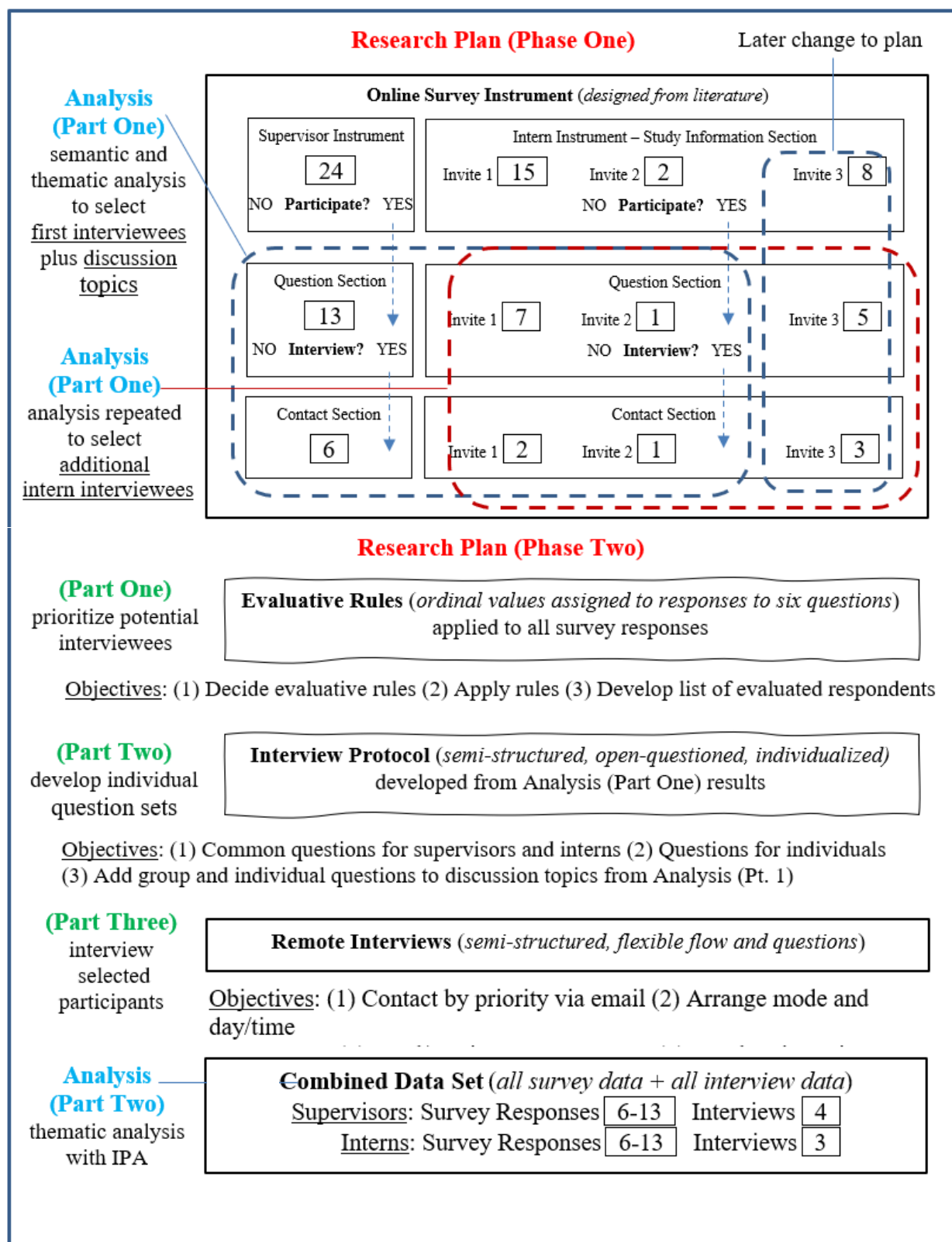
Figure 8. Phase Two of Research Plan, through Analysis (Part Two)

and supervisors was more likely. The reason for selecting both interns and supervisors for this study is that many prior studies explored the intern's perspective, but few examined that of supervisors, the other half of the supervisor-intern relationship.

Sampling. Participants of Phase One of this study were self-selected individuals from the population of students and organization employees acting as intern supervisors who responded to invitations to answer an online survey. Students were college-aged U.S. citizens who were enrolled in an institution of higher learning anywhere in the world during the first semester of their internship year, in a bachelor's, master's, or doctoral program. Supervisors were employees of organizations who sponsored virtual internships. Coordinators of the virtual internship program hosted two private groups on a popular online social media platform, a group for supervisors and a group for interns, and appeared to add the names of new supervisors and interns to the sites while retaining participants from all previous years. At the time the invitation was posted online, a potential of over 1000 interns and 500 supervisors might have responded to the survey invitation. After the distribution of the invitation, I realized that only those who noticed the invitation post would have had the opportunity to respond to it.

Phase Two participants were from a purposive sample of supervisors and interns invited by email to discuss their internship experiences in remote interviews. A purposive sample is a non-probabilistic option to select members of a population who serve a specific research purpose. For this study, that purpose was to obtain detailed, complex, and contextual, that is, rich and thick descriptions of internship experiences from which to infer meaning they perceived about work relationships by use of interpretative phenomenological analysis.

While online surveys were open to all members of the population, the sample size for interviews was guided by recommendations from literature. Interpretative phenomenological

analysis is a data analysis method particularly suited to studies that involve in-depth exploration of how participants create meaning of experiences and events as they make sense of their personal and social worlds, and to researchers who have shared those experiences who can interpret how participants are trying to interpret their experiences. Typical sample sizes for research applying interpretative phenomenological analysis are five to six purposively selected participants, with sample sizes in published studies ranging from one to fifteen, and three recommended for first-time research using this method (Smith & Osborn, 2003). A study on how many participants are appropriate for research of this type concluded that six participants should yield 80-90% of common themes associated with a shared experience (Guest, Bunce, & Johnson, 2006; Landauer, 1993). The initial goal for this study was to obtain interviews with three supervisors and three interns, which were well within the recommendations for studies using interpretative phenomenological analysis. An initial qualitative analysis of survey data from supervisors and interns was subjected to a set of evaluative rules designed to construct a prioritized list of potential interviewees who were most likely to share rich and thick descriptions of their internship experiences. A minimum of three supervisors and three interns were selected from this list for interviews.

Phase One: Exploring the Breadth of Experience

The initial strategy was to develop or obtain, administer, and evaluate a structured survey containing open-ended questions covering many of the aspects of internship evaluation or satisfaction published in prior studies. The first phase of the study began with an initial review of literature over the last four decades that revealed prior studies focused on factors influencing internship success and satisfaction from the perspective of the intern. These factors were categorized as pertaining to either internship policy, participant preparation, or social behavior.

Factors associated with internship policies included the type of work that interns did, compensation for work performed, evaluation of work, selection of supervisors, and others associated with internships from the perspective of sponsoring organizations. Factors associated with participant preparation included an intern's academic preparation, goals and expectations about the internship and supervisor, and the supervisor's experience supervising workers and internship work. Factors of social behavior included the intern's attitude towards the internship and approach to work, contact they had with their academic advisor, the type of supervision interns experienced during the internship, and interactions with co-interns.

Developing surveys. The first step to develop the survey instrument began with a search for an existing instrument that contained questions covering as many of the researched factors as possible, rather than construct and validate an original instrument, the assumption being that an existing survey developed and used by an authoritative source would be validated by design and by continued use. An online survey instrument suited the situation because access to the population had been granted by the coordinators of the virtual internship program who acted as gatekeepers via invitations to the online survey. Hosting the online survey through a company that specialized in this service would provide a link to the online survey by which participants could access it, and later provide access to collected data by downloading it from their website.

Several online survey instruments were considered before discovering a survey that met the described criteria. The Office of Human Resources Management Services for the State of North Dakota developed a survey instrument. The survey's developer and owner gave permission to use and modify it as needed (Appendix A). The North Dakota government survey adopted for this study was developed to obtain feedback from student interns about their internship experience for the purpose of helping the sponsoring office to grow the program and

provide valuable information to the agency and other student interns. The government internship

program was created from a grant that ended in July 2017, a year before the survey was adopted

for this study. The survey was still online but the owner/developer had discontinued its use. The

survey contained 11 questions on topics including application of academic studies, learning

opportunities and outcomes, supervisor-intern relationships, and satisfaction with the experience

(Appendix B).

 Since this study's participants included both supervisors and interns, wording was

adjusted to create two slightly different survey instruments applicable to these two segments of

the populations. A question about where participants worked was deleted because this

information is not needed for this study. A question about describing the relationship that

supervisors and interns had with their counterparts was added to gain specific information about

the topic of research, along with a question about what participants would like to have known

before starting the internship, which was a factor revealed in prior studies. The adopted

instrument also included questions about favorite and least favorite experiences and if

participants would recommend the internship, which were retained since they might yield

unexpected and unprompted responses about working relationships. The final survey instrument

contained 12 functional questions accessible to participants who consented to participate in the

study, plus four accessible to those who agreed to interview, which asked for contact

information, the type of work the intern did, prior internship experience, and any perceived

demographic differences between supervisor and intern. The first page of the survey contained

information about the study, with an estimate that the survey would take 10-15 minutes, based on

multiple trials I conducted (Appendix B).

During development of the online survey instruments' questions on the host's website, the instruments were divided into three sections. The first section contained required information about the research that including the estimated time to complete the survey, the topics of the questions, how the data would be protected, participant rights, and contact information for questions or grievances concerning the research. At the bottom of this section was a yes/no option about consenting to participate in the survey. Survey respondents who consented to participate were directed to the second section. At the end of that section was the question, "Would you please consent to being interviewed about your experience?" with answer options of "Yes, I will help" and "No, thank you" (Appendix B). Respondents consenting to interviews were directed to a third section which asked for contact information, the type of internship work they did, previous internship experiences, and if they perceived their supervisor or interns were significantly different from them in terms of gender, age, nationality, or culture/ethnicity.

Implementing surveys. From observing the social media site for the intern group, I noticed that the program coordinators appeared to use the site to post program announcements and to introduce new interns. Interns appeared to use the site to greet new interns and post information about associated events that other interns might find interesting and about issues they were having getting started on the internships. I asked for and received permission from the coordinators to post the survey invitation on the interns' social media site and asked the coordinators' assistance with posting an invitation on the supervisors' site.

The duration of initial data collection was 2 weeks. Access to the online survey was discontinued at the end of this period and data for supervisors and interns were downloaded in two spreadsheets. Of 24 supervisors who accessed the survey, 13 proceeded to section two with the first questions and six agreed to interview. This number met sampling objectives of at least

three supervisors. On the other hand, of the 15 interns who accessed the survey, seven continued to section two and only two agreed to interview, which was an insufficient number since the sampling objective was to interview at least three interns. The survey invitation was reposted with permission form the coordinators and remained accessible for an additional two weeks. Two more interns accessed the survey, one of whom answered question and agreed to interview. This met the sampling objective to interview three or more interns.

Changes to the data collection plan. During the process of implementing the interview plan I learned that only one of the three interns who agreed to interview would be willing to participate. Several months later, a second intern replied to emails, writing that he would only answer questions by email. I declined this offer not only because it departed from the approved data collection plan but because the purpose of interviews in this study was to guide the participant towards drawing out a deep sharing of experience than would likely be achieved by answering written questions. Realizing the number of interns did not meet the data collection objective or number needed according to theory (Guest et al., 2006; Landauer, 1993; Smith & Osborn, 2003), I modified the data collection plan with permission from the dissertation committee and a representative of the university's Institutional Review Board and reposted the intern survey invitation (Appendix C) to the intern's social media site. Eight more interns accepted the invitation, five answered questions, three agreed to interview, and two followed through. Data from the five additional interns who answered the survey questions were analyzed in the same manner as that of the previous sets of interns, and the evaluative process was conducted on all intern data to reveal which interns were most likely to produce the most valuable information during interviews.

Analysis (Part One). There were two parts of data analysis. The purpose of Part One was to conduct an initial analysis of survey data from all supervisors and the first two sets of interns to which to apply evaluative rules for the purpose of selecting potential interviewees and topics for interview discussions. The purpose of the Part Two was to discover themes about work-related relationships in the experiences of all study participants. The initial part ended with semantic and thematic analysis of initial survey data, while the second part was more extensive and included interpretative phenomenological analysis. During Part Two, the source of the data, whether from a survey instrument or interview transcript, was not considered and all data were analyzed in the same manner. Details of Part One of data analysis follow.

Processing. Survey data collected in spreadsheet format were processed by separating them by question and by individual to gain familiarity with the type and breadth of responses, as well as uncommon or especially rich responses. At this point before analysis personally identifying information and responses coded by participant.

Open coding. Figure 9 is an example of semantic analysis that reveals information about participants, sites, activities, settings, boundaries (such as when, how, how much, or how long), language descriptors or qualifiers (Lichtman, 2013). Semantic analysis resulted in 24 memos evaluating the richness of data and scope of experiences.

I started my **first virtual internship** at the beginning of my **masters program**, so most of my preparation came from my **undergraduate studies and experiences**. We had a career center which is where I learned **how to find internships, apply, write resumes and cover letters** and that was pretty helpful. In regards to my academic courses, I was studying [*subjects omitted to protect identity*], which helped me with my **writing skills** and understanding [*subjects*], which is what sparked my interest in [*the organization and program sponsoring virtual internships*]. But most of my preparedness came from the career center. [eIntern 6815642873]

Figure 9. Example of semantic analysis of a survey response.

Axial coding. Writing memos aided in open coding of ideas and concepts. Thematic

analysis, the next step, resulted in an additional 24 memos identifying 137 ideas or concepts.

Figure 10 shows an example of a memo written during thematic analysis about academic

preparation. Where respondents answered in terms of quality of preparation, a note was made to

THEME MEMO 1: INTERNS: academic preparation
What I asked: How well did the intern's academic program prepare them for the internship.
What I did not ask: I did not indicate for which *aspect* of the internship the academic program might prepare the intern, or what *aspect* of the academic program would do that.
THEME 0: Quality of preparation [quality is a theme detected in word-for-word analysis] varied widely [wide range of experiences is a selection criterion] from "somewhat" to "fairly well" to "suitably" to "very well"
THEME 1: Academic knowledge and skills**(?)** prepare an intern for the work completed during the internship.
Supported by [Intern 6839454098] and [Intern 6800935493]
--- CLARIFICATION: In what way did the academic program prepare you for the work you did? *Subject*? *Teamwork*? *Academic discipline*? *Regional history/culture*? *Psychology*? *Technology*? *Software programs*?
THEME 2: Support programs prepare interns for finding internship opportunities. Example: The career center at the intern's university helped find internship opportunities and helped to develop a resume and cover letter.
Supported by [Intern 6815642873]
THEME 3: Skills learned in liberal arts courses prepare interns for internship activities. Example: Courses in [*subjects*] helped him develop writing skills and to understand [*subjects*], which led to an interest in pursuing the [*virtual*] internship.
Supported by [Intern 6815642873]
THEME 4: Skills learned in other virtual work prepare internships for a virtual internship. Example: Completed an MLIS masters online, so felt ready to (a) work in a virtual environment and (b) interact with the supervisor "fully digitally."
Supported by [Intern 6819460158]
THEME 5: The internship demonstrates the application of academic concepts. Example: in [*subject*]
Supported by [Intern 6800935493]
--- CLARIFICATION: [Intern 6839454098] In what way(s) did your academic program prepare you for your

Figure 10. Example of a memo written during thematic analysis.

clarify what "somewhat" or "suitably" meant, which became a question in the individualized

question set for those participants. In this example, where interns wrote that they were

academically prepared, I made a note to clarify if this meant just having knowledge or skills or

also being able to work in teams, apply technologies, or understand the historical or cultural

aspects of the communities of people with which they could associate during their internship.

There were also unanticipated discoveries, such as an intern noting that virtual work like earning

an online master's degree helped to familiarize that intern with working in a virtual environment, and another who contributed the assistance of academic support centers to being selected to the virtual internship.

> *Axial coding applied*. Figure 11 summarizes an initial categorization of ideas or concepts

identified by thematic analysis. Drawing on experience designing and implementing internships helped me to classify the 137 ideas or concepts by the phase of the internship (pre-, during, or

Phase: Pre-Internship | Activity: prior experience (policy, preparation, selection)
Survey question: (Criterion #1) Q17 = Describe any previous internship experience

Theme: 113 – nearly all respondents had prior internship experience
Theme: 114 – all supervisors had prior virtual internship experience, while no intern mentioned this
Significance: participants had a point of reference for their virtual internship experience

Questions for all participants:
    (1) How did your [virtual] internship compare with previous internships?
    (2) Why did you decide to do a [virtual] internship when you already had prior internships?
    (3) What were your expectations for this internship? [Were they met?]
    (4) Did you have more than one intern/supervisor? [How did that work out?]
    (5) How would you compare face-to-face with virtual internships?
    (6) Why do you think you were selected for this internship?

Questions for all supervisors:
    (1) Have you had experience as an intern yourself? [Describe]
    (2) How might having been an intern yourself have prepared you for being a supervisor?
    (3) How did this year's [virtual] internship compare with prior ones?
    (4) Were your prior internships with the agency where you work now?
    (5) Have you observed any differences or trends over your years of internship experience?

Questions for all interns:
    (1) Were your prior internship experiences face-to-face or virtual?

Questions for individual participants:
    (1) [Intern 6803898103] Did you conduct the [virtual] internship <u>at the same time</u> as the one with the [organization] (Fall 2017)? → How did that work? [Intern 6803898103] Did you conduct the [virtual] internship <u>at the same time</u> as the one with the [organization] (Fall 2017)? → How did that work?
    (2) [Supervisor 6830569022] #1. Were your virtual internships with [org. name] or another organization? #2. Describe how you supervised a <u>virtual intern team</u>.
    (3) [6819761582] Why did you describe your [virtual] intern as "<u>fantastic</u>"? Why did you decide to stay 'in touch' with your intern?
    (4) [6808734160] Were your "years of [virtual internship] engagement" as an <u>intern</u> or a <u>supervisor</u>?
    (5) [6803963000] Was this [virtual] internship was your <u>first experience</u> with internships?

Figure 11. Example of thematic coding.

post-internship). The rationale was that identifying the phase of interpersonal activity internships

helped me to classify the 137 ideas or concepts by the phase of the internship (pre-, during, or

post-internship). The rationale was that identifying the phase of interpersonal activity would

assist in learning when internship designers and practitioners should address issues associated

with interpersonal relationships. The common theme depicted in this table was nearly all survey

respondents had prior internship experience and all supervisors had prior experience with virtual

internships. This led to the interview topic included in interview question sets about why interns

decided to participate in a virtual internship or why supervisors decided to participate in yet

another virtual internship.

Phase Two: Exploring the Depth of Experience

The goal of the second phase of the data collection plan was to obtain rich and thick

information from participants about their experiences in virtual internships. This was achieved in

three parts. The first part was selecting potential interviewees. The second was developing the

interview protocol. The third was interviewing participants and collecting data from this process.

Selecting interviewees. The process of selecting potential interviewees was achieved

through completing activities associated with three objectives. The first objective was deciding

on how to evaluate survey responses to select which survey participants to invite to interview.

The second objective-was applying evaluative rules to the results of the first part of the analysis

process conducted on early survey data. The third objective was developing a prioritized list of

potential interviewees from the evaluative process.

Developing points of evaluation. Evaluative rules were developed to apply to the results

of first part of analysis conducted on initial survey data to identify a purposive sampling of

supervisors and interns most likely to share a wide range of detailed, complex, and contextual descriptions of their internship experiences during interviews (Lunenburg & Irby, 2008). Evaluative points consisted of responses to six survey questions. The first point was prior internship experience because it might give interviewees a basis for describing experiences. The second point was perceived significant demographic differences between supervisor and interns because it might influence relationships. The third point was the participant's description of the relationship with their counterpart because it would help guide questions on that topic. The fourth point was the type and scope of supervision, because it was indicative of the supervisor's relationship with the intern, and the fifth was the type of internship work, because it might help explain responses to the fourth question. The sixth point was how well interns or supervisors felt that supervisors answered questions from interns because it could indicate differences in how participants perceived of the relationship between them.

Applying points of evaluation. Subjective ordinal values ranging from 1 to 3 points, indicating potentially low to high value for this research, were assigned to responses to these six questions that formed the points of evaluation to indicate the likelihood of survey participants providing interview data of the highest value to this study. Participants who wrote particularly rich responses or whose responses exhibited a range of responses were also noted, regardless of the points assigned to the response. Figure 12 provides examples of responses.

The result of applying evaluation to survey data analysis was that the supervisors I felt would provide the richest answers during interviews were Supervisor K (scored 10 points, including two particularly rich responses), Supervisor M (10 points and a rich response), Supervisor C (10 points), and Supervisor F (9 points and a rich response). Other supervisors scored three or fewer points. Interns similarly selected as those who might provide the most

valuable interview data were Intern K (10 points, with two particularly rich responses), Intern M

(9 points, four rich responses), Intern J (9 points and a rich response), and Intern C (7 points).
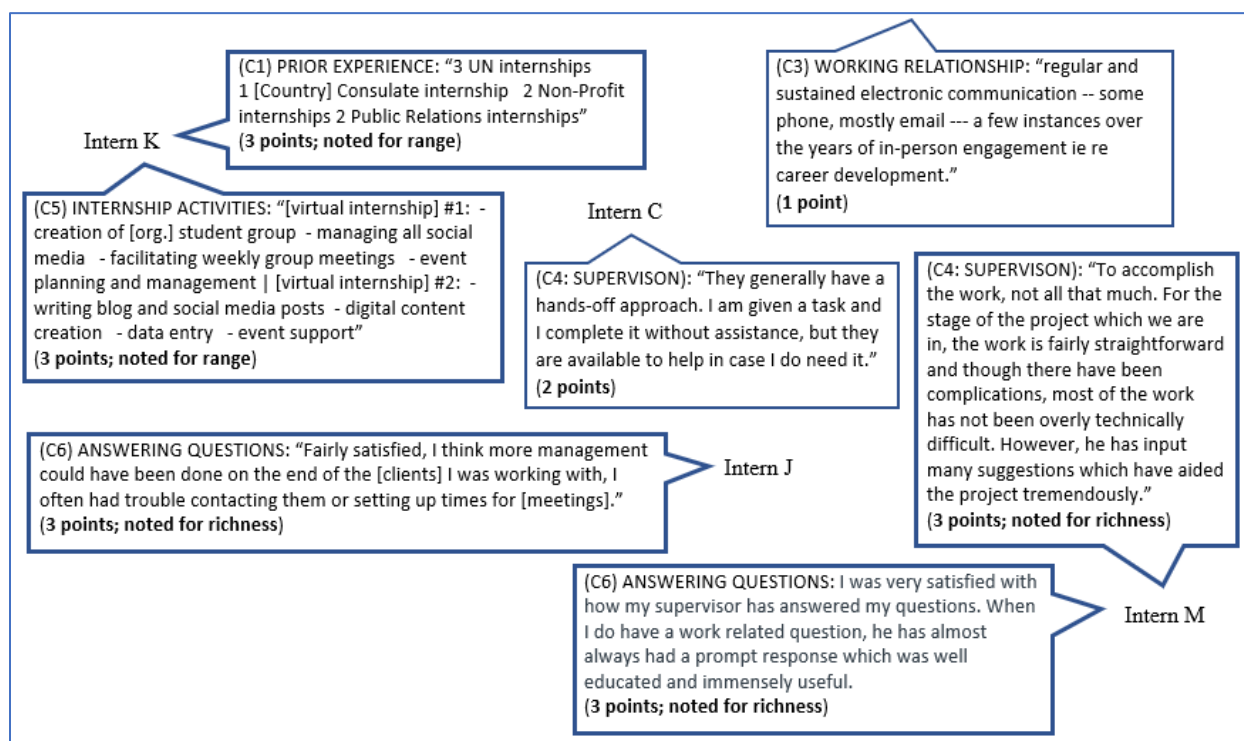
Figure 12. Examples of survey responses with evaluative rules applied.

Developing the interview protocol. The process of developing the interview protocol was

achieved through completing activities associated with four objectives. The first objective was to

conduct a thematic analysis to discover common themes in survey data to become the topics that

form the backbone of questions for the semi-structured interview protocol, befitting a

phenomenological approach (Smith & Osborn, 2003). The second objective was to assess which

themes were common to supervisors or interns as separate groups and add those to the protocol.

The third objective was to add questions intended to be asked of individuals based on their

survey responses to clarify what they wrote. Together, the question sets create individualized

question sets for each interviewee that create the fourth objective of this second part of phase two

of the data collection plan. Appendix D shows the common questions and provides examples of individualized question sets for Supervisor F and Intern K.

Interview topics were chosen from semantic and thematic analysis of survey data representing 21 respondents, including 13 supervisors and 8 interns. Table 2 shows how survey question topics were converted into interview protocol topics. Some survey questions were retained with wording modified to be less leading, and some topics were added or expanded based on results of the initial survey analysis.

Implementing interviews. The process of implementing the interviews was achieved through completing activities associated with four objectives. The first objective was to contact people on the prioritized list of selectees by email to confirm that they wanted to interview and to receive their reply. The second objective was to agree by what means selectees wanted to interview (i.e., video or audio recording and arrange the day and time). Only one selectee agreed to interview via videoconferencing (Zoom, https://zoom.us). The others agreed only to audio recording by telephone. The third objective was to send selectees an Informed Consent Letter by email and have them sign and return it before the interview. The letter contained similar information as the survey invitation (Appendices C and E). The fourth objective was to conduct the interviews using the individualized question sets to guide the conversation and for field notes during the interview.

A test audio recording by telephone was conducted by calling an associate to ensure the recording had good volume for both my voice and the voice of the interviewee and that the voices were distinctive enough to create a transcript. I had classroom experience with the videoconferencing application, so did not test that.

Table 2

Transition from Survey Questions to Interview Topics

Phase: Pre-Internship		
	Themes pointed to expectations, some realized and others not	NEW-<u>Why</u> did you participate?
---academic preparation ---prior internship experience	→ retain idea, but less leading (no academic or experience)	How <u>prepared</u> were you for this internship?
---internship work (planning) ---work flexibility (planning)	→ retain idea, but less leading (no flexibility)	[Describe <u>internship work</u>.]

Phase: During Internship		
---differences (perception)	→ retain idea, but expand to ask open question about factor impact	NEW-What <u>helped or hindered</u> your internship relationships?
---internship relationships	→ retain and expand idea to include complexity, development, behavior, and question with open wording (describe your ideal relationship)	Describe your work/professional <u>relationship</u> with intern/super. NEW – <u>intern supervisors</u>? NEW – relationship <u>development</u> NEW – work <u>ethic</u> NEW – develop <u>trust</u> (needed?)? NEW – <u>ideal</u> relationship
---internship work (implementing) ---work flexibility (implementing) ---apply academics	→ retain idea, but less leading (no flexibility or academics)	Describe <u>internship work</u>.
---answer questions	Themes pointed to communications as important factor of relationship	NEW – types of communication NEW – when tasks <u>due</u> (logistics) NEW – difference from <u>in-person</u> NEW – provide <u>feedback</u>?

Phase: Post-Internship		
---what would you like to have known ---internship should have included	→ retain these ideas (expectations/planning)	What would you like to have <u>known before</u> beginning?
---learn new knowledge/skills ---favorite | least favorite experience ---how well would you recommend	→ retain these ideas, but more open, and add personal gain	NEW – How <u>satisfied</u> were you with your internship? NEW – What did <u>you</u> get out of participating in the internship?

Interviews started with a reminder of the purpose for the research, the participant's right

not to answer questions and to quit at any time. I typed field notes on the individualized question

sheet, but soon found it difficult to take notes and listen intently enough to guide the conversation, so made notes instead about the flow of the conversation, order of questions, communications cues, and anything noteworthy or unusual that might help with later analysis (Brinkmann & Kvale, 2015). The exact questions and the order asked were guided by the conversation, although the focus was always on understanding experiences and relationships and the strategy was to start with general questions and funnel to ones more specific about relationship (Smith & Osborn, 2003). Table 3 shows an example of the variability of applied question sets. Supervisor F was the first person interviewed and questions mostly conformed to the question set. By Intern K, I learned to shape the conversation around what the interviewee said, while guiding the conversation in the direction needed for data collection.

Analysis (Part Two). Interview data consisted of an audio-video and six audio recordings. Following the phenomenological tradition of interview analysis (Creswell, 2013; Lunenburg & Irby, 2008; McNeil, 2015), I watched or listened to recordings to gain familiarity with the content before typing word-by-word transcripts that excluded non-lexical material (e.g., um, uh, yeah) which did not add or detract from meaning. Interview notes pertaining to pauses, inflection, or other cues that could aid in interpreting meaning not apparent in the wording, were added to transcripts inside brackets, as were annotations of time so that passages could be more easily located on recordings (McNeil, 2015). Recordings were listened to again alongside transcripts to ensure the latter were accurate and to listen for common ideas and concepts. Brief discussions that occurred during some interviews for the purpose of gaining trust or common ground with interviewees were bracketed and excluded from analysis.

Survey responses and interview transcripts were merged so that source was not considered except for participant pseudo-identity codes. Thematic analysis was conducted on the

Table 3

Variability in Applying Interview Question Sets

Supervisor F	Intern K
--How was your virtual internship this year?	--How was your virtual internship this year?
--Why did you participate in this internship?	--Why did you decide to do the one that was virtual, even though you already had a bunch of others?
--Please, describe the professional relationships you had with intern(s).	--Let me follow up on your experience with the student coordinator. How did that work out?
--How would you describe your interns' work ethic?	--Did you mention a technology called Slack?
--Did you have interns supervising interns?	--Considering this was a virtual internship, how did you communicate?
--How did you develop & sustain the relationship?	
--How did you develop trust between you and interns? Did you need it?	--How did you think that visiting the office in person influenced your supervisor relationship?
--How did interns know when tasks were due?	--You wrote about our supervisor as incredibly supportive. Could you elaborate?
--What communications did you have w/interns?	--How was the attitude of the other interns?
--How did that differ from in person?	--Was there anything that helped or hindered your relationships?
--How frequently did you communicate?	
--Did you provide them feedback?	--How did you develop a relationship with your supervisor and other interns?
--Were you able to answer intern questions?	--Proactive means what with respect to your supervisor?
--Did you communicate with multiple interns?	---How did you conclude your relationship?
--What helped or hindered your intern relationship?	
--Did differences help or hinder your relationship?	--You mentioned daily communications. Could you elaborate?
--Based on experiences, how would you describe a meaningful experience between interns and supervisors?	--Were there any differences that you felt helped or hindered, such as gender, age, culture?
--What do you think you are losing with a virtual internship?	--If you were to design the perfect relationship with a supervisor or intern, what would that relationship be?
--How satisfied were you with the internship?	--What did you get out of the internship personally?
-- What did you get for the time and effort you put into the internship?	--What new learning did you get from internship?
-- Briefly describe the work your intern did.	--What would you liked to have known before starting?
-- How prepared were you for this internship?	--What else would you share to help others to understand your experience or a virtual internship?
--What would you like to have known before starting the internship?	--Is there anything else I might have missed or that I interrupted you saying?
--What else would you share to help others understand your experience or virtual internships?	
--Is there anything else you would like to add?	

data set to arrive at categories of common themes. The process was repeated to explore whether alternative themes were present (Lichtman, 2013). Analysis ensued by searching data for textural and structural descriptions, that is, what was experienced and how (Moustakas, 1994), searching for how participants related to others with whom they shared the virtual internship.

As discoveries emerged about work-related relationships, I applied interpretative phenomenological analysis through a two-stage interpretative, or double hermeneutic, process (Smith, 1996; Smith & Osborn, 2003; van Manen, 1990). The first stage involved closely examining how participants described what and how they experienced work-related relationships during their virtual internships from their perspective, that is, how they made sense of their experience. The second stage involved reflecting on my own experiences in similar situations to make sense of how participants were making sense of their experiences.

For example, a participant might not say something they assume is common knowledge to anyone who has been a worker, supervisor, student, or intern but adding that information is necessary for readers with no experience in these roles to better understand the message participants are trying to convey. A participant might also talk around a subject or leave parts out because they are not sure of the consequences of saying it. For example, a supervisor continued to say "you know" during the interview and, from analyzing the transcript, assumed that I knew in some cases. Participants might also not be aware of the types of work relationships or associated activities or not recognize they were talking about relationship, while I might be able to recognize this because I had the bigger picture as a result of this research and experience from many perspectives. In cases where participants did not disclose experiences, this style of analysis would not be useful, but in many cases interpretative phenomenological analysis helped to make discoveries and reveal insights about work-related relationships in virtual internships.

Ethical Considerations

An authorized representative of the university's Institutional Review Board assessed this study to be "exempt" from board review, that is, the study posed minimal or no risk to participants. Ethical issues regarding human subject research and treatment of data were considered during the design and implementation of this study.

Ethical treatment of participants. All study participants completed some or all questions on an online survey instrument, others communicated with me remotely via email, and some talked with me via telephone or videoconferencing software. The survey invitation (Appendix C) revealed who I am by name, that I was also a current virtual intern associated with the same program as they were, and that I taught an internship course. The invitation continued with information about the nature of the study and questions in the survey, informed them of the intent to interview them about their internship experience, and let them know that their information would contribute to helping internship developers, interns, and supervisors to learn how to relate to each other better. Except for the benefit they received from contributing to helping other internship participants, no other compensation was offered.

Those who responded positively in the survey to being interviewed and followed up with an interview when contacted by email received an Informed Consent Letter (Appendix E), which they signed and returned before the interview. The letter contained similar information as the survey invitation, with the estimated length for the interview, a request to schedule a time for a remote interview via videoconferencing or phone call, and a notice that I would be recording our conversation. There was also a notice that their participation was voluntary, they could decline to answer any question, and quit at any time without penalty. I informed them that the only

anticipated risk bringing up subjects that might invoke personal feelings, and that they could contact me, or the Institutional Review Board, about any issues with the study.

During communication by email and the interviews, I tried to be respectful to them and about what they shared with me and, to my knowledge, none of the participants contacted me or the Institutional Review Board about negative issues associated with data collection. To the contrary, a couple of participants, and a director of the virtual internship program, told me that they thought this study was a good idea and they were looking forward to learning its results.

Ethical treatment of data. Data collected from primary sources consisted of survey data downloaded in spreadsheet format, and audio or video files collected from interview sessions. Participants received Informed Consent Letters over a business email address and sent signed forms to that address. Spreadsheet files, audio and video files, and Informed Consent Letters were stored on a password-protected faculty laptop and have not been released to anyone.

Spreadsheet files containing responses to survey questions that I downloaded from the company hosting the online surveys (SurveyMonkey, https://www.surveymonkey.com/) contained the public IP address of the device that participants used to access the survey. An IP address is a temporary address given to a device by the telecommunications company that assists it in connecting to the public Internet. This address can reveal the general location of the device, but not the actual physical address of the device's user. For example, looking up the IP address of the computer I am using to type this report reveals the city in which I am currently located.

Spreadsheet files contained email addresses of survey respondents who agreed to an interview, plus the type of work associated with the internship and whether they believed there was a significant difference between certain demographic characteristics of their supervisor or interns and them. Some participants revealed information that might help to identify them

personally and I have been careful to anonymize that information in this report. Because email and IP addresses, responses to survey and interview questions, and audio and video files collected during interviews might contain information that could reveal the identity of participants, I encrypted these files to provide added protection to participants.

During transcription of audio and video data, and during analysis of surveys and interviews, I identified participants by a random capital letter, e.g., Supervisor K or Intern M. I was also careful to anonymize identifying information in transcription files and in files generated for this report. These electronic files were securely stored but not encrypted. Printouts of sections of these files used in analysis or editing were secured in a locked drawer in my faculty office, and similarly protected when I worked at home. Spreadsheet, audio, video, and transcript files will be deleted or destroyed 3 years after I publish this work.

Trusting This Study

Trustworthiness refers to credibility, dependability, and transferability. While it was not my intent that this study's findings would be transferable to participants in all virtual internships, the range of organizations sponsoring the internships that participants experienced was large enough that the results of this study are generally useful to internship developers and practitioners. The study is made credible due to its transparency, with much detail revealed about the research plan and examples of how the first step led to another with any assumptions made between them. Trustworthiness is further established through triangulation of sources, including collecting data from supervisors and interns, use of findings in literature to develop the survey instrument, adoption of an established survey instrument, and analysis of survey data to select interviewees and topics of discussion in interviews. The seven participants interviewed were well within recommendations for the approaches used for research and analysis, were evenly

distributed among supervisors and interns, and the interview data was corroborated by survey responses from 26 participants.

Limitations. Participants in this study were volunteers who responded to invitations. Participants were self-reporting in their responses to survey questions and they chose what to reveal during interviews. A selection process of potential interviewees was only partially successful because not all participants who agreed to an interview when they completed the survey instrument followed through on that agreement and supervisors who were not on the prioritized list of selectees were interviewed to obtain sufficient numbers of supervisors. A more thorough analysis of why relatively few potential participants agreed to interview will be discussed in the last chapter, with recommendations for how this might be improved.

Allowing participants to self-select by volunteering to answer the survey or interview invitations might also have biased responses to those who had particularly satisfying or unsatisfying experiences who wanted to share these. Supervisors might also have made their experience seem more positive than it was, particularly when responding to questions over which they had control of the outcome, such as answering intern questions.

Since researchers who conduct phenomenological research cannot have complete knowledge of a participant's mind or perspective or the background and experiences on which they draw to make sense of their virtual internship or relationship experiences, the researcher is limited in how complete analysis can be. Any assumption of a connection between what is written or said and what is thought or correct may also be inaccurate (Smith & Osborn, 2003). This is particularly true when using interpretative phenomenological analysis to interpret how participants are trying to interpret their experience because with a double hermeneutic approach, misperceptions may be compounded by participant and researcher.

Delimitations. There are many programs worldwide that facilitate virtual internships. I chose to select participants from internships sponsored by just one program to strengthen the credibility of my use of interpretative phenomenological analysis because I participated in a virtual internship sponsored by the same program. However, this choice also limited participants to people who were U.S. citizens and students at the time of the internship. While participants represented a spectrum of demographical characteristics, they may have shared cultural dimensions that were closer than a random selection of participants in programs throughout the world and therefore represent a more constrained perspective of relationships and expectations.

The study did not examine the academic side of internships and did not include academic advisors or internship instructors or school administrators among supervisors. This was a deliberate choice because of my extensive knowledge and experience in this area and the desire to limit the scope of the study. In retrospect, none of the participants mentioned people in these roles. The only people in academia mentioned were career center representatives who helped an intern to find the virtual internship program and prepare application documents. The study also did not include administrators from internship-sponsoring organizations who may have developed or approved of the virtual internships.

Summary and Next Steps

This chapter detailed the research approach and plans to collect and analyze data, discussed ethical concerns, and made a case to trust the findings. The next chapters are a discussion of what participants revealed in the data in context with established theories, concepts, practice, and personal experience, concluding with how this study contributes to what is currently known about virtual internships, including commonalities with in-person work or

internships and guidance for internship developers and practitioners about how virtual

internships differ from in-person experiences, and suggestions for future research.

Revealing what was discovered in data, then grounding those findings in the context of

what is known about the virtual internship phenomenon will be divided into two chapters,

followed by a concluding chapter discussing the results and contributions of the study, with

recommendations for future research. The first of these chapters will reveal discoveries about

participant experiences in virtual internships through a lens of how their experiences compared

with experiences typical to what employees and employers experience working in-person. Since

the study was about relationships among supervisors and student interns, this approach will more

readily identify which experiences could be attributed to the more typical experience of students

learning about work and which experiences may be truly indicative of differences working in a

virtual environment. The second of these two chapters will seek to explain what was found in the

data that appeared to be different from regular work.

Findings: Experiences of Virtual Internships

The purpose of this study was to explore the relatively recent and unstudied phenomenon of virtual internships from the perspectives of participants, then to interpret from the experiences they shared how participants related with each other through mediated communications. Through analysis and interpretation, I sought from a practical standpoint to discover what types of work relationships and information participants found were necessary to meet their objectives, with what technologies they chose to communicate and why the technology was chosen, and how relationship was established and sustained remotely.

The results of this study are divided into two chapters for clarity. This chapter describes inductive findings. The following chapter reflects a deductive approach to explaining this chapter's discoveries through the lens of theory, practice, and personal experiences, yielding insights about working relationships during virtual internships. The primary objective of these chapters will be to create a theoretical framework about virtual internships, to differentiate virtual internships from regular employee work and from in-person apprenticeships and internships, and to determine how this study contributes to current understanding.

This study will best contribute to current understanding by focusing on the practical aspect of assessing virtual internships as a potential alternative to in-person internships, in keeping with the study's significance, rather than simply exploring the phenomenon as an intellectual curiosity.

During thematic analysis, it became clear that what participants shared about their experiences could be framed within a conceptual understanding of interpersonal relationships in working organizations. By taking this approach, I was able to recognize what virtual internships have in common with in-person employee work and in-person internships.

Concepts of the Work Environment

This section establishes the conceptual understanding of a working organization to create a foundation for understanding the nature of the virtual internship and relationships during it. Concepts include the work community of which an intern supervisor is a member, the space in which work will take place, work activities, roles people play when working together, and typical work relationships.

Work community. An organization is a group of people who work together in an organized way for a shared purpose (Cambridge English Dictionary, 2019). Working together requires group members to establish and maintain interpersonal relationships for the purpose of conducting work. Working in an organized way implies defining work roles, goals, and activities within organized groups. Groups perform work in a work environment, consisting of a workspace, job characteristics such as policies, processes, workload, tasks, how work groups are organized, the culture and history of the organization, and interrelationships of group members who form the work community (Anjum, Ming, Siddiqi, & Rasool, 2018; Briner, 2000).

Workspace. Traditionally, a workspace is a room or building in a physical environment (Cambridge English Dictionary, 2019). The purpose of a workspace is to provide workers with a space to work that includes access to needed resources while diminishing distractions from work. Depending on the needs of the work community, the workspace may also provide some privacy or security from those who are not part of the immediate community. However, work is not the only activity conducted in a workspace. Some spaces may be deliberately designed to develop and sustain the work community. An example is Apple Park, Apple's new headquarters that has corridors and spaces designed to promote spontaneous interpersonal encounters for the purpose of innovation (Magnolfi, 20017) as well as an inner natural space, which may promote individual

thinking and a space to get away from work. An older example of this architecture is the courtyard at the Pentagon, the headquarters of the U.S. Department of Department of defense, which may also be designed around the same concepts (Achenbach, 1994).

   Formal learning spaces. Classrooms within buildings are another type of physical workspace, created for the purpose of learning. The configuration of the space depends on the type of work conducted and may vary from rows of seats facing the front designed to focus attention on the teacher to groups of tables central area or surrounding the outside walls designed for laboratory or teamwork. Learning spaces are typically connected by corridors and other spaces in which students may interact, and offices in which teachers and students may interact for purposes such as tutoring or academic advisement. Classroom spaces may also be outside the building if that is where learning resources are located.

   Virtual workspaces. A modern virtual workspace created by communications technologies (Sias, 2009) is an abstraction of a physical workspace, typically represented by a computer screen. The types of communications cues and work resources available to workers in this virtual environment depend of the technology they choose to use to create the virtual workspace. Email or chat technologies only include resources to create and manipulate text, though they may have the capacity to include emoticons, images, or links to other resources. Phone technologies enable communication by voice only or add voice to written language and visual images. Still other technologies can create a workspace in which participants can see each other and get nonverbal communications cues.

   Imagining the workspace. Whether work is conducted at home, at school, in organization workspaces, or on a computer screen, the point is that students unfamiliar with the working environment of the internship-sponsoring organization who cannot see or sense that

environment will need to imagine it if doing so is necessary for work. They do not have to have experienced a workspace firsthand to create a mental model of it. Mass media provides us with images of workspaces ranging from business spaces to spacecraft from which to draw models of environments we have not experienced firsthand. However, the farther removed the supervisor's workspace is student experiences in terms of how the supervisor's work, workload, available resources, and interact with the work community, the more likely the supervisor will need to describe the aspects of this if that information is needed for work and relationship building.

Work activities. Work takes place as a result of interpersonal interactions. Interactions are typically associated with the work community, group members, and work activities. Interactions at the community level include determining the purpose of the community, defining groups within it, and selecting new members. The community may appoint group members and define roles within the group, or group members may do this. Group member interactions include supporting members and controlling work activities through leading, managing, making, and implementing decisions, directing, collaborating, following, persuading, appraising, providing feedback, conflict, and resolution of conflict. Work activities include gathering, sharing, processing, and presenting information (Sias, 2009; Sias, Heath, Perry, Silva, & Fix, 2004).

Working together. Work group members establish supervisor-subordinate, mentor-mentee, and peer-coworker relationships that form the work community. They may also relate with persons outside the organization. Relationships may be work-related or include interactions for other than work purposes such as those associated with friendship or romance (Sias, 2009; Sias et al., 2004).

Work relationships. Relationships are characterized by repeated interpersonal interactions among people acting in roles, which create a pattern of behavior. A pattern of

behavior helps members to conduct work activities effectively and to connect with the work

community (Sias, Krone, & Jablin, 2002).

Working in supervisor-subordinate relationships. Student interns assume the role of

subordinate to members of the work community appointed in the role of supervisor, who receive

formal authority to make work-related decisions, direct work activities, and enforce compliance.

Prior studies of supervisor-subordinate relationships focused on relationship development, the

functions and outcomes of leadership, power or influence, mentoring, feedback and appraisal of

work, information exchange, and demographic influences (Sias, 2009).

Overview of Findings

The following sections describe the inductive findings of this study, classified into four

categories. The first category includes discoveries that led to a better understanding about the

relationship between the work community and supervisor-intern work group and how each

affected the other. The second category includes discoveries of different types of interpersonal

interactions that constituted a virtual internship relationship. The third category is the complexity

of virtual relationships discovered while learning about interactions among supervisors and

interns. This finding expanded my initial concept of the virtual relationship, revealing that a

study of supervisor-intern relationships must include or account for the supervisor's interactions

with members of the greater work community. The fourth category includes additional

discoveries about working in a virtual environment from the perspective of the supervisors and

student interns who shared their experiences in this study.

Symbiosis Between Work Community and Work Groups

Student interns in this study did not choose their supervisors, and supervisors knew little

about the students with whom would work. Members of internship-sponsoring organizations

appointed intern supervisors and selected from among interns who applied. Some supervisors directed or were otherwise involved in the intern selection process.

Discovery 1 – By creating internships and selecting working groups, deciding on who worked with whom and their roles, and the purpose of their work, the work community both enabled and constrained the boundaries of internship relationships. Work group members in turn fine-tuned how the work community was defined by refining their roles, detailing work goals and activities, and establishing patterns of behavior to aid them in working together. In this way, work community representatives and work group members formed a symbiotic relationship.

Unlike in personal relationships, workers may have little choice with whom they work. From a work community viewpoint, the purpose of establishing and maintaining relationships among supervisors and subordinates is to accomplish work to fulfill the purpose of the community. In this section are examples of how participants experienced the community's involvement in establishing the purpose of work, enabling and constraining supervisor-intern relationships, how the purpose for the internship was established, who and how interns were selected, and how roles were assigned.

Defining the purpose of work. Discovery 2 – The driving force behind the willingness of most of the organizations in this study to sponsor internships appeared to be a need to accomplish existing work or to initiate new projects requiring additional personnel.

Sponsoring organizations posted descriptions containing information about expected internship work and required or desired knowledge and skills. The online description might also include the organization's purpose for the work. Figure 13 describes the purpose of an intern's

internship. Figure 14 describes my virtual internship project, which was to assist the supervisor

with ongoing work, which I would learn soon after communications began was because of the

office staff's high workload.

> The purpose of Intern K's first virtual internship was broadly stated, enabling her to use the confidence she gained from other internships to form student groups at the university where she was studying overseas, facilitate weekly group meetings, create and manage associated social media sites, have the students reach out to local organizations and help to create partnerships with them, and plan events to bring partners together.

Figure 13. The purpose of an internship as described by the intern.

> The purpose for the work I completed for a virtual internship was indicated in the posted description. I would assist an overseas office of a U.S. organization with two annual economic reports and possibly with reports in other areas, for the purpose of providing U.S. businesses with information they needed to work with that organization and to conduct business transactions in that country.

Figure 14. The purpose of my virtual internship project.

Some projects had restrictions on who was qualified for them, such as Supervisor H's,

whose interns were all law students because the nature of the internship work required that

expertise. The purpose for his individual projects varied, so internship descriptions were broadly

stated to accommodate this. In some instances, employees conceived of a project and agreed to

supervise interns to acquire human resources they would not otherwise have.

For other supervisors, the purpose of the internship was centered on the intern's needs.

From Supervisor G's perspective, the purpose of an internship was for student interns to learn

new work skills, so she and colleagues identified gaps in the interns' knowledge or skills and

found work to help address these. Supervisor L used a similar approach, tailoring tasks to the

interns' academic background and interests. Others like Supervisor A had projects that were

"somewhat specific and narrowly defined." These restrictions required more direct interaction

with interns. Intern E's project had restrictive goals, but he was able to make suggestions and was given the latitude to adjust activities to best suit the project.

Selecting work group members. All participants in this study experienced at least one virtual internship facilitated by coordinators of a program which recruited internship-sponsoring organizations and student interns. They did so by first hosting a website to which internship descriptions and requirements could be posted, then by assisting organizational representatives to learn about prospective interns and contact them if desired. Why individual interns were selected was not part of this study, but there is evidence for who selected interns and overall reasons for their selection. Figure 15 summarizes my experience with intern selection.

I observed that sponsoring organizations posted internship descriptions on the facilitating program's website that also included requisite or desired knowledge or skills. Prospective interns posted resumes and choices of internships from among hundreds of options.

Organization representatives apparently viewed student applications and selected interns from among those who chose their project as one of their preferences. The program website noted that interns might also be interviewed, although this was not part of my experience.

A program representative then contacted me (and presumably other selected students) and asked me if I accepted the internship.

Figure 15. Intern selection process from my perspective.

How interns selected internships. Before work communities could select them, interns first had to apply to the virtual internship program and make their preferences known. While examining internship descriptions, Intern B saw an opportunity to gain direct work experience in her academic minor by teaching English to people associated with an organization in offices overseas. Intern C selected an internship that would enable her to use skills in her native language to help another international organization to translate information from local sources. She also thought that her "academic program aligned almost perfectly with what I do in my internship." Intern E applied cultural knowledge and linguistic skills in assisting an organization

to develop a database of resources in the location of an overseas office. Intern K (see Figure 16) found an opportunity to create her own virtual internship. Figure 17 provides multiple reasons for my choice of virtual internship.

Intern K's experience with eight internships, including two with public relations firms, two for non-profit organizations, and four with government agencies, provided her with substantial experience to select internships.

In fact, she essentially selected herself when she learned of a virtual internship while studying abroad for her master's degree and pointed out to the organization that they needed an intern where she was located.

Figure 16. How a student created her own virtual internship.

I chose my virtual internship because it was primarily involved research and analysis. The description also noted that work would be heavier during the second half of the year and I needed more time for other commitments during the first half. I also wanted to learn more about the location and people in the overseas office of the organization that sponsored it.

Figure 17. Why I chose a specific virtual internship.

Who selected the interns? Supervisors might be selected to supervise interns with ongoing work. However, some supervisors played a direct role in selecting interns, including prompting colleagues to find qualified interns at their organizations (see Figure 18), selecting interns for colleagues, or agreeing to manage interns for their work community. For example, Supervisor K agreed to manage a virtual intern for colleagues. Supervisor M had supervised traditional interns for more than two decades and had recently selected a second virtual intern who was a graduate student with work experience to help develop an organization-specific database to help manage the department.

Supervisor F had overseen the selection of virtual interns for the whole department for years. He actively recruited students from universities he knew by persuading colleagues to advertise the virtual internship program to students there.

Figure 18. Example of how a supervisor recruited interns for colleagues.

Discovery 3 – Overall, it appeared that interns were selected primarily based on the purpose of the work or on their work experience as they would if viewed as temporary workers instead of students. However, there were notable exceptions, discussed in the next chapter.

Figure 19 provides possible reasons for my selection as an intern, which was likely due to experience with research and analysis, which was the primary skill required for interns applying to internships in this study.

I do not know why I was the only one of four doctoral students at our university who applied and was selected for a virtual internship.

Since I had no experience in the specifics of the internship work, it may have been because no one else applied to the project, or more likely because of extensive experience with research and analysis, which was the primary skill required, or for reasons such as military veteran status, which could indicate a degree of work discipline or ability to work with others, or just be the deciding factor for selection among others.

Figure 19. Possible reasons for my selection to the virtual internship.

Selecting interns based on work purpose. How organizational representatives or supervisors viewed the purpose of the internship and of interns may also have influenced intern selection. Some supervisors selected virtual interns to help them with projects they developed. Supervisor C, for example, had selected teams of virtual interns for the past six years who were able to help them with labor-intensive geographical resource information mapping projects.

Selecting interns based on prior experience. Discovery 4: An overarching reason for intern selection appeared to be whether there was evidence of prior experience in areas required to increase the likelihood of being successful in accomplishing the work of the internship.

Although many supervisors appeared to view interns as temporary workers, there was also evidence in data that some supervisors acknowledge interns as students and adapted the work to the student's needs and schedule. However, when interns were viewed as temporary employees, selection of the most qualified or experienced appeared to be the primary reason.

Based on a review of the descriptions and requirements posted for hundreds of virtual internships available through this program in the year I participated, it appeared the knowledge and skills for these internships could be obtained either through formal academic preparation, through informal learning when knowledge or skills such as with a language or culture were needed, or through work experience in the field of internship work. Some students in the study had formal experience with communicating via technology by participating in formal online courses, through playing remote games with others, or through remote work.

For both supervisor and intern participants, experience as an employee, or with or as an intern, varied from no experience to decades of experience with work relationships and with multiple traditional (in-person or face-to-face) and virtual internships. Most participants in this study had prior work or internship experience, which likely aided them to make informed choices about which internship so select and what work to do. However, unless they had prior experience with supervisors, and arranged to apply to the same internship with the same supervisor for another year, they did not know who their supervisor would be before they were selected. Figure 20 summarizes my work experience prior to engaging in a virtual internship and how this enabled me to select with whom I and others worked and to make choices about what I did, with the exception of the virtual internship, as others in this study experienced.

Interns selected from among a choice of internships, but at least one intern saw the opportunity to create her own internship (Figure 16). Over a third of interns who agreed to

participate in this study were graduate students. This may be indicative of the population of interns applying to virtual internships or to internships sponsored by the subject program, or it could indicate that supervisors selected graduate students over undergraduates because of perceived levels of skills, knowledge, or personal traits. Supervisor M revealed that he selected interns in graduate school who were also working professionally in the field and Supervisor B hired graduate students who had experienced a clinical rotation which would give them the knowledge and skills needed for the organization's project.

In my 55 years of work experience outside the home before engaging in a virtual internship, I work full-time, part-time, contractually, voluntarily, in paid, and unpaid work, in positions of low to high authority. Learning from the experiences of study's participants helped me to recall that the closer I was to members of the work community, or the greater authority I had, the more likely I was to have the opportunity to select with whom I and others worked.

Prior experience with work, internships, and work relationships enabled me to understand more about the organizations I chose for two academic internships and to choose my supervisor before learning from them of projects to which I could apply knowledge and skills. In the virtual internship though, I could only select the type of work, not the supervisor. This appeared to be the case for most, if not all, of this study's participants.

Figure 20. My work experience.

Discovery 5 – Several supervisors in this study apparently either initiated a search for interns to assist them with existing work or new initiatives or were unwilling to accept whomever the work community assigned to them so took an active part in selecting interns to improve the likelihood that the work they wanted to conduct would be accomplished.

If some supervisors preferred graduate students it may have been because they could expect them to require less instruction and work more independently, requiring less "handholding," as Supervisor F described it. As for interns, Intern J for example admitted that

she would have felt "overwhelmed had I done it straight out of university" and needed the extra knowledge, skills, and personal work experience she gained in graduate school.

Relationship as Interpersonal Interaction

Once the purpose of internship work and members of work groups were identified by the work community, members needed to create patterns of behavior to coordinate work within the context of their roles as supervisor and subordinate. Their interpersonal interactions took the form of establishing rules for technology-mediated communications, providing feedback and appraisal of work, and resolution of conflict. Study participants shared how they accomplished this as they were building their relationship.

Creating patterns of behavior. Discovery 6 – What constituted the overt supervisor-intern relationship in this study centered around the content, frequency, regularity, and perceived quality of communications mediated through telecommunications technologies, which necessarily substituted for in-person interactions available during a traditional internship.

Content of communication. Supervisors L and M communicated with interns concerning work goals, specific tasks, and upcoming work. Supervisors and interns, and teams of interns, established days and times to check-in with each other to maintain their work relationship. Members shared the status of specific work and the overall project. Supervisor D also held "weekly status and workshop sessions as a group" on project activities.

Discovery 7 – All participants reported that supervisors allowed interns to ask questions. The way supervisors conducted this interaction occurred ranged from active to passive.

If interns had questions or concerns about work, they contacted the supervisor, who might respond individually or as a group. Some supervisors set aside times for questions apart from work status sessions or, like Intern E reported, informed interns that they were always there if questions or concerns arose. For example, Supervisor D set aside one-on-one sessions to assist interns, and Supervisor E had biweekly phone calls for the same purpose.

Supervisor L encouraged asking questions at weekly meetings in Google Hangouts, where she asked questions about schoolwork and whether interns needed more time for projects. Supervisor F "made the effort to find someone who could" answer questions when he could not. Supervisor M likewise answered questions personally or directed interns to helpful resources. Intern M felt his supervisor provided "well-educated and immensely useful responses."

Supervisors K and L started intern meetings by initiating their own questions, but on subjects concerning interns, not about internship work. Supervisor K asked interns about their coursework, suggesting resources for academic team projects, and asked about career goals, passing on advice about searching for full-time work. Supervisor L started each meeting asking about how student interns were doing in school and if they needed more time on internship project work. Supervisors B, C, D, and J all expressed interest in knowing what competed for the intern's time and interest so they could predict possible work interruptions.

Communications technologies. Discovery 8 – While the predominant platforms that study participants used to establish a virtual environment in which to communicate were the telephone system and email (see Figure 21 for a supervisor's explanation for this), other participants used a more extensive group of telecommunication technologies depending the purpose and content of communication such as whether it was intended for individuals, for specific groups, for the public, or just for internship participants.

For example, the internship program's administrators contacted individuals by email, used separate, private, monitored Facebook groups to connect with all supervisors and all interns as groups (individuals were added to the groups when they agreed to the internship), sponsored a

> Supervisor F communicated with interns via email and telephone. "Yeah, this is (name of organization). This is like the fanciest stuff we've got, right? We make telephone calls and we send emails. We don't do anything else in that regard."

Figure 21. Example of why a supervisor selected certain communications technologies.

website to provide information and polling applications (via SurveyMonkey) to solicit end-of-internship feedback from all participants. Several interns and supervisors reported using Skype (https://www.skype.com), Slack (https://www.slack.com), Google Hangouts (accessed through https://www.google.com), blogs, and other social media on which to post information, coordinate work, get assistance, alert community members of upcoming events that may be of general interest, or interact informally to establish working relationships. Other technology was used for work-related purposes. For example, the purpose of Intern F's internship work was to develop a website to coordinate internship projects.

Frequency of communication. Most supervisors and interns established a weekly cycle of communication, as they might if they were meeting in-person. Some intern teams met more frequently if needed. In one instance, the goal of the internship work to produce a daily summary of local news that might be of interest to the organization, and Supervisor A met with her intern daily at a scheduled time. Supervisor E met with interns every two weeks. Intern E's supervisor met "as frequently as needed," while Supervisor L "made sure they knew they could contact me at any point via email or phone" and Supervisor F established a "virtual open door" policy for interns. Figure 22 provides detail of Intern K's communication plan.

In the first virtual internship, Intern K had weekly email check-ins with another student intern acting as intermediary supervisor. In the second, she spoke with the supervisor and other student interns at least once a week to stay in touch and coordinate work activities.

Figure 22. Example of an intern's communications plan with the supervisor.

Regularity of communication. The regularity with which supervisors and interns communicated was either formalized or left to the perception of participants. For example, Supervisor A held "regular" email communication sessions during which she set out clear expectations for interns, but was flexible about meeting times, depending on the project and intern needs. Intern C's supervisor was "there" when she had questions or concerns but was otherwise flexible about when they met. Interns C, F, I, and M all felt that their supervisors responded quickly, promptly, or were very responsive to their email inquiries and, as mentioned, Supervisors F and L left a "virtual open door" for interns to enter when needed.

Participants used their primary form of communications regularly and others as needed. For example, Intern F reported that his supervisor called him at the beginning then used email afterwards. Also, not all communication was two-way. Sent instructions and interns delivered products via email or on other work applications. Supervisor F remarked that his interns were "usually responsive and deadline oriented" in this regard, whereas Supervisor L checked with interns at the beginning of group meetings to determine if students needed more time on tasks due to conflicts with school or other life commitments. Figure 23 is my experience with internship communications, especially with the lack of frequent or regular communications.

Feedback and appraisal. Students intern to gain work experience and to validate their academic preparation, so another crucial role of supervisors is to provide students with feedback on their performance and appraisal of their work.

My virtual internship supervisor primarily used email for communication, particularly when she wanted to attach a file or direct me to a link. Phone calls were limited to milestones, that is to times of transition or reflection.

The supervisor's boss sent a 'welcome' email at the beginning and initiated a phone call, joined by the supervisor, a month later to mark the beginning of internship work. I heard from him again, by email, at the end of the internship. The supervisor called when I submitted the first economic report months later. She used email at all other times.

There was no regularity. I send several emails at the beginning and about every other week or so to update them on the progress of my work. They said they would call or email every two weeks, but this schedule never materialized.

Figure 23. My experience with communication frequency and regularity.

Feedback. Supervisors appeared to be either proactive or passive in providing feedback to interns. They also chose whether interns were an active or passive part of this process and when, how, and on what they provided feedback.

Discovery 9 – Supervisors provided feedback to interns but did always provide solutions. Intern K "learned a lot more than expected" from her supervisor, who allowed her to work out issues on her own and provided examples when needed, particularly with new or complicated tasks. Intern M's supervisor provided feedback on his approach, but otherwise let him work out problems, which he appreciated (see Figure 24 for Intern M's appraisal of feedback).

Appraisal. How study participants assessed the internship and work performed took many forms. As discussed, expectations about the internship and interpersonal interactions could greatly influence an individual's overall impression or feeling about the internship, but more tangible evidence of appraisal is discussed in this section, including recommendations, rewards, learning outcomes, and instruction where supervisors perceived gaps in knowledge or skills.

> Intern M's work was not difficult and the supervisor did "what I felt he should do, play a supervisory role" and not micromanage ("railroad") his team so that "we have been free to manage the project as we see fit. Many of the core goals remain the same, but as we acquired new information we were allowed to shift work towards what might be more advantageous for the project and our methodology has been large influenced by our own thoughts rather than by strict guidelines." Intern M's favorite aspect of the internship was "the ability to guide a project which may have real-world effects. In my academic program, my studies are rarely related to turning out results so much as taking in information."

Figure 24. An intern's appraisal of supervisor feedback.

> Discovery 10 – Nearly all interns reported that acquiring knowledge or skills about relationship was their primary non-work-specific learning outcome. Supervisors reported similar learning outcomes from their interns.

For example, Figure 25 details one supervisor's assessment that are felt that his interns were "not at all prepared" to do general office management work or to work with others (soft skills), noting that they would likely not get that training through formal education activities. Supervisor D noted that "many of our interns stated that their experience was quite different

> Supervisor F felt that in some cases his interns were "not at all [prepared], i.e., when [the work] was more about soft skills and general office management type assignments. "They refined their soft skills – something they wouldn't have done solely through academic work."

Figure 25. Supervisor appraisal of interns' lack of soft skills and improvement as an intern.

from textbook information" and one learning outcome was learning to "differentiate real life practices from the general academic program." Supervisor I thought that student interns had a "gap between theory and practice" and learned how to apply project management knowledge and teambuilding skills. Several supervisors became aware that interns were not as prepared in terms

of writing and social skills. Supervisors K and L helped students to improve their writing, especially becoming more concise in their language.

Discovery 11 – Many interns asked supervisors to recommend them for full-time work or for other internships or asked permission to use them as a reference for later opportunities.

The virtual internship program provided all participating interns with a Certificate of Appreciation. Supervisor J provided all her interns with an additional Certificate of Appreciation specific to her work community. She also asked the internship program director if there were any other approved ways to reward outstanding performance by her interns.

Conflict and resolution. Discovery 12 – Relationship conflicts were evident from first meetings through closure.

Supervisor A's least favorite aspect of internship was the selection process. The first student "balked" at the project and left, but later returned and worked out well. Supervisor K was not as fortunate. "We didn't communicate well, and she was not interested in the work."

Discovery 13 – One source of conflict was interns' commitments to academics. Some student interns, not unexpectedly, prioritized schoolwork, exams, and school holidays over internship work and schedules.

Supervisors C, D, and J would like to have known when midterms and finals were to schedule assignments around the student's schedule. Supervisor D had a couple of interns "drop off as academic workload increased." Supervisor J changed meeting sessions to accommodate the interns' schedules and thought next time she would "record sessions for use at their leisure."

Discovery 14 – Conflicting commitments outside the internship was an issue for both interns and supervisors. In some instances, supervisors expressed concern about their own ability to spend the time they felt interns needed on the internship (see Figure 26).

Some supervisors reflected on their intern relationships and noted shortfalls of their own. Supervisor K felt she did not communicate well with the intern and thought she should have provided the intern with more feedback to help him improve his writing. Supervisor I's least favorite aspect of the internship was limited time to participate in the relationship, noting "I was the weakest link in the project team chain."

Figure 26. Two supervisors' appraisal of their own performance.

When supervisors and interns first met, they frequently discussed the purpose and goals of the internship work, developed a routine, and established details of work activities. However, not all supervisors provided this type of information, nor was it always shared at the beginning of the relationship, and sometimes supervisors would communicate instructions to accomplish tasks and not share the purpose for the work with interns. Figure 27 details my experience with conflict due to missing directions and how this was resolved.

With minimal directions and no response to emails, I checked every statement on the economic report for accuracy and relevance, added information on economic transactions and projections, and updated statistics.

My supervisor called, said she wished we could meet face-to-face, and sounded a bit exasperated. She asked me to reduce the number of comments and followed up with an email containing specific instructions in which she wrote that "the main idea behind getting assistance with the reports is to save us time updating them." I expressed my interest to reduce her workload, reduced comments by 80%, and resubmitted the report. She replied by email, "This looks much better."

Figure 27. My experience with relationship conflict and resolution.

Complexity of Relationships

Discovery 15 – For many participants in this study, the supervisor-intern relationship was only the center of a complex web that student interns needed to understand and negotiate to accomplish their work or connect with the work community.

Since the virtual internship enabled students to intern at locations around the world, study participants often found themselves working with people who they perceived as significantly different from them. In addition to this, both supervisors and student interns had to learn how to relate, connect, and accomplish work within a virtual environment. Taken collectively, study participants reported sharing each of the types of relationships described above, including supervisor-subordinate, mentor-mentee, peer-coworker, relationships with persons outside the organization, and what might be interpreted as friendships. The only type of relationship not reported was romantic.

Refining member roles. Discovery 16 – Supervisors frequently had more than one intern and some interns had more than one supervisor.

For example, Interns C and L had more than one supervisor. Intern C had one supervisor in the first semester and another in the second while. Intern L had primary and secondary supervisors. While the community might assign primary supervisors, some supervisors appeared to have the latitude to delegate that role to others, including to other interns. Intern I was chosen to be leader for a team of interns during the second semester, while Intern K was on a student team (see Figure 28). Supervisor I's role was to manage interns by providing them with project requirements, tasks, and feedback on design and development issues, but had to refer interns to

Intern K could not have anticipated that the supervisor would use another student intern as a proxy supervisor to manage the team, and that she would rarely have direct contact with the supervisor, though she tried several times. Intern K thought the student supervisor did a good job coordinating student groups, but she would like to have had more contact with organization's supervisor to get help with career development, so she applied to and was accepted to a virtual internship the following year during which she had frequent and direct contact with her supervisor.

Figure 28. Example of an intern supervised by another intern.

colleagues to answer questions about the details of the projects. Supervisor L had a similar managerial role because she also had to refer interns to subject matter experts (SME's) when they asked specific questions about work content.

The responsibility of people assigned to manage virtual interns in this study included recruiting and distributing interns to colleagues to work on their projects, selecting interns for their own projects, managing interns by communicating with them to assign goals and tasks and responding to intern replies, and mentoring activities. Some supervisors had one intern and others were involved with dozens at a time. The decision to personally supervise or to do so by proxy appeared to be guided by the purpose for supervising, the nature of the project, and the number of interns under supervision. Intern F worked weekly with the supervisor to "ensure [we] were on track completing tasks the way she wanted." Intern L, on the other hand, reported that most assigned tasks "were pretty standard" and were open to all interns because anyone on the team could do them. Supervisor D had a team of interns who worked independently on projects and chose to coordinate their efforts through group workshop sessions, with an added session for those needing assistance. A few supervisors delegated some authority to experienced interns, particularly routine activities such as weekly status checks. Others had a secondary or backup supervisor who could take over if needed.

Connecting to the work community. Discovery 17 – The supervisor-intern relationship was only one of several that constituted participant experiences. Both supervisors and interns worked with others inside and outside of the work community.

Expanded relationships. Some supervisors sought out interns for their own projects and dealt directly with internship program coordinators. If supervisors did not originate the project that interns worked on, or if they acted as intern recruiters or had agreements to supervise interns for others, then their work relationship included superiors or colleagues in the work community. Some supervisors also had colleagues work with interns in other ways. Supervisor I had interns reveal the final product of their work to the organization's leadership team. Supervisor A had colleagues provide feedback to the interns on work relating to their projects. Intern K's supervisor helped her to network with colleagues and others outside the organization who could help with career advice. As mentioned, interns often worked in teams, some including students acting as intermediary supervisors. Intern B taught English classes for clients, and Intern K established student and partnership groups and worked with others to set up group meetings. Additionally, she reported that representatives at the career center at her university helped her to first become aware of the virtual internship and helped her to learn how to write an effective resume and cover letter for her first internship.

Application of academics. Discovery 18 – Interns were interested in how their work reflected how their academic preparation was applied in the work community.

Intern I learned how to interpret the meaning behind the language people used at work and Intern L learned how statistics are viewed by policymakers and how to display them for

presentations. Intern K found she could apply writing skills, business knowledge, and leadership skills she acquired in the internship back into her academic studies. Intern E was able to apply what he learned about spreadsheets to his current work. Intern J learned how to teach in a virtual environment, including when face-to-face interactions worked best.

Application of internship work. Discovery 19 – Interns wanted to know how the work they did for the internship contributed to the "real world" (Intern C).

Supervisor I was one of many supervisors whose interns were interested in learning about the use of their internship work. For example, Intern F wanted to know more about the project because the first two assignments were very different. When the supervisor finally revealed the purpose, he reported that was his favorite aspect of the internship.

Demographic influences on relationship. A large majority of participants believed that supervisors were of significantly different age than interns. This was not universally true. When asked how he applied his academics to internship work, Intern G noted that "this is difficult because I am an older student and many things I applied were after undergrad." However, no participant reported that age might be an issue, excepting my experience (Figure 29).

With minimal communication, I felt a need to learn something to help me to interact with my supervisor. Recalling that participants were on Facebook groups, I found her profile and learned that she was at least half my age. She never revealed anything about herself in email, but from emails detailing my background and from my voice, she could estimate my age.

I believe my age and experience may have contributed to our minimal work relationship. I shared my concerns with my wife, who had lived in the country where the supervisor's office was physically located, and she cautioned me that most people in that country are reserved with strangers until they get to know them. This may have been why the supervisor told me she would have liked to meet face-to-face, although I suspect from my own experience that the tone of emails was due to the organization's policy of using email strictly for business.

Figure 29. My experience with demographic differences.

Discovery 20 – In addition to the perceived age difference, a large majority of participants perceived that their supervisor or intern was a member of a significantly different nationality, culture, or ethnicity than them.

There was a potential for demographic differences to influence relationships since members of different cultures may have different perceptions of work hierarchy, expression of individual interests, approach to uncertainties such as working outside the description of the project, handling situations such as working with assignments only as they arose, and working with people of the opposite gender, particularly supervisors. In two cases mentioned earlier, interns were able to capitalize on their culture or ethnicity to help a supervisor to work with people in the overseas office or with clients. At least one intern, Intern D, found that "working with my co-intern and seeing how our different backgrounds all brought something interesting to the table" was her favorite aspect of the internship. A supervisor expressed the same sentiment about the diversity and talent of young people around the world who had worked on virtual internships, although this was not without logistical challenges (see Figure 30).

Supervisor C had been working with virtual interns for many years. "Working with such diverse and talented young people around the globe to get much needed work completed" was his favorite internship experience, though "having to coordinate so many different time zones, academic calendars, and differences in communication style" was his least favorite.

Figure 30. A supervisor's experience with diverse interns.

Virtual Relationships

An organization such as a business or school creates a workplace for collocated members by providing a physical environment such as a room or building with the functionality and content required to facilitate interaction and work. When organization members are not

collocated and need to work together, the workplace is a virtual environment mediated by telecommunication technology. In this case, virtual refers to something that can be seen or accomplished using a computer without the need to go somewhere or talk to someone (Cambridge English Dictionary, 2019). Study participants reported on the technology they used to connect with each other and frequency of use which created a pattern of behavior, and on the content and regularity of communication which influenced the supervisor-intern relationship.

> **Working in a virtual environment**. Discovery 21 – Relating remotely has become a normal part of the lives of people worldwide, particularly the younger generations who routinely connect with friends, family, colleagues, and others on social media and by texting or talking on smart phones. However, some supervisors found that interns did not have the technology required to perform work or communicate well, and some interns found that communicating with a supervisor was not the same as with friends and family.

Supervisor D found though that his intern's preparation should have included checking for access to hardware, software, and phone connections because it was not the intern's ability to work virtually but the technical aspects that inhibited work performance and their relationship. Several of the supervisors in this study had worked with virtual interns before and routinely conducted business remotely with colleagues in different parts of the world. Only a few of the study's interns had likewise experienced establishing and sustaining a long-term working relationship with strangers in a challenging supervisor-subordinate work environment. Interns F and L felt prepared for a virtual internship because they had experience with many or all academic courses online or in a hybrid environment (some classes in-person, others online).

Successfully learning how to communicate with a supervisor online was Intern D's primary outcome for the internship. Similarly, Intern J, whose internship project involved teaching, felt that her most useful learning outcome was that "I learned a lot about what a virtual English class needs to function and what the best way to approach a combined virtual and in-person class is." Intern K "loved the flexibility of the virtual nature" of her internship. Many supervisors voiced the same opinion. Supervisor D's favorite aspect of the internship was being able to participate virtually, and Supervisor J felt that the "virtual experience made it well worth the time and expanded opportunities" to select and work with qualified interns. Not all supervisors had a positive experience. For example, Supervisor M's least favorite experience was "managing everything via phone. I prefer to have at least some in-person interactions with people on my team."

> **In-person visits.** Discovery 22 – Virtual internships enable student interns to conduct an internship anywhere in the world. Apparently though, several participants of this study went to lengths to visit their supervisor in person.

There was no evidence of a policy restricting interns from in-person visits, though apparently this was not advertised. In fact, Intern E "happened to have been traveling to the area" overseas where his supervisor worked but did not visit him. "It would have been nice to present [the internship work] in person," he said on learning that he could have visited. Lack of opportunity to meet in-person was Supervisor B's least favorite experience, while having two interns travel to attend a training session and meet colleagues was Supervisor D's favorite experience. Two of Supervisor J's interns also attended a workshop in-person. Three of

Supervisor C's interns visited his international office and he arranged meetings and tours for

them. Figure 31 provides details of an intern's experience with an in-person visit.

Intern K had little contact with the supervisor during her first virtual internship but was more proactive during the second one. She would like to have known "how much I could've have worked in person in the office (as well as virtually) because I am living (where the organization is located). I didn't realize I could've gone into the office a lot more than I did (and I didn't realize that until much later in the internship)." When she did ask the supervisor for career advice, she was invited into the office and "she was incredibly supportive – she (and the rest of the team) introduced me to a few people and helped me with career advice."

Figure 31. An intern's experience with in-person visits.

Summary of Findings

In this chapter, I described discoveries about the nature of virtual internships and work

relationships experienced by study participants while engaged in them. Discoveries from survey

and interview data appear to fall into four categories – interns learning about the work

community, both participants learning about work relationships, perceptions of the internship,

and learning about working in a mediated communications environment.

Participant experiences could often be attributed to the fact that two very different people

were learning to work together, that is, to form productive work relationships. Relatively

seasoned professional employees acted as supervisors to relatively inexperienced students. Both

often had seemingly different primary commitments, that is, the supervisor had an ongoing, full-

time, established position in the sponsoring organization and the intern was a full-time student

who might also work to support their education. It was therefore not surprising to this researcher

the source of some conflicts was trying to balance primary commitments with an internship, that

some interns were ill prepared for this kind of social relationship, and that interns sometimes

sought ways to visit their supervisors in-person. Students were, for the most part, unfamiliar with

how to interact with others in what appeared to be high-paced work environments in which they were might be provided with work goals and materials but not a lot of "handholding," as Supervisor F termed it. That is, some of the discoveries found in data could be attributed to the nature of work relationships and student interns learning about how to relate in a work environment.

Participant experiences can also be attributed to working in an environment in which the supervisor-intern work group was part of a larger work community sponsoring the internship. The community created work groups as needed to fulfill the mission of the organization and left the leader with the responsibility to form a working group and conduct work. This was a symbiotic relationship in which the work community relied on the work group to accomplish needed work and the work group relied on the work community for human and material resources. Therefore, some of experiences that supervisors and interns described were associated with working with others within a work community. Work communities as well were not isolated from a larger social community, with some participants describing relationships with others outside their organization's work community. That is, some of the discoveries found in data could be attributed to relationships in a complex work community and student interns learning to relate in that environment.

The internships in this study were not negotiated between sponsoring organizations and representatives of an academic community, that is, they were not academic internships with a goal to provide work that would help student interns to complete specified learning objectives. Therefore, without prior coordination, supervisors and student interns might have very different objectives for the internship. In most cases, it appeared that the primary driver for the intern-sponsoring organization was to find qualified personnel to assist in working on existing projects

or on new initiatives. It was not to help students learn about the work environment or to demonstrate what they had learned through scholarly preparation or prior work experience. Many students nevertheless expressed an interest in learning how their academic preparation applied to internship work and how internship work contributed to the "real world," as Intern C described it. There is also evidence from interns asking supervisors for recommendations for other internships or full-time work opportunities that student interns viewed the internship as a steppingstone to where they wanted to be, which was working full-time, for some in an organization like that with which they interned. Overall, some discoveries from data could be attributed to perceptions of the internship and of their counterparts that participants brought to the internship which frequently differed from those of their counterparts.

Finally, other discoveries from this study could be attributed to the nature of mediated communications and to its capacity to expand the opportunities of participants to work with people around the world. While student interns apparently had no major issues using technology to mediate work communications, one supervisor reported that interns did not always have adequate network connections or the knowledge or skill to work with business hardware and software. On the other hand, supervisors used the technologies they regularly used or knew, and which tended to match their leadership styles. While it might not be surprising to learn that nearly all participants perceived their counterpart to be significantly older or younger than they were, all participants also noticed significant demographic differences as well, that is, the supervisor or intern were of a different gender, ethnicity, culture, or nationality. While this is often characteristic of many work communities today in the large organizations that sponsored this study's internships, it is also likely a product of the global nature of virtual internships which enabled student interns to work with supervisors located throughout the globe.

Insights: Relating in a Virtual Work Environment

The results of this study have been divided into two chapters for clarity. In the previous chapter, the results of a thematic inductive analysis of data showed that what participants shared about their experiences could be systematically revealed within a conceptual framework of literature about interpersonal interactions in work environments (Anjum et al., 2018; Briner, 2000; Sias, 2009; Sias et al., 2004).

The results of inductive analysis were nearly two dozen discoveries about the nature of virtual internships and working relationships within them. In this chapter, I will use a deductive approach to explain the results of the previous chapter's analysis in terms of existing theory and concepts, findings from prior studies, and interpretative phenomenological analysis, with the goal of creating a theoretical framework about working relationships in virtual internships. The results of the previous chapter's analysis will also aid me to identify which experiences participants might have in common with students learning to work with a supervisor in-person or with students conducting an in-person internship, and which experiences appeared to differ markedly from both of these types of in-person interactions, thereby yielding insights about what participants might expect during virtual internships.

Categorization of Findings

The summary of findings at the end of the previous chapter suggested that discoveries from data analysis can be classified into four categories: learning about work relationships, learning about the work community, learning about virtual communication, and learning about perceptions that supervisors and interns brought to the internship concerning the internship and the roles each of them was expected to play in the virtual internship.

Categories and topics of discoveries. Table 4 details how each discovery about work relationships in virtual internships described in the previous chapter fits into 1 of 4 categories. Sub-categories reflect the main topic within each category. This classification forms the foundation for discussing the principal insights that this study reveals.

Overall, this categorization reveals several revelations about participant experiences in virtual internships. The first is that relationships formed a significant part of their experiences. The second is that relationships extended beyond my original focus on supervisor-intern interactions to include the supervisor's work community. Not unexpectedly, mediated communication played a significant part of participant experiences, but one unexpected revelation was the extent to which preconceptions and perceptions of the internship and of the role stakeholders should play, influenced participant experiences.

Impressionable experiences. Among several non-leading questions built into data instruments, participants were asked about their favorite and least favorite experiences. Their responses can act as an independent confirmation of whether framing data discoveries in the concept of interpersonal interactions in the work environment was a justified approach. It is evident from the information depicted in Figure 32 that the participants' most impressionable experiences cover the range of the four categories of discoveries. Starting with the favorite experiences of supervisors, talk about school and meeting in person clearly refers to work relationships, while getting assistance from interns is about the work community, finding talent is about supervisor perceptions of the intent of the internship, and virtual advantages refers to being able to work with student interns around the world via remote communications.

For interns, virtual communications also meant that for some students, a global experience was among their favorite experiences. For students whose perception of the

Table 4

Categories of Study Discoveries

Category	Topics	Discovery	Description
Learning about work relationships	Adapting to different work cultures	12	Conflicts in relationship were found at all stages of relationship, from initiation to closure.
		13	One source of conflict for interns was academic commitments or schedules.
		14	Some supervisors experienced conflicts associated with work commitments and feelings of obligations towards student interns.
	Learning work-related social skills	9	Student used to instructions and feedback often had to make their own decisions about work.
		10A	Supervisors reported that some interns had gaps in social skills required for effective work.
		10B	Some interns reported that learning social skills associated with work was their primary learning outcome aside from work task-specific skills.
Learning about the work community	Community-work group relationship	1	Work communities and work groups exhibited a symbiotic relationship in defining and refining each other.
		5	Work group members were often actively involved in refining membership.
	Community-connected relationships	15	The supervisor-intern relationship is part of a complex web that constitutes the virtual internship experience.
		16	The supervisor-intern relationship was frequently not one-to-one but could include more than one supervisor and teams of interns.
		17	The supervisor-intern relationship was not isolated from the greater working community that included people inside and outside.
Learning about virtual/mediated communication	Technical aspects	6	Relationships in virtual internships appear to be constrained to how work groups conducted communications mediated by technologies.
		21	Not all interns were prepared technically to work with work-related technologies.
	Supervisory aspects	7	All participants reported supervisors created opportunities to ask questions, varying from passive to active in nature.
		8	The technology that supervisors chose to mediate communications varied considerably, often matching supervisor-intern interactions.
	Social aspects	20	Almost all participants perceived there were significant demographic differences between supervisors and interns.
		22	Some supervisors and interns went to lengths to meet or try to meet in-person.
Learning about perceptions of the internship and each other	Supervisor perceptions	2	The apparent driver of sponsoring organizations was to enlist the assistance of qualified workers in working on existing or new projects.
		3	Most supervisors viewed interns like employees rather than as students learning about work.
		4	Most interns appeared to be selected for their experience in the area of internship work.
	Intern perceptions	11	Intern asked supervisors for recommendations for other internships and full-time work.
		18	Interns expressed an interest in how academic preparation was applied in internship work.
		19	Interns expressed an interest in how internship work would be applied in the work community.

Figure 32. Favorite and least favorite experiences reported by study participants.

internship as a bridge to the working world, learning how to apply academic learning to the

internship, and internship work to the work community and in possible future careers was among

favorite experiences, as well as the challenge of working with others in a new environment.

Trying to establish and sustain work relationships and managing groups of interns,

especially those in different time zones, all via remote communications, were among the least

favorite experience for supervisors. Issues with intern relationships that included interns not

coordinating school and internship schedules and some quitting when they became overwhelmed were also concerns. Different preconceptions, and consequent differing perceptions about internship work and the supervisor topped the least favorite experiences for interns.

In addition to validating that participant experiences would be framed in the context of interpersonal interactions at work, analysis of participants' favorite and least favorite experiences revealed additional discoveries. The most prominent of these was that fully a third of interns felt unappreciated and over a third declined to share their least favorite internship experience. A second prominent difference between how supervisors and interns experienced the internship, as indicated by what they reported as their favorite and least favorite experiences, was that nearly half of the supervisors reported issues conducting the internship virtually while no interns reported this as a prominent issue. The third difference is how supervisors and interns viewed work, with supervisors enjoying the assistance they got from interns and finding new talent, while interns seemed concerned with validating their academic preparation and work usefulness. Details of these and other discoveries will be presented next, by discovery category, followed by a deductive analysis of how discoveries appear to be related that could explain the study's data.

Learning About Work Relationships

The primary purpose of this study was to learn how supervisors and interns learned to relate to each other in a virtual environment. Table 5 describes discoveries from the previous chapter's analysis associated with what participants learned about work relationships. Many participants described positive experiences with the internship and with their counterparts, but some described conflicts in adapting to the supervisor's work culture. While this should not be surprising considering conflict is a natural part of human interaction (Campbell, 2016; Napier & Gershenfeld, 2004), it is important to this study to recognize sources of conflict so stakeholders

may identify and avoid or resolve them so that participants can achieve their internship goals.

While many interns adapted well to the work environment, some supervisors noted that their

interns had gaps in social skill required to conduct effective work.

Table 5

Discoveries About Work Relationships

Category	Topics	Discovery	Description
Learning about work relationships	Adapting to different work cultures	12	Conflicts in relationship were found at all stages of relationship, from initiation to closure.
		13	One source of conflict for interns was academic commitments or schedules.
		14	Some supervisors experienced conflicts associated with work commitments and feelings of obligations towards student interns.
	Learning work-related social skills	9	Student used to instructions and feedback often had to make their own decisions about work.
		10A	Supervisors reported that some interns had gaps in social skills required for effective work.
		10B	Some interns reported that learning social skills associated with work was their primary learning outcome aside from work task-specific skills.

The internship as a meeting of cultures. Drawing from personal experience, I have

observed that internships involving students can be like a meeting of members of two cultures,

specifically students familiar with the academic environment and employees familiar with the

work environment. The two cultures share similarities in design and function, such as a mission,

goals and activities to support the mission, a physical environment customized to conduct

activities, and a hierarchy of roles that members assume to organize and conduct work activities.

However, beyond those similarities, members of the two cultures typically interact with others

differently. It may be helpful to contrast the two environments to show how difficult it might be

for students unfamiliar with work to imagine a work environment when they cannot see or

experience it in-person during a virtual internship.

Relating in the academic environment. The role of student, prominent in the academic environment, is assumed by people who are neither employees nor customers, at least not while in the classroom (Thirunarayanan, 2012). The student's university level supervisor is a school employee in the role of teacher. Communication in teacher-centered classrooms may be one-way from teacher to student, and student-to-student interaction may be minimal. Learning is typically modular in design, that is, the focus of learning may be algebra the first hour and biology the next, and the work schedule typically does not change for months at a time and then everyone changes their schedule at once. Students often rely on the supervisor teacher to provide them with clear instructions on approaching problems and resources such as textbooks explain issues, provide examples and context, and often solutions to problems. After a specified period during which students work on the same task and submit work before the same deadline, the supervisor teacher evaluates work, endeavoring to treat everyone equally, and may provide students with feedback that includes accepted answers to problems. In summary, the academic environment can be a world disassociated from other work or life environments, in which individual thinking is rewarded, evaluative tools frequently do not allow students to use available resources, and subjects are decontextualized (Merriam et al., 2007; Resnick, 1987).

Not all classroom experiences match this description, but I have observed that this is typically how most students experience the academic environment. Teachers who use a more learner-centered approach also provide students with clear learning goals and instruction, but may also engage them in the learning process by recognizing they may come to the classroom with naïve concepts of the subject, by accepting responsibility for outcomes by learning individual understanding, by monitor learning, and by providing appropriate feedback to increase understanding (Porter & Brophy, 1988). The learning-centered teacher may promote thinking by

allowing students to work out solutions to problems, promote deeper understanding by blurring subject boundaries to provide real-world context, and rearrange the physical environment to accommodate hands-on activities and student-to-student interaction (Goldring, Porter, Murphy, Elliott, & Cravens, 2007); Newmann & Wehlage, 1995).

Relating in the work environment. In contrast, the work environment has marked differences from the academic. Unless employees are working on routine tasks with regulated procedures, they most often work with others as members of teams and have different roles and are given or assume different work activities to achieve a common work goal. Problems are not specified ahead of time, may not be expected, or even recognized, and are likely to be slightly different each time because work projects support or lead to others so the environment is rarely the same. Because of this, members must use all knowledge and skills they have learned in life to solve problems rather than simply tap modular knowledge or skills. Problems may have no obvious solution and whatever solution is reached may need to be coordinated with others first.

New members may join established teams, with established and complex inter- and intra-group relationships, in which members may not be treated equally. Depending on the style of leadership and followership that members display, the amount of instruction and instructional clarity may vary, and there may be assumptions about knowledge of available resources and how they are accessed, how much the supervisor will be involved, and a list of other factors that new member cannot be expected to know unless oriented to the environment by a supervisor or experienced team member. In other words, the work environment differs substantially from the academic environment with which the student is familiar.

Relating in an internship. An internship is not an academic environment but may share some of its characteristics, such as a specified duration and temporary relationship between a

supervisor and students in the role of interns. Because there is a specified duration, student interns may work on a project with a deadline, but other characteristics may be more those experienced by employees in a work environment. An internship may also be just like a work environment if the supervisor views interns as temporary employees and discounts that they are also students. Indeed, a goal of the internship is for students to experience a work environment. Figure 33 illustrates the types of relationships that may exist in an internship, depending on the supervisor's perceptions of it and if it is an academic internship instead of the type that participants in this study experienced.
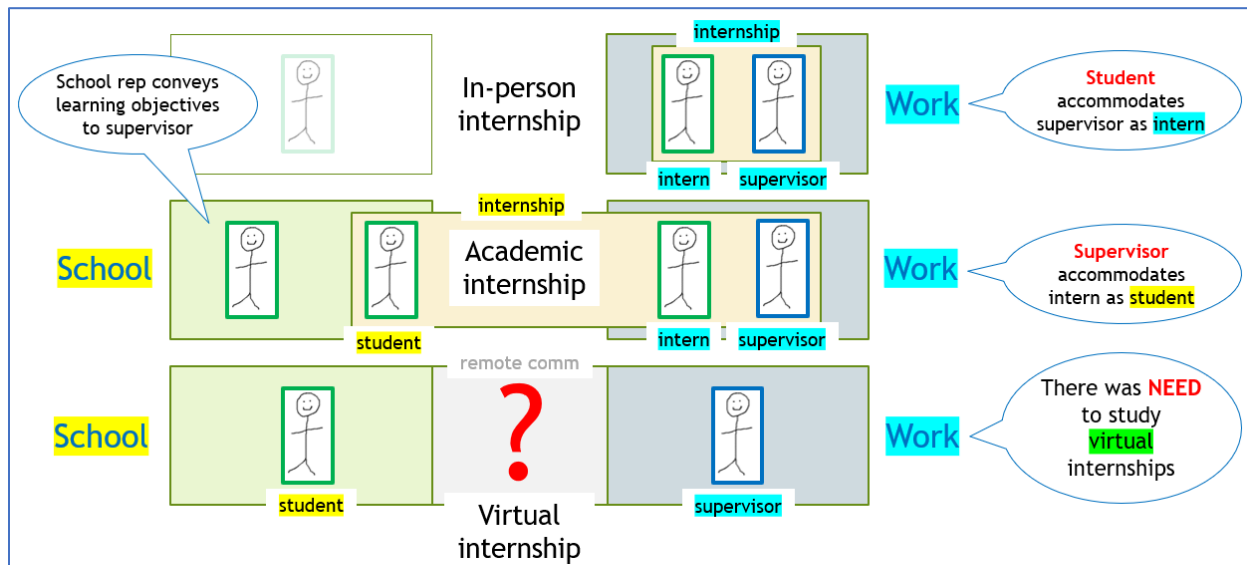
Figure 33. Relationships in different types of internships.

In an internship relationship, some employee of the sponsoring organization assumes the role of supervisor. While there is no direct evidence in this study to support the speculation, the supervisor may or may not have supervisory experience. On the other hand, there is evidence that student interns in this study had employee and even supervisor experience, which aided them in imagining the supervisor's work environment, as they must do in a virtual environment unless the supervisor or other individual orients them to what they cannot see or know.

The in-person internship. In the first internship depicted in Figure 32, the student intern works in-person in the supervisor's environment. Participants may bridge the gap between the different cultures with which they are familiar by the student assuming the role of intern and the supervisor viewing the intern as a temporary employee. In this scenario, the intern may dress like other employees, may be given a place to work, and receive a badge or other identifier and be indistinguishable from a new employee to other employees.

Variation 1: The experienced intern. The intern in the scenario described for an in-person internship may be a student who is inexperienced with the type of full-time work environment in which she enters. On the other hand, she may already be an experienced worker who is also a student and whose objective for interning is not to gain work experience but to demonstrate to a prospective employer that she has the knowledge and skills required for a certain type of job and who can work with others in the employer's work environment. In this variation on the in-person internship, the supervisor treating the intern as a temporary employee may pose no problem in their relationship.

Variation 2: The academic internship. Another variation of the in-person internship is the academic internship in which an academic administrator or faculty member intervenes between the student intern and intern supervisor before the internship begins to ensure that the student will have an opportunity to achieve specific learning outcomes through internship work. In this scenario, the supervisor accommodates the intern as a student instead of the intern subsuming their student identity like they might in the in-person internship description. Since the supervisor accommodates the intern, preconceptions, perceptions, and conflict may be lessened.

The virtual internship. Contrast the in-person internship with the virtual internship depicted in Figure 33. The most obvious difference with the virtual internship is the physical

location of the student intern, which is no longer in the supervisor's work environment and no longer in proximity to others with whom interns may have to relate to conduct work, the consequence of which is the absence of the natural environment for verbal and non-verbal communication, requiring participants to create a virtual environment mediated by technology to communicate. The absence of physical presence can complicate relationships because participants may have to imagine who the other is, and the intern has to imagine the supervisor's work environment, a task made more difficult if the intern is unfamiliar with work environments in general. Learning who the other person is, and the nature of the work environment, may require less explanation when participants can see each other, and intern can see the environment in which work will be conducted.

Unless participants recognize and accommodate differences between the environments with which they are familiar and those of the virtual internship either by making this a part of early discussions or by using technology with video features to ameliorate the absence of a natural environment, it is possible that the intern will miss out on information needed to conduct work, and that both participants need to build and sustain a working relationship. This type of information may be left out regardless of the communication environment, but in a virtual environment the supervisor must either provide it or the intern must ask for it.

Easy solution. If the purpose of the internship for interns is to learn about the work environment or to prove they can work in it, or for the supervisor to get work accomplished, then an option available to supervisors in either in-person or virtual internships is to provide the intern with only what is needed to conduct work and disregard a closer work relationship. This is also an option for supervisors and employees when the primary objective is to accomplish work. I found this can be implemented in almost any communications environment.

Flawed assumptions. The critical assumptions in this scenario is that interns are interchangeable regarding what they need and how they work, and that the primary objective of the internship for the intern and supervisor is accomplishing work. The flaw in these assumptions is that accomplishing work is not the same as learning about the work environment or even demonstrating an ability to work with others in it. For that, supervisors and interns must form closer work relationships and often extend that to others in the supervisor's work environment. The other critical assumption to the minimal relationship scenario is that interns are prepared to work and know enough about the supervisor's specific work environment to do so. However, as some supervisors discovered, this was not the case for interns who lacked work-related social skills and might not be expected to be the case if the purpose of the internship for the intern is to learn about the work environment.

Missing pieces of the puzzle. There are other elements of a virtual internship that may be missing from an in-person internship experience. Since interns need not dress like employees or wear access badges, student interns will miss out on these experiences. Not being in the same physical location as the supervisor may also limit access to resources. In this study, several supervisors lamented that virtual interns could only use publicly available resources to conduct their work and this limited what they could accomplish and the utility of it.

Perhaps more importantly, the intern who cannot see the supervisor's work environment has few cues about how busy the supervisor is or how the supervisor relates with supervisors or colleagues. Unless the supervisor volunteers this information and asks if individual interns have questions about specific items, interns, just like students in classrooms, may be reluctant to ask because they do not want to appear like they are insufficiently prepared to engage in work.

While many ambiguities could be resolved early in an in-person internship, this requires that supervisors imagine what it might be like for the student intern and plan to make up for the lack of information incumbent in the mediated communications environment if they want work to be accomplished effectively and efficiently. If the intern does not receive needed information or resources, some ambiguities may never be resolved, which can lead to differing perceptions, which can influence relationship building to a greater degree than in an in-person internship.

The likelihood that ambiguities may not be resolved is greater in a virtual internship because, while the student intern is obligated to learn about the supervisor and the supervisor's work environment to accomplish work, the supervisor has no reciprocal obligation to know anything about the intern as a student. However, understanding that the intern is also a student and orienting them to the work environment helped several supervisors to prevent conflicts.

Insight 1: An internship is a joining of differing cultures. Figure 34 illustrates the first insight of this study, namely that supervisors and interns are from differing cultures and must recognize and accommodate differences to build and sustain a relationship to conduct work.

It could be argued that since students choose to intern it is incumbent on them to accommodate the supervisor in her environment, and this is indeed what often happens in the in-person internship as described. However, it could also be argued that since supervisors are likely to have more work and life experience than students, and may have experience in the academic environment, that they have the responsibility to recognize that the intern as a student may not know how to act as an employee, cannot see or learn about the work environment except through what the supervisor shares with them, and may not ask to avoid appearing like they do not know.

Differing perspectives. Familiar with the academic environment, the student who is unfamiliar with the work environment may view the supervisor as they would a teacher, the only

Insight 1: Supervisors and interns are members of different cultures. They must recognize this and accommodate differences to build and maintain a working relationship.

Figure 34. Insight 1: Relationships. Internship participants are from two cultures and one or both must find ways to accommodate each other to build a working relationship.

role model for supervisor with which they may be familiar. In this case, students may expect the supervisor to give them clear instructions and resources to conduct internship work, plus provide feedback on their efforts and even the correct answers to problems. However, if the supervisor is work-oriented, this information may not be forthcoming to the degree the student expects. If the student intern is a member of a team of interns, as many were in this study, she may have other interns to whom to turn for resources, discussion, and other needs. Supervisors in this study also often selected the most experienced students as interns and may have expected students to be resourceful and solve problems with little supervision like they would be expected to do as employees. Misunderstanding about expectations and perceptions of the internship or each other could lead to conflict and dissatisfaction on the part of both participants.

Different views about guidance. The difference between academic and work cultures could explain Discovery 9, that is, that some students felt that they did not receive as much instruction or feedback as they expected. The intern might believe this if the supervisor treated the intern as an experienced employee and not a student learning about work. Recalling examples from the previous chapter, Supervisor F described his interns as "not at all prepared [with regard to] social skills and general office management type assignments" but realized that students might not learn these skills in the academic environment. Supervisor D recognized that the interns' experience would likely be "quite different from textbook information" and that student interns were likely to come to the internship with a "gap between theory and practice," in the words of Supervisor I.

Conflict as a result of failure to recognize or accommodate different cultures. Both supervisors and interns reported instances of conflict that might have been avoided had they recognized each other's environment and adapted the way they related and worked to accommodate differences. Examples provided in the previous chapter included conflict in the selection process conflicts between the internship work schedule, the supervisor's regular work schedule, and the intern's schedule at school. Although I was unaware of the details of each case, supervisors and interns may have benefited from understanding how theories of group development applied to their situations.

Group development in theory and practice. There are common experiences that team members have from the time they become members to when the group disbands. A linear model that accommodates these experiences and has been found to be applicable in describing small group development abbreviates stages as forming, storming, norming, performing, and adjourning (Bonebright, 2010; Napier & Gershenfeld, 2004; Tuckman & Jensen, 1977).

Forming. When a group forms or new members enter a group, they look for things familiar to their experience. This could explain why in this study that a supervisor might view an intern as a subordinate employee and the student view the supervisor as a teacher. New members proceed with caution and tend to keep what they are feeling or thinking to themselves, looking for structure such as goals, rules, patterns of behavior, procedures, and other clues as to how the group works. They are likely to be confused about what is expected and look to the leader for guidance. In a working relationship, members are advised to voice concerns and uncertainties.

While many of the supervisor-intern work groups in this study worked together to establish a good working relationship early in the internship, there is evidence that some interns looked for guidance but did not receive what they perceived they needed, that not all supervisors established structured work settings, and interns did not voice concerns.

Storming. As members learn about the group, there may be confrontation as they try to assert their own interests for joining the group. They may become frustrated or dissatisfied if initial perceptions are incorrect or expectations are not realized. When this occurs, members are encouraged to express feelings but also accept feedback and reflect on it to resolve conflicts. There are a few notable cases in this study of conflict and abrupt ending and a case where an intern left and then returned, and the group worked well.

Norming. If conflict is resolved, which is not always the case, members look for ways to work under the circumstances and may strive to learn about each other to be better able to work together, assessing strengths and weaknesses, making adjustments in plans to achieve work goals, and mutually supporting each other's efforts. There is ample evidence of this in this study.

Performing. If the group reaches this stage, members typically reassess their situation and accomplish what work they can until the group disbands. They often experience a period of

industry, productivity, and creativity amidst warm relationships. There are a couple of notable cases of this occurring in this study.

Adjourning. Concluding work may be orderly or hectic. Members may experience closure or extend work relationships beyond the project. Planned adjournment may include evaluation and reflection on work, outcomes, and relationships. In this study, while no participants talked about reflection, there were several instances of supervisors continuing to communicate with interns to help them to find jobs and guide them in their career.

Learning About the Work Community

Table 6 describes discoveries associated with what student interns learned about how the supervisor-intern team is connected to the work community. The internship team is both enabled and constrained by the community. In turn, members of the internship refine membership and activities, refining the work community symbiotically. Internship relationships frequently included intern teams and sometimes included student interns as supervisors, or more than one

Table 6

Discoveries About the Work Community

Category	Topics	Discovery	Description
Learning about the work community	Community-work group relationship	1	Work communities and work groups exhibited a symbiotic relationship in defining and refining each other.
		5	Work group members were often actively involved in refining membership.
	Community-connected relationships	15	The supervisor-intern relationship is part of a complex web of relationships that constitute the virtual internship experience.
		16	The supervisor-intern relationship was frequently not one-to-one but could include more than one supervisor and teams of interns.
Learning about the work community		17	The supervisor-intern relationship was not isolated from the greater working community that included people inside and outside.

sponsoring organizations were part of a larger community outside of it with which supervisors would introduce interns interested in learning about internship and employment opportunities. Some interns also worked with clients and others associated with the sponsoring organization.

      Insight 2: The supervisor-intern relationship is part of a larger context. Figure 35 illustrates the extended work community that Intern K experienced as the extreme example of the complexities of the work community in which some interns in this study had to learn to conduct work. In this example, both the supervisor and student intern interact with those who manage the internship program to coordinate the meeting of supervisors and selected interns. Intern K was a member of a team of interns, over whom the supervisor appointed an experienced student as an intermediary supervisor to which other student interns reported and who then informed the
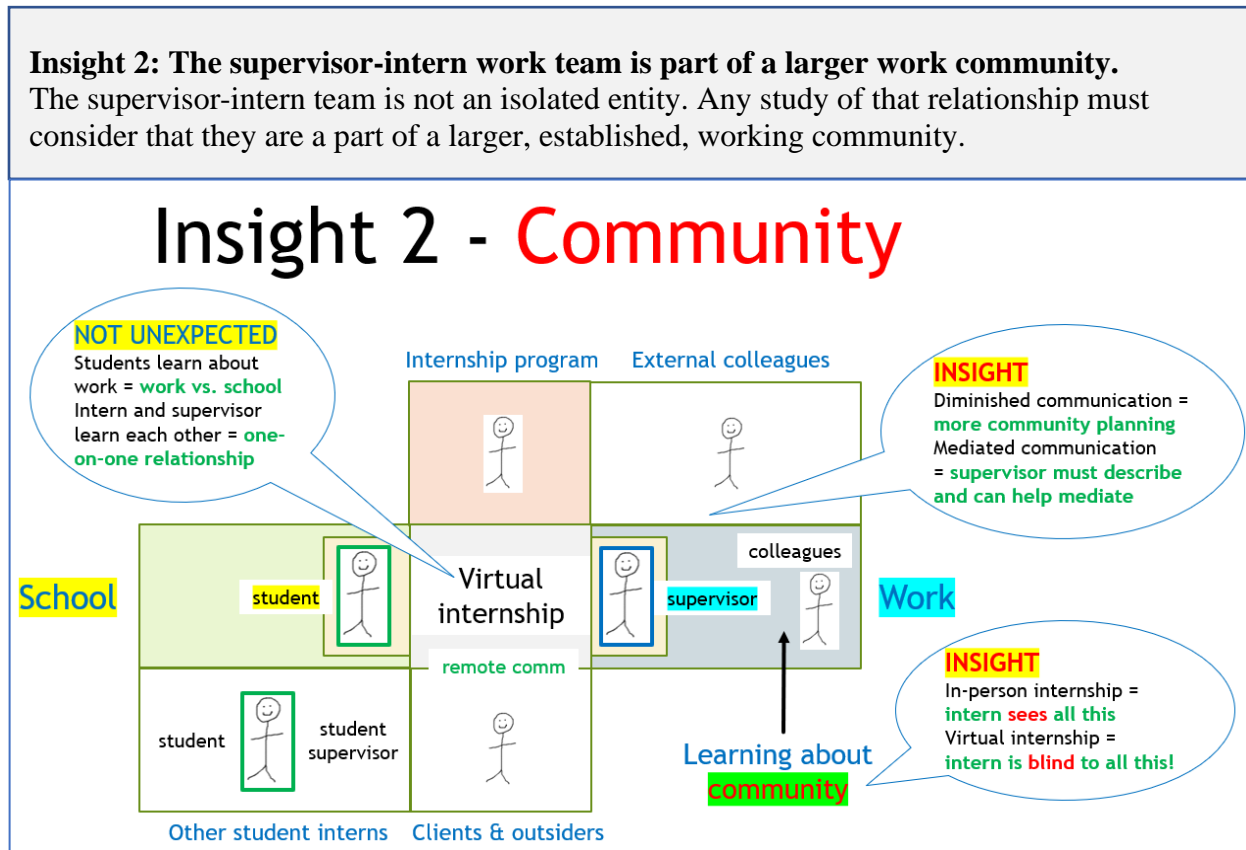

Figure 35. Insight 2: Community. The supervisor-intern team is part of a larger work community that extends to communities outside the internship-sponsoring organization.

supervisor of the status of projects and interns. In her first virtual internship, Intern K in fact rarely if ever had direct contact with her project supervisor but had weekly contact with other interns on her team. Intern K's internship work required that she also work with some of the organization's clients and other outsiders to coordinate events. During Intern K's second virtual internship, her focus was on acquiring information about employment from the supervisor, who introduced her to colleagues in the organization and similar organizations in her area.

The supervisor's environment. The importance of the insight for this study and for anyone contemplating a virtual internship experience is that the supervisor and intern are but one team that is part of a larger work community. A student in an in-person internship may be aware of some of the work community, but the virtual student intern cannot be aware of any of it except what the supervisor shares, but may need to learn about the community to understand the work environment and to accomplish work. Diminished communications inherent in the virtual internship require more planning on the part of the whole community with which the intern must relate and supervisors must plan to describe what the intern cannot see and help mediate relationships the same way as they might do for an in-person internship.

There are also other relationships that are important to the success of an internship, including a relationship conducted via mediated communications. Not depicted in Figure 34 is the relationship that the supervisor has with her boss, who must be aware of the internship because it impacts the intern supervisor's work. The reason why this relationship is an important aspect of the work community is because the results of the internship work may benefit the supervisor's boss, other people she supervises, or the greater work community, and the supervisor's boss is likely interested in the work relationship between supervisor and intern

because a poor relationship may negatively impact the supervisor and may extend to the work community if they are depending on the intern's work. The supervisor's colleagues may also be involved as recipients of the intern's work or in a role as backup supervisors. The intern supervisor may also be an overall supervisor for a team of interns of which the student intern is a member. All these relationships were evident in this study's data.

The intern's environment. Other internship relationships not depicted in Figure 34 are in the academic environment. For Intern K, it was with academic administrators who helped her to locate a virtual internship and to write a resume for the internship application. For other student interns, including me during every stage of the virtual internship, other relationships in the academic community may include those with other student applicants, program heads and internship instructors who develop and teach internships, and other teachers or students contemplating the option of a virtual internship.

The complementary holistic model of community. A model that might prove useful in planning and implementing internships considers how institutions shape the people who create them. In the complementary holism model, people and their personalities, needs, and talents are at the center, surrounded by institutions such as academic and work organizations that people create to facilitate development and distribution of services people need (Albert et al., 1986). Community institutions and the people who created them, with their cultural traditions and roles, form the greater society that may be viewed as spheres of influence that interact mutually, accommodating and co-defining each other, in much the same way as the work community and supervisor-intern team co-define each other and the supervisor and intern accommodate each another from different spheres to be able to do work.

Learning About Mediated Communication

Table 7 describes discoveries associated with participants learning to interact via mediated communication, including technical aspects such as not having sufficient connectivity, supervisory aspects such as the technology that individual supervisors chose to mediate communication and their reasons for making those choices, plus social aspects including influences of demographic differences and meeting in-person.

Table 7

Discoveries About Mediated Communications

Category	Topics	Discovery	Description
Learning about virtual/mediated communication	Technical aspects	6	Relationships in virtual internships appear to be constrained to how work groups conducted communications mediated by technologies.
		21	Not all interns were prepared technically to work with work-related technologies.
	Supervisory aspects	7	All participants reported that supervisors created opportunities to ask questions, which varied from passive to active in nature.
		8	The technology that supervisors chose to mediate communications varied considerably, often matching supervisor-intern interactions.
	Social aspects	20	Almost all participants perceived that there were significant demographic differences between supervisors and interns.
		22	Some supervisors and interns went to lengths to meet or try to meet in-person.

Negotiating technology. Recall from Figure 32 that the least favorite experience of nearly half of the study's supervisors was working in a virtual environment, while none of the interns had this as their least favorite experience. The only intern issue that one supervisor reported was problems with network connections and working with a type of software.

One explanation for this disparity between supervisor and intern experiences might be the level of comfortable with communicating with others who were not collocated with them. As

noted in the previous chapter, all participants except Intern G, a self-described "older student,"

perceived the supervisors to be significantly older than them. This may not be surprising

considering that supervisors in this study were likely to have been employees with experience so

they could balance their own work while managing one or more interns and their work. Age does

not automatically equate to comfort with remote communications, but it is my experience from

teaching telecommunications that there is some correlation, or that younger people tend to be

better acclimated to communicating remotely. Also, increasingly more students are taking online

courses and playing games online, so they are familiar with learning and relating to others in

virtual environments (Allen & Seaman, 2008).

     Influence of technology choices. Figure 36 depicts the type of remote technology that

participants reported using to communicate, and how often they communicated. From this data, it

appeared that most supervisor-intern work groups emailed or phoned at least weekly. Only a few

supervisors and interns used more synchronous and interactive technologies such as audio-video

chat applications that enabled participants to see each other face-to-face and to communicate

more naturally as they might in-person. Supervisors generally made the choice of what
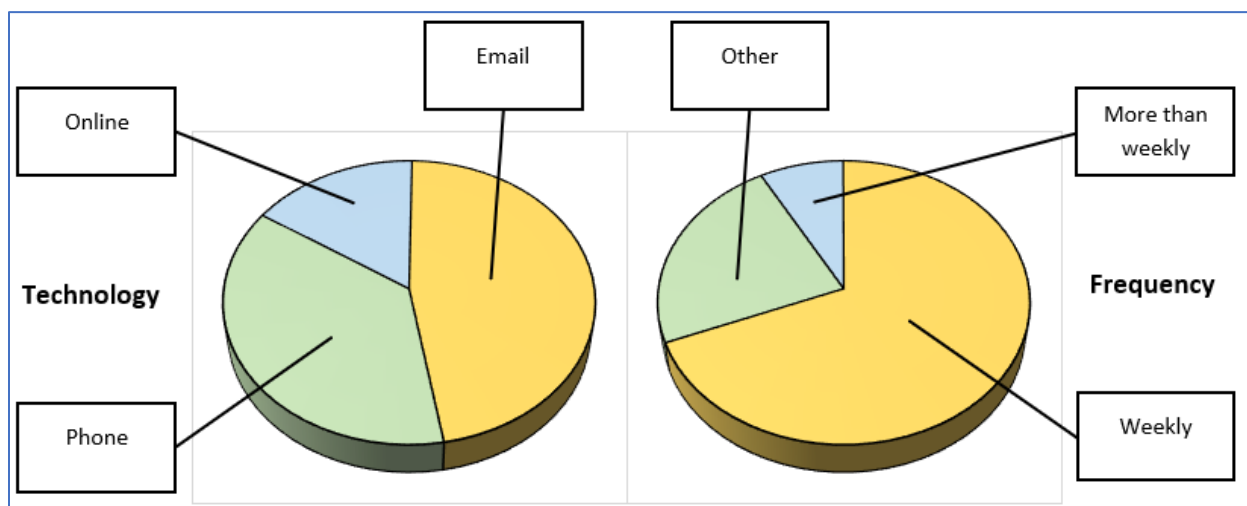
Figure 36. Types of remote technology and frequency of remote communication.

technology would be used to mediate communication, although a relationship-oriented supervisor asked interns what they preferred, and some choices may have been constrained to what was available, just as this may have been the case for some interns. For example, Supervisor F used email and phone because "This is like the fanciest stuff we've got, right? We make telephone calls and we send emails" (see Figure 21). On the other hand, a supervisor (Supervisor K) insisted on meeting with interns visually so she would pick up cues about their personalities and level of fatigue or concern that she might not catch in email or a phone call.

Social presence theory. Developed over four decades ago, Social Presence Theory rated each telecommunications technology on its capacity to transmit language cues compared to the gold standard of natural in-person communications (Short, Williams, & Christie, 1976). The more socially present and engaged the communicator felt using the technology, the theory held that the better a message could be retained. The measurable dimensions of social presence were intimacy and immediacy. Intimacy could be measured by perceived physical distance, eye contact, topics of conversation, and gestures such as smiling (Argyle & Dean, 1965). Immediacy was the psychological distance between people that could be measured by formality of dress, facial expression, and verbal or non-verbal language components, with a strong sense of social presence predicting satisfaction with communications (Gunawardena & Zittle, 1997; Wiener & Mehrabian, 1968). In later studies, emoticons, and expressions such as LOL were shown to have no effect if social presence was low due to other factors (Lahaie, 2007). Social presence theory was expanded on in later studies to include cognitive presence, that is, the ability to construct meaning during communication (Garrison, Anderson, & Archer, 2000).

Based on decades of experience with remote communications, first with radio in the military and later with over a decade of experience teaching in virtual three-dimensional worlds,

I found that telepresence, the psychological feeling of personal presence, is as important as social presence, meaning that effective communication is a two-way process requiring committed engagement from all participants, and the type of technology is secondary (Hayek & Youngblood, 2015; Schultze & Leahy, 2009). From decades of teaching experience, I also found that in-person proximity only weakly correlates with presence or engagement and that this is an individual choice.

The Quality Matters model. Quality Matters (https://www.qualitymatters.org/) (QM) is an approach to remote communication with the goal to improve student learning, engagement, and satisfaction with online and blended (mixed in-person and online) learning (MarylandOnline, 2018). Unlike social presence theory, the focus is not on the innate capability of a technology to convey content or to promote communication between the teacher and students, but on the choice of technology and how the teacher uses it. The only guidance about choice of technology is to use a technology that is easy to use and readily accessible, promotes learner engagement, and describes policies, course instructions, and resources. I most recently employed Quality Matters standards for a blended course while writing about the results of this study.

Demographic influences. Provided that participants can communicate sufficiently via telecommunications technologies, virtual internships enable participants to work with people anywhere and from any location. I did not have data for how participants perceived these differences, but I had a supervisor of the opposite gender who was significantly younger and from a different cultural and national background. All participants in this study perceived that their counterparts were either of a significantly different cultural, ethnic, or national group than them, and a majority worked with a supervisor or intern of a different gender. Demographic differences have the potential to influence relationships since members of different cultures may

have different ideas about hierarchy, expression of individual interests, dealing with uncertain conditions, and working with people of the opposite gender, particularly supervisors. In two cases mentioned in the previous chapter, interns were able to capitalize on their culture or ethnicity to help a supervisor work with people in an overseas office. Intern D found that "working with my co-intern and seeing how our different backgrounds all brought something interesting to the table" was her favorite aspect of the internship. A supervisor also expressed the same sentiment about the diversity and talent of young people around the world.

Insight 3: People create relationship, not the medium of their communications.

Figure 37 illustrates the findings and insights associated with what participants shared about learning about mediated communication. I did not find it surprising that some interns, as
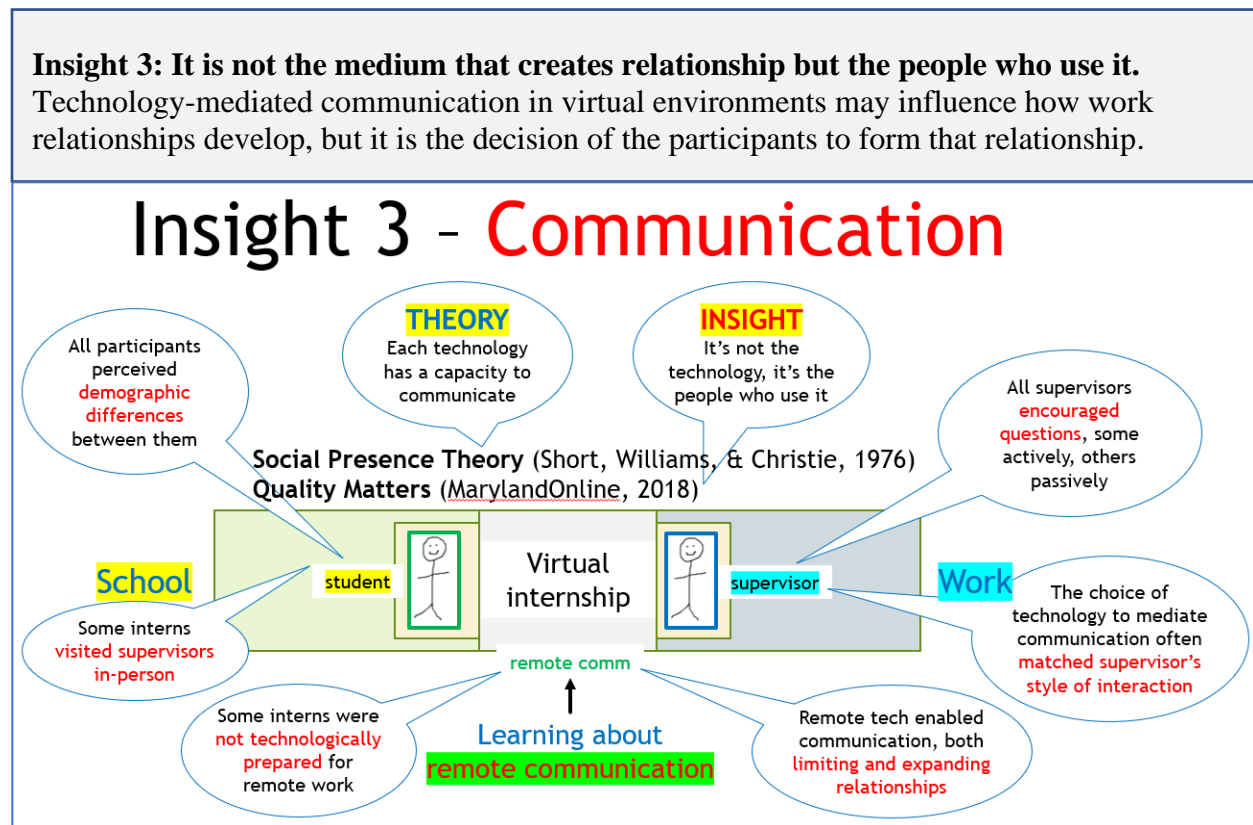
Figure 37. Insight 3: Communications. Discoveries about learning to communicate in a mediated environment and dealing with the situation.

comfortable as they may have been with virtual communication, did not have a sufficient connection or proficiency with software to conduct internship work effectively, that technology limited communication to some extent, or that participants perceived demographic differences between supervisors and interns. What was surprising was that several interns felt a need to visit their supervisor and others with whom they worked in-person. Although there is no data in this study to support an explanation for this, I believe this indicates that interns felt that there was something missing in a relationship via mediated communication.

Discoveries that led to the insight that relationship was a choice of the participants included the technologies that supervisors chose to communicate and the way they provided student interns a way to communicate outside of structured settings. Both choices tended to match the supervisor's style of interaction. For example, I assessed Supervisor F as focused on work. He used email and phone exclusively. Supervisor K, on the other hand, focused on the professional relationship with interns and asked them which technology they wanted to use, choosing, almost exclusively, to communicate with them via technologies that supported voice and video.

Learning About Perceptions of the Internship

Table 8 categorizes discoveries associated with perceptions that supervisors and interns appeared to have about the internship and each other. While not universally true, the primary purpose for the organizations that sponsored the internships that this study's participants experienced appeared to be to find qualified individuals to work on existing projects or new initiatives. That would explain why interns appeared to be selected for their experience rather than selecting students to gain experience. From the perspective of the majority of this study's interns, the internship was a bridge to the future, first as a vehicle for validating academic

Table 8

Discoveries About Internship Perceptions

Category	Topics	Discovery	Description
Learning about perceptions of the internship and each other	Supervisor perceptions	2	The apparent driver of sponsoring organizations was to enlist the assistance of qualified workers in working on existing or new projects.
		3	Most supervisors viewed interns like employees rather than as students learning about work.
		4	Most interns appeared to be selected for their experience in the area of internship work.
	Intern perceptions	11	Intern asked supervisors for recommendations for other internships and full-time work.
		18	Interns expressed an interest in how academic preparation was applied in internship work.
		19	Interns expressed an interest in how internship work would be applied in the work community.

preparation and how internship work would apply to the working world, then as a network to

obtain information about future internships and work.

Although all interns in this study were current students at the time of their internship,

there was no evidence of negotiations between internship-sponsoring organizations and

representatives of academic communities to ensure that internship work would enable student

interns to achieve specific learning outcomes, that is, the virtual internships experienced by

participants were not academic internships as described earlier in this chapter.

Without the coordination associated with an academic internship, supervisors and interns

were liable to have different objectives for the internship and the roles they expected each other

to play based on the differences in how students and employees relate to each other in the

environments with which they were most familiar, as was evident in this study. These differences

could have been resolved early in the relationship but, as noted in the description of group

development theory, sharing personal thoughts or feelings is not likely to occur during the group

forming stage, only later when the group is established and members feel less vulnerable and are more trusting (Napier & Gershenfeld, 2004; Tuckman & Jensen, 1977). There is evidence from the types of conflicts experienced well into some of the relationships, such as conflicts with work or school, that perceptions about the internship and each other was often not discussed, although this was not a universal experience of this study's participants.

Perceptions of internship relationships. Evidence for the variability in the way participants of this study interacted with their counterparts is found in how both parties described their experiences, as depicted in Figure 38 by representative responses from supervisors (top) and interns (bottom) on a subjective ordinal scale from perceptions of less to more interaction.
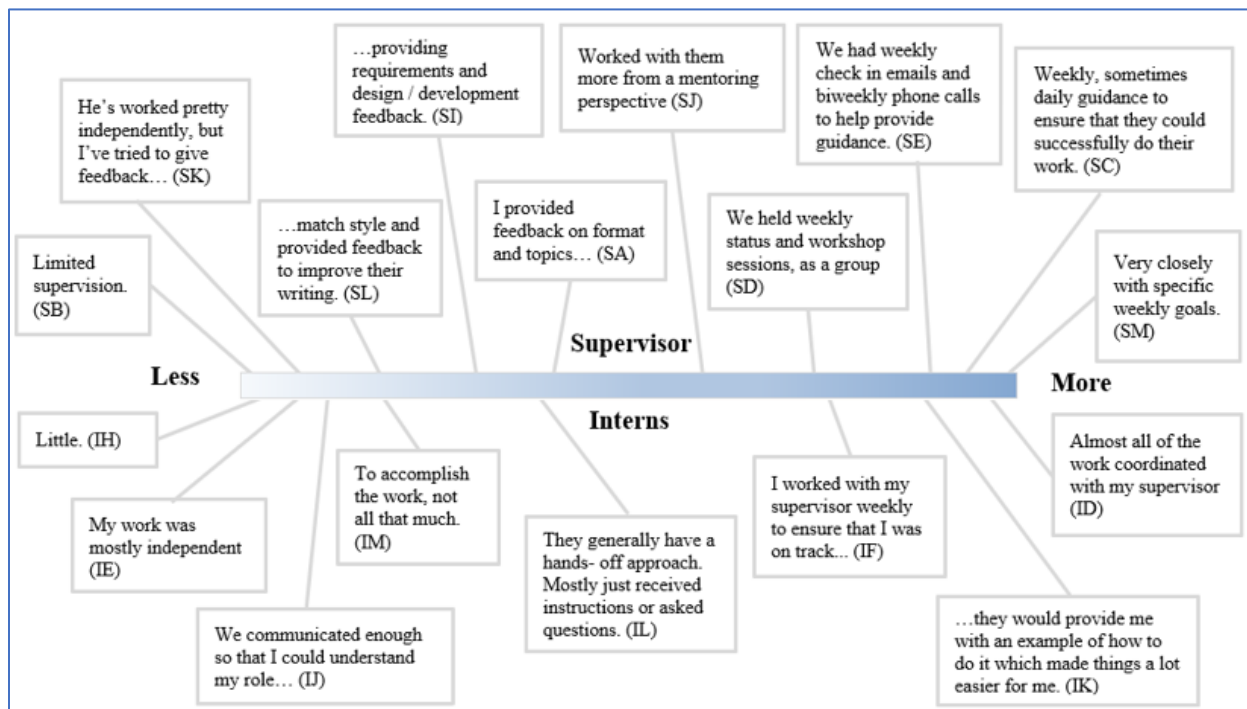
Figure 38. Variability in the perception of supervisor-intern interactions.

While the degree of interaction does not speak to intent, it is indicative of the perception that participants had about their relationship. Most of the responses included detail, but other perceptions were more subjective, such as "little" [interaction] (Intern H), "we communicated

enough" (Intern J), "they generally have a hands-off approach" (Intern L), "I've tried to give

feedback" (Supervisor K), and "very closely" (Supervisor M).

Other indicators of the range of perceptions about supervisor-intern relationships are

depicted in Figures 39 and 40, the first showing how participants described the relationship with

their counterpart , ranging from "incredibly supportive" to "we chatted a bit" and "helpful but
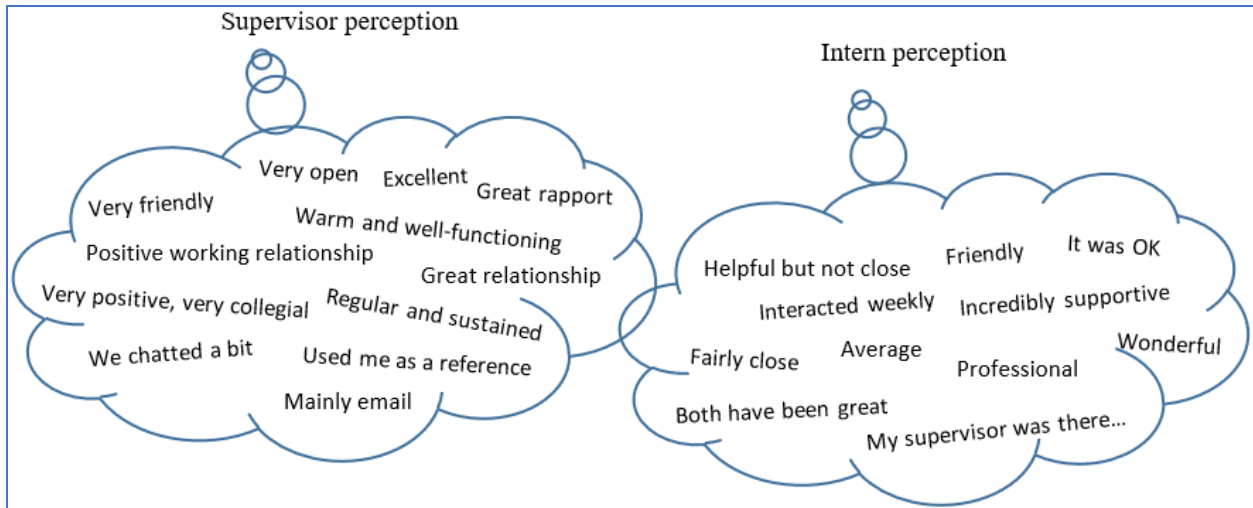
Figure 39. Variability in perception of supervisor-intern relationships.

Figure 40. Participant perceptions of ideal supervisors and interns.

not close." Of note is the more positive tone of how supervisors perceived of the relationship compared with intern perceptions. The second figure shows how participants described their ideal counterpart. Notice the focus on work by both supervisors and interns, especially on productive interactions, with communication predominating. However, notice that for interns, work productivity means creating a good relationship, particularly respecting them and their work, being enthusiastic about the work, guiding them and giving them freedom to work rather than micromanaging, and recognizing that interns view the internship as a bridge to their future by mentoring them and assisting them to find jobs in the field. The disparity between how supervisors and interns focused on work could explain why a third of interns felt they were not appreciated.

Insight 4: Variability in perceptions may be explained by individual differences. From my experience, it can be easy to confuse individuals with the roles they play in both academic and work environments. This is a study on the surface of relationships among supervisors and interns, but it is really a study of how different individuals in those roles, some with very different preconceptions, experiences, and subsequent perceptions of the internship relate to each other.

Figure 41 depicts the two predominant views of the internship, as a way for supervisors to accomplish needed work, and as a way for interns to validate their academic preparation and build a bridge to the full-time working world. It was apparent from what participants shared of their experiences that they could accomplish their different objectives and did not have to agree on a common goal except to accomplish the internship work. My initial premise was that supervisors and interns needed to establish and sustain a working relationship to accomplish work, but there is a contingency theory of leadership that suggest that a good relationship is not

necessary if the primary objective is to accomplish work or if the relationship is structured so that the intern can accomplish work independently (Fiedler & Garcia, 1987).
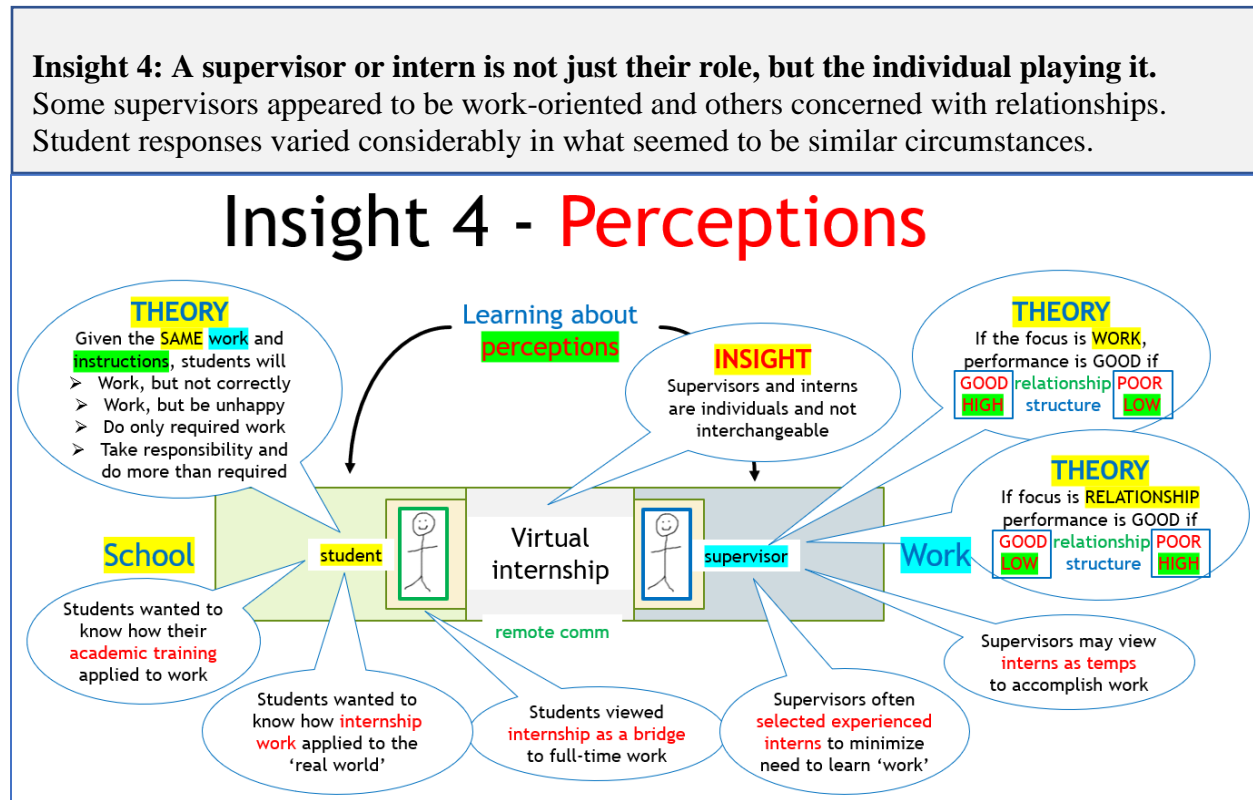
Figure 41. Insight 4: Perceptions. Supervisors and interns appeared to have different perceptions of the internship, with variability explained by the way individuals approached it.

Likewise, there is a theory of followership that indicates that interns will behave very differently under the same set of circumstance that the supervisor creates (Kelley, 1992). I contend that this strengthens the need for supervisors and interns to talk about their perceptions and differences early in the internship so that they can approach the internship and the way they relate to each other so they can both accomplish their goals for the internship.

Influence of supervisory leadership style. The supervisor's work environment includes the work as well as how people relate to accomplish work. Ideally, a student intern will learn both to transition from academia to the working world. Ideally, the intern's supervisor would

recognize that the intern is also a student who needed to learn to relate well with the supervisor and others to perform well and be able to accommodate both the relationship and the work.

As the results of data analysis showed, many supervisors in this study chose to focus on getting needed work accomplished while minimizing relationship. Behavioral theories of work suggest that teams that focus on work tend to have leaders who may be uncomfortable with informality and feel that establishing personal relationships conflict with efficiency, so they are highly structured regarding supervisory control and time organization, depend on rewards to motivate workers, focus on accuracy, minimize autonomy and free expression, and encourage conformity (Napier & Gershenfeld, 2004).

At the opposite extreme, some supervisors in this study focused on finding gaps in student knowledge and skills associated with work and the work environment and were more flexible about how and when work got done. Figure 42 shows how both approaches could lead to good work performance, contingent on matching the focus (work or relationship) with the structure of the relationship and how strong the leader (the supervisor, in the case of internships) leads (Fiedler & Garcia, 1987). Scenarios A, B, and D represent relationships in which the focus is on work, while in Scenario C the focus is on the supervisor-intern relationship, that is, on teaching the student intern about work, the work environment, and work relationships.

Work-focused teams. In Scenarios A and B (Figure 42), teams focused primarily on accomplishing work can perform well if the leader creates a highly structured work environment and has a good relationship with team members. Scenario A, in which the supervisor has a strong position of power, describes many of the work relationships in this study. In most internships, the supervisor is viewed as the expert in the field and, especially since the internship can be viewed as a small team, is given a high degree of control over how the team operates (Napier &
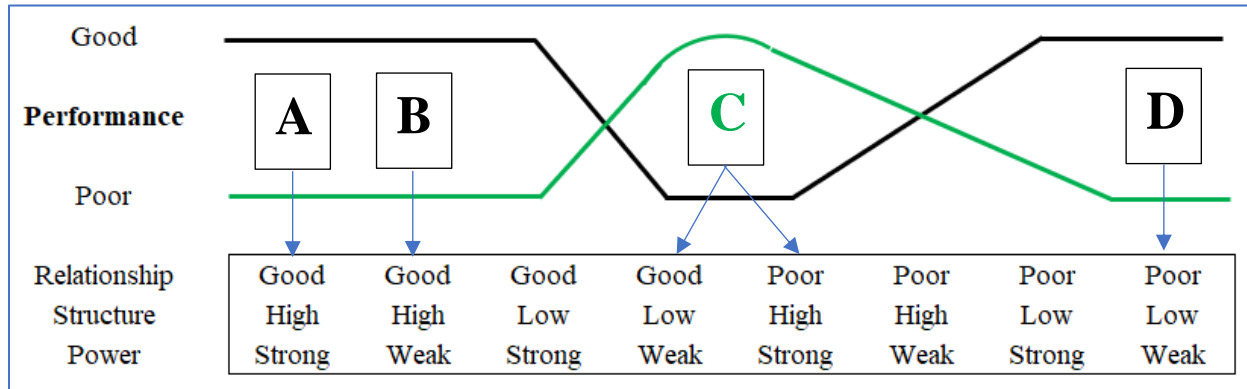
Figure 42. Fiedler's contingency model of leadership. Work performance relates to relationship, structure, and leader power. [Adapted from Exhibit 12-1 in Nahavandi (2009)]

Gershenfeld, 2004). The perception of the interns in this study, who volunteered for a challenging, year-long experience, tended to be that the internship was a high-stakes endeavor that would help create a bridge to their future. They were motivated by rewards such as certificates of achievement, feedback that could validate their academic investment and the value of their work and earn them recommendations and leads on full-time employment in return.

Scenario B, in which the supervisor is in a weak power position, describes the intern teams that had a student as an intermediary supervisor. Provided the internship was highly structured regarding work and communication and relationships were good, the supervisor could expect good performance from team members.

As mentioned, my original aim was to explore experiences of relationships in virtual internships with the assumption that if the data revealed instances of poor relationships that the reasons for this would also be apparent and so be avoided by future practitioners. However, according to this theory, a good relationship is not needed to yield good work performance, if accomplishing work is the primary aim of participants. Scenario D is another situation in which the supervisor is in a weak power position. In this scenario, the relationship is poor. Work can still be achieved if the work structure is low, that is, if the supervisor allows the intern to work

independently. For example, I propose that Scenario D could describe a supervisor who does not

supervise much and only provides interns with information they need to perform work, a

deadline for submitting it, checks on progress occasionally, and otherwise allows interns to work

independently or in teams. This describes several other relationships that participants in this

study experienced.

Relationship-focused teams. For the few teams in this study in which the supervisor

focused on interns learning or needed to focus on relationship due to the nature of the project,

Scenario C shows that the team can perform well either if the intern has freedom to work in a

good relationship or else the supervisor provides strong control and structured work if the

relationship is not as good. The former situation describes the relationship-focused teams in this

study. What happened in this study's example of the latter situation was the intern quit the

project. A paid employee might have less incentive to quit than an intern volunteer.

Influence of intern followership style. If supervisors are team leaders, then interns are

their followers. An example model of followership describes five followership styles (Kelley,

1992). Figure 43 depicts these styles across dimensions of work engagement (passive to active)

and independence (dependent to independent).

Interns in this study exhibited behaviors indicative of each followership type. Passive

interns waited for direction from the supervisor while active interns asked for directions. Passive

interns who were not independent, critical thinkers gave largely negative or critical descriptions

of their internship experience. Interns who actively communicated with supervisors but who

were not independent followed supervisor directions but appeared not to work beyond project

requirements. Interns who adapted well to the work environment appeared to strike a balance,

engaging moderately in the work but showing limited commitment to it, waiting pragmatically to

see what came next before taking further action. At the highest functional end were interns who

both actively engaged in the supervisor-intern relationship and work environment and who also

appeared able to evaluate information, identify opportunities, create alternative solutions, assume

responsibilities beyond minimal requirements, and exert considerable effort to accomplish their

goals (Kelley, 2008; Novikov, 2016).
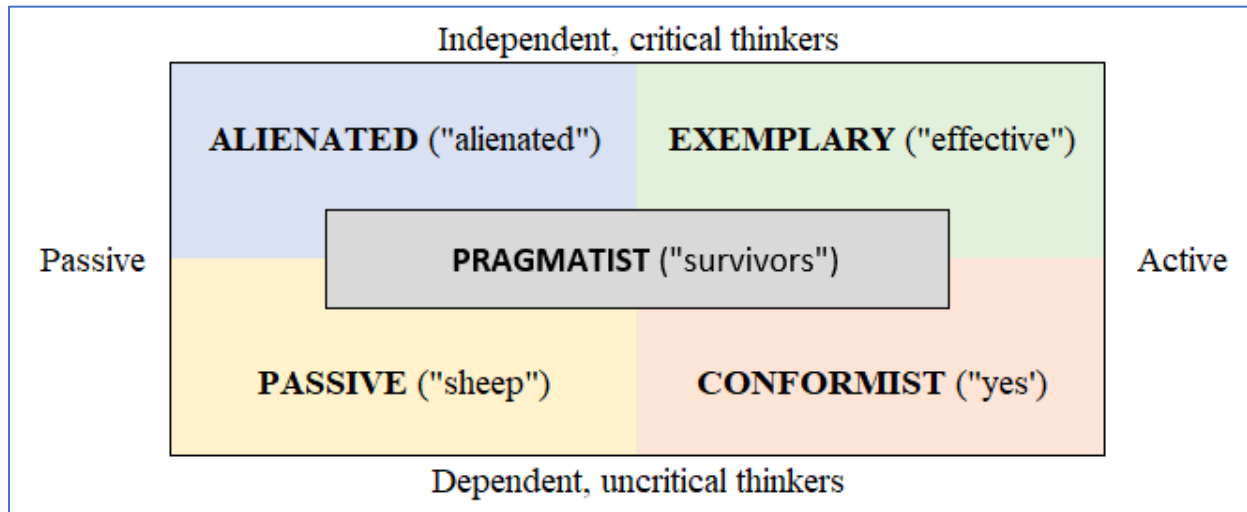
Figure 43. Kelley's two-dimensional followership model.

Summary of Insights

In this chapter, I described insights about the nature of virtual internships and work

relationships experienced by this study's participants. Insights were revealed in the context of

explaining the two dozen, data-derived discoveries described in the previous chapter. Four

insights were deduced, one associated with each of the 4 categories of discoveries: learning

about work relationships, about the work community, about mediated communication, and about

perceptions that participants had about the internship and about each other.

Insights may be summarized as learning that supervisors and interns are a meeting of

members of different work cultures and learning about the other was necessary to form a

working relationship, that the teams that supervisors and interns form are part of a larger community with which team members relate to accomplish their goals, that relationship is formed by team members and is not dictated by the communications medium, and that supervisor and intern are just roles and the individuals who assume them are individuals with different perceptions and styles of interacting as either leaders or followers.

Conclusions: Discussion, Contributions, and Next Steps

Through the millennia, young people have learned about the world and how it works from life's informal lessons and from watching and learning from others in systems of non-formal education. Only relatively recently have large segments of the population spent much of their youth in formal education systems that modularize, decontextualize, and otherwise separate the learning of knowledge and skills from the environments in which they are applied.

The internship was instituted in the last century to provide graduates, and later current students, of formal educational systems with opportunities to learn about the working world, to learn to apply theory to the real world, to sample different work environments, and to demonstrate to would-be employers both the ability to perform work and the capability of working well with others. Just as internships represent different opportunities for students, employers may also view internships as other types opportunities. Some employers view interns as students needing to learn about the work environment, so they cooperate with educational institutions to incorporate learning goals in internship work. Others view the internship as a more reliable method than interviews or similar work experiences to select new employees who can work well with them because an internship is a first-hand evaluation of how a potential employee can work with others in a specific environment. For other employers, interns may be viewed as a temporary, qualified, and often voluntary, labor force who can help with existing work or new projects to lessen their workload or conduct work they might otherwise not be able to do due to a shortage in qualified workers.

While internships enable students to gain work experience while still in school with the aim of increasing their likelihood of getting a job soon after graduation, an in-person internship can also add the logistical challenges of work on top of school and life commitments. Over the

last decade, the virtual internship has developed as an opportunity for students to intern with organizations located anywhere in the world, and for those organizations to select interns worldwide, provided that student interns and intern supervisors can establish and communicate effectively in a virtual work environment. While this relatively recent type of internship may alleviate or reduce some of the logistical issues associated with working in-person, there is still the issue of participants learning enough about each other, about the work to be accomplished, and about the environment in which work occurs, without the advantage of being able to see each other or the work environment in-person.

While engaged in a virtual internship to better understand the experiences of other internship participants, I developed a study to learn about the experiences of others who had experienced virtual internships. Student interns and intern supervisors who had experienced a virtual internship facilitated by the same internship program through which mine was sponsored were invited to respond to an online survey with open-ended questions. The results of the survey were used to identify prospective interviewees and to develop a semi-structured protocol with the aim of learning about the depth of internship experiences from a few purposefully selected participants.

Analysis of survey and interview data revealed two dozen discoveries about the nature of virtual internships and work relationships experienced by the study's participants. This study's discoveries were reported within the conceptual framework of interpersonal interactions in work environments to enable me and readers to more readily distinguish between typical work and in-person and virtual internships. Deductive analysis yielded four categories of discoveries, each of which led to insights that will contribute to what is known and practiced.

This chapter begins with examining how research questions were addressed, followed by examining what contributions were made to existing knowledge in theory and literature. A guide for stakeholders and suggestions for future research will conclude this study.

Addressing the Research Questions

The central question. The guiding question for this research was, "How did virtual internship participants relate via mediated communication?" with its implied intent to discover how participants communicated information needed to work together via technology-mediated communication. Inherent in this question are assumptions that there is information needed for work, that the supervisor or intern or both have information the other does not and needs to communicate, and that the only means to do so was via technology-mediated communications because participants are not collocated.

The role of prior agreement. Supervisors did have information that interns needed because they or their work community had a reason for sponsoring an internship of which the intern could not be aware, and the intern selected to intern with the sponsoring organization instead of the organization approaching the intern or an academic institution. The virtual internships in this study were not negotiated beforehand between representatives of the sponsoring organization and the academic institution to which the student intern was associated, where learning outcomes would be known by the supervisor and interns before they met. Therefore, without prior agreement, the intern could not know the purpose of the internships and would have no reason to expect anything more than gaining experience with some type of work that the sponsoring organization performed, or to demonstrate an ability to work in the organization's environment. These are two objectives of an internship and could be fulfilled without a close working relationship.

A biased assumption. I originally assumed that the supervisor and intern had to establish and sustain a working relationship to conduct work, and that mediated communication might complicate that process. Based on the results of this study though, a close working relationship was not required when work could be easily described and the supervisor could assume that academic or other preparation described in the intern's application would be similar enough to that of other workers in the organization to enable the intern to perform the intended work with minimal supervision. In these instances, the only information required would be to communicate via email or phone, a mediated communications environment familiar to both supervisors and interns, logistical matters including enough detail about the initial work and resources to get started, when the work was due, and how the supervisor would monitor progress and discover and deal with any issues that arose.

This type of information is like what learners need for informal learning such as self-paced online learning, or for textbook problems. Not all internships matched this description. Several supervisors and interns reported work that due to its timeliness, complexity, changing nature, or unfamiliarity to the intern, required daily or at least frequent coordination. These types of internships required that the supervisor and intern form a closer working relationship, but participants did still not need to know much about the other person, just the work.

Improving the supervisor-intern relationship. If the intern and supervisor's mutual objective was to accomplish work by enabling interns to assist, thereby providing an opportunity to gain work experience or demonstrate an ability to work with the sponsoring organization, then there was little disconnect between their perceptions of the purpose of the internship. However, as the study showed, interns frequently appeared to want more out of the internship, as evidenced by a third of participants feeling unappreciated (see Figure 32). Data does not reveal directly why

some interns felt unappreciated since this fact was not discovered until after all data was collected so interns were not asked about this response, but explanations can be found indirectly through other data.

Evidence for what interns meant by appreciation was found in how interns described their ideal supervisor (Figure 40). In that disclosure, interns described the ideal supervisor as creating a productive environment by respecting them and their work. Since all interns received a certificate of appreciation (see discussion of Feedback and Appraisal), this appeared to involve more than recognizing participation. Interns described an ideal supervisor as showing enthusiasm for the work, checking with them regularly on their work, mentoring them, and assisting them to find jobs. In their disclosure of favorite experiences (Figure 32), interns included applying learning, real world results, and career applications, all of which refer to validating their academic and other preparation by learning how their work applied to the real world and to furthering their careers.

Based on individual responses, interns also appreciated instances where supervisors involved them in making decisions about what technology to use to communicate (Supervisor K) or gave them latitude to make decisions about the work (see Intern M's account in Discovery 9), a show of respect for them and their knowledge or judgment. Supervisors did not require a sophisticated environment in which to communicate to include these actions in the internship, thereby improving how they related with the intern and increasing the likelihood of successful outcomes due to student commitment and involvement.

Associated questions. Original sub-questions were associated with communication, work, and perceptions. Communications questions included what technology was used to create the virtual environment and how effective it was. Work questions were about how to establish

and resolve ambiguities about work logistics. Perception questions included what participants brought to the internship that could affect their relationship and how their perception changed.

Questions about communication. The answer to the question about what technologies were used to communicate (see Figure 36) was revealed to be mainly the technology with which supervisors were already familiar at work and used to communicate with employees. For the most part, this was email for detailed or persistent information and phone when more immediate information, close coordination, or quicker interaction was needed, or during transitions such as the first meeting. Most supervisors used only the voice feature of audio-video conferencing software and only a few used visual features to see each other.

The conclusion then was that most supervisors, who chose the communication medium, did not require audio or visual cues to convey information needed for work or to create a working relationship. On the other hand, at least one supervisor insisted that she see intern faces when they communicated. This supervisor found it valuable to be able to get visual cues from her student interns and found that by speaking to and seeing each other, she could convey information more quickly and detect issues that might affect work more readily, as well as help her to relate to her interns like she did with students when she was a professor.

As described earlier, the repercussions of communicating in a virtual environment was that interns relied more heavily on supervisors to convey information than obtaining it themselves through in-person observation and contact with others. Establishing and sustaining a relationship was slower and took more work, which meant that some busy supervisors may have turned to focusing on accomplishing work rather than establishing relationships.

Questions about work. Ambiguities concerning work schedules and meetings times were largely resolved at the beginning of the internship. Unanticipated changes to established work or

communications patterns, most frequently due to uncommunicated competing commitments such as those associated with school for interns and other work for supervisors, often led to conflicts in the relationship. The least favorite experiences by both supervisors and interns (Figure 31) were in this area. Repercussions of not communicating this information in a timely manner were confusion, "unappreciated" interns, and sometimes interns who quit the internship. Some supervisors appeared to ameliorate the effects of this by having teams of interns, placing other interns as intermediate supervisors to work with student logistics, and arranging for substitute supervisors when needed.

Questions about perceptions. A key takeaway from this study was how perceptions of the internship and other participants influenced experiences. A potential issue that did not appear to influence relationships was demographic diversity, though participants perceived significant differences from their counterparts in more than one demographic.

Reflecting on internship experiences, supervisors and interns provided useful information on what perceptions they had about the internship and their counterparts and how this differed from what they encountered, depicted in Figure 44. Responses to what participants would like to have known before the internship covered the range of the study's discoveries and insights.

Except for a few interns who would have liked to have been better prepared, other responses could all have been dealt with through effective communication at the outset or during the internship when participants became aware of them. For example, had interns shared when their academic schedules or other activities of which they became aware might compete with internship work, supervisors said they would be more than willing to accommodate them. Several responses had to do with policy which could have been discussed early, such as the type of work to be done, professional email etiquette, technology requirements, supervisor

expectations, and the degree to which the supervisor would be involved in the work. Beyond

that, an early discussion of expectations and perceptions about the internship and the role of each

other would reduce many of the problems and negative feelings that some interns experienced.

The most surprising finding for me was interns being unaware that a purpose of the virtual

internship was to expand inclusion and not to restrict in-person meetings.

Figure 44. What participants would like to have known before the internship started.

Contributions of This Study

The nature of the virtual internship. A purpose for this study was to explore the virtual

internship, what it has in common with full-time work, an apprenticeship, and an in-person

internship, and what is unique about this type of internship. Table 9 summarizes the

commonalities and differences among these work environments, including expectations,

relationships, community, and communications.

Bolded characteristics in Table 9 indicate 12 categories that distinguish each of the four

work environments. Maertz, Stoeberl, and Marks' (2014) review of internship literature found

Table 9

Comparison of Work, Apprenticeship, and In-Person and Virtual Internships

Characteristics	In-Person Work	Apprenticeship	In-Person Internship	Virtual Internship
Expectations				
Purpose:	**Employment**	**Certification**	Work experience to demonstrate ability	Work experience to demonstrate ability
Employment:	**Continued**	**Expected**	Recommendation to possible offer	Recommendation to possible offer
Relationship				
Status:	Paid / **Employee**	Paid / **Employee**	Paid or unpaid / Non-employee	Paid or unpaid / Non-employee
Work duration:	Full-time; Indefinite	Full-time 1-6 years	Part-time; **6-12 mo**. [Co-op: **full-time**]	Part-time (full-time?) **6-12 mo**.
Instruction:	None to continuing ed	**Continuous**; non-formal	None to non-formal; [Academic: **expected**]	None to non-formal
Outcome:	None to promotion	Certification to **employment**	None to recommendation	None to recommendation
Community				
Workspace:	Supervisor's work area	Supervisor's workplace area	Supervisor's workplace area	**Anywhere** with a virtual connection
Others:	Local to remote	Local	Local to remote	**Remote**
Planning:	None to minimal	None to minimal	None to minimal	**Considerable** (if work is the focus)
Communication				
Travel:	Commuting distance	Commuting distance	Commuting distance	**Worldwide**
Communication:	Immediate; voice and visual	Immediate; voice and visual	Immediate to soon; voice and visual	**Delayed** or set; **written** or voice
Information:	Provided or asked for	Provided or asked for by apprentices	Provided or asked for by interns	Provided or unk. (**cannot see**)

11 distinguishing characteristics, sharing many of those discovered in this study as reflected in Table 9, such as compensation, duration of work, implied employment. Their study included aspects of academic internships such as whether students received college credit, had a faculty mentor, and whether the internship was arranged by the academic institution or by employer-intern negotiation, as participants in this study had to do. More intriguing in their study are characteristics that are discussed in this study such as whether interns were undergraduate or graduate students, whether internship work required high or low requirements, whether the internship was structured or unstructured, and whether interns worked on job tasks or on larger projects. This implied that other researchers discovered that internships could range from routine work to more complex projects.

Ambiguities in status and compensation. Two internship ambiguities are status and compensation. Several intern participants were disappointed that they were not paid or offered a job. Also, interns generally only work part-time, but this is not always the case as students may intern full-time between academic terms or in a co-operative internship agreement. Another ambiguity is whether the internship includes instruction. Full-time workers often have no expectations about instruction except for work where knowledge and skills change rapidly. For apprentices and students in academic internships, a training or educational component is part of its unique difference between it and the other work environments.

Ambiguities in duration of relationship. A unique characteristic of an internship is its short duration, typically a half year or less than a year. A study of virtual internships worldwide revealed that most are between 3 to 6 months, though those in India may be 6 months or more and some more than a year in length (Jeske & Axtell, 2013). Except for duration, an in-person

internship has many characteristics in common with full-time work or an apprenticeship

regarding the work community and communications (Jeske & Axtell, 2013).

Ambiguities in communication. On the other hand, communication is an area that

distinguishes the virtual internship from other work environments. On the positive side, virtual

interns may conduct work anywhere in the world from any location where they can establish and

maintain a workable communications environment, but virtual interns are also more reliable on

supervisors to provide them with information because interns cannot are on physically at the

supervisor's location and cannot see the worksite or the supervisor. Therefore, a virtual

internship may require more planning to avoid miscommunication, diminished work, or a poor

work relationship. The alternative for supervisors is to focus on work and minimize the need for

relationship. Communication is also frequently not immediate or natural as it is in-person,

depending on the technology and familiarity with it, which may complicate relationships.

Working relationships in a virtual internship. The other purpose for this study was to

explore an understudied aspect of internships, namely work relationships among supervisors,

interns, and other internship participants. In previous chapters, evidence was presented to support

some two dozen discoveries in the data, leading to a deductive analysis they could be classified

into four categories, yielding an equal number of important insights about working relationships

in virtual internships. Figure 45 summarizes the insights I derived from what participant shared

about their experiences with virtual internships.

Not unexpectedly, interns learning about work also learn that they had to form some type

of work relationship with a supervisor and often others. The extent of that relationship depended

on the type of work to be done. If work is routine or easily explained, the relationship does not

need to be any more sophisticated than a set of instructions, perhaps accompanied by an

> **Summary insight: People create working relationships. While the communications medium may influence the process, understanding the community culture with which people are familiar and the perceptions they bring to a relationship is key to relating.**
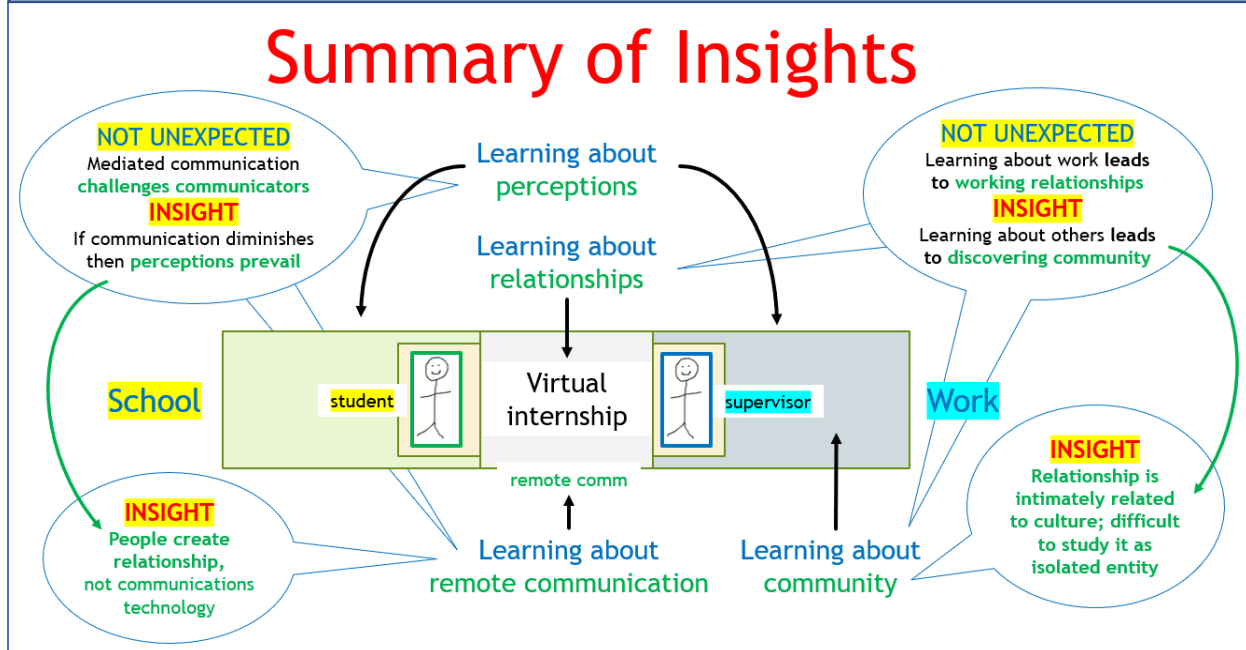
Figure 45. Summary of insights about working relationships in virtual internships.

example, like a cooking recipe, a do-it-yourself installation project, or online coursework. The more complicated the work or variable the work schedule, the less familiar workers are with the task or the less able a worker is in doing the work alone, the more likely a work relationship is required. Learning about work relationships means learning that people are not the roles they play, but individuals whose perceptions and actions are guided by the culture of the community with which they identify, which predates the work relationship. Because the community culture exists in supervisors and interns before their relationship, their relationship is intimately related to their communities to the extent that it would be difficult to study the relationship without including the communities to which the supervisor and intern belong.

Not unexpectedly, study participants learned that technology-mediated communication could challenge communicators if they wanted or needed to form a working relationship because

it was not natural communication and did not include the cues they would normally receive when talking and seeing each other in-person. However, not all internship work required a close relationship that needed the types of cues available through in-person communication. Most students in the study appeared to be selected for the experience they already possessed to do work they knew how to do. Graduate students were selected because they could perform work mostly independently or with teams of interns, without the need for a close relationship with the supervisor. A third or more of the students who did not get the type of relationship they wanted from supervisors felt unappreciated for the work they did. For them, the lack of communication led to a disparity between the supervisor's perception of the internship as a vehicle to accomplish needed work and the intern's perception of having more of a relationship with their supervisor.

Diminished communication led to a prevalence of often differing perceptions. This was not a consequence of mediated communications. Supervisors could have chosen to use technology that had voice or video features, as some did. In any case, establishing and sustaining a relationship was the responsibility of both the supervisor and intern. Technology does not create a relationship. People do. A poor relationship can result in-person the same as in a virtual environment. It can just be more challenging to relate via mediated communications. This is the likely reason that supervisors who had to manage interns on top of their own work chose internship work that did not require a close relationship.

Contributions to literature. Table 1 summarized factors of internship success or intern satisfaction discovered in prior studies. The purpose of this study was not the same as the majority of prior, mostly quantitative, studies. The findings where the researchers of this and other studies would agree are in the need for planning and preparation, that is, in setting policy and practice for the internship, and in setting the goals and objectives of internship work. Where

this study would go further would be advising that those items are conveyed to all participants. Where these prior studies come closer to the focus of this study is in noting that social behavior, that is, in effective interpersonal interaction, is a primary part of a successful and satisfactory internship. Reviewing the specific factors in Table 1, this includes the attitude of participants and their approach to the internship (proactive, active, reactive, or passive) (Williams, 1976) and the type of supervision (Beard & Morton, 1998), which mirrors the theories on leadership and followership styles discussed explaining Insight 4 on Perceptions. Also included is intern-intern interaction (Greer, 2013), noted in discussion of work community, but not studied in-depth here.

On the other hand, this study's findings were in concert with, or supplemented, those of a host of other studies detailed here (citations). The insights of this study and findings of other studies will be integrated into a guide and recommendations for developers and would-be practitioners in the following section.

Franks and Oliver's (2012) study of master's degree students in global virtual internships. Like this study, a large majority (92%) of supervisors in Franks and Oliver's (2012) study communicated via email, while some use phone calls or Skype (42%). In the current study, the voice feature of Skype was used most often and only a few supervisors used video. Franks and Oliver (2012) did not specify this in their study. The reason organizations in their study reported hosting internships was to prepare future professionals to work in real-world settings (85%), to access new ideas (46%), and to help with a heavy workload (38%). They also did so because hosting a virtual intern was less costly than if they had to find a physical workspace and other logistical issues associated with in-person work (58%) and appreciated the ability to obtain qualified interns outside of their local area (58%).

These responses matched those of this study well, except for some of the principal reasons for hosting an internship. The reason for this can be explained by the nature of the internships in their study and this one, namely that theirs was an academic internship in which their institution and sponsoring organizations communicated about learning objectives, which was not the case for this study.

The experience of 75% of interns in the academic internship study was reported as positive, though interns also found the work demanding and stressful, and at least one reported failing to adapt to the supervisor's management style. Interns also recommended that students become familiar with the internship work environment, with the supervisor, and understand work responsibilities before starting the internship, which this researcher would echo based on this study's discoveries.

Franks and Oliver's (2012) recommendations were much the same as this researcher's, namely that student interns need both hard and soft skills, that they become comfortable with communicating online via phone, the web, Skype, and collaborative software, that they have the hardware and software necessary to exchange files and to work on them collaboratively, that they learn how organizations communicate and approach work, and that they take responsibility for the expectations associated with telecommuting. Franks and Oliver's (2012) study's supervisors would agree to all of these.

Gardner's (2013b) employee survey. The data discovered in Gardner's (2013b) Recruiting Trends survey of 2000 employees nationwide matches this study's more closely regarding the reasons for sponsoring internships. In that study, 57% of employers offered internships to identify new talent, 23% to staff special projects, and only 20% offered internships to develop talent or out of a sense of social responsibility to students.

Hartung's (2016) study of communications within virtual intern teams working on engineering projects. Hartung (2016) found a disparity between school learning and that associated with life and work, in that school focuses on individual rather than collaborative effort, on unaided thinking (such as during assessment) instead of using available resources, and on abstract, rule-based thinking rather than interaction in real-world, complex scenarios. This sentiment was expressed by supervisors in the current study, which led them to assess that some interns demonstrated a gap in social skills required to collaborate in a work environment.

Preconceptions and perceptions of the internship and relationships. Researchers in several prior studies also concluded that relationships had a significant impact on intern experience and that understanding and addressing preconceptions of the internship and the roles of participants, and subsequent perceptions during internship implementation, were at the heart of good participant relationships (Gillam, 1998; Ramos-Sanchez et al., 2002). Their conclusions are in concert with the current study's discussions associated with Insight 4 on Perceptions.

In her research on supervisor and intern expectations as pre-internship factors, Gillam (1998) concluded that how internship participants conceptualize the supervisor's role influenced supervisory behavior and the nature of the internship relationship. In Franks and Oliver's (2012) study, a conclusion was that communication before the internship answering questions about student expectations contributed to student success during the internship. Holyoak (2013) found in his exploratory study of internships as learning experiences that the intern's motivation and supervisor's willingness to support learning could reduce or enhance learning. Jeske and Axtell (2013) found that learning and mentoring were associated with intern satisfaction and attitude. Together, these findings could be summarized by Maertz, Stoeberl, and Marks' (2014)

conclusion that "Potential pitfalls stem from the fact that employers and interns often do not have consistent or shared expectations regarding the internship" (p. 129).

Unique aspects of virtual internships. Two conclusions from this study regarding virtual internships were that mediated communication might not capture all the cues that in-person communication might but that telecommunications expanded the selection opportunities for both employers and interns from local to global. In their study of international virtual internship experiences, Vriens, de Beeck, De Gruyter, and Van Petegem (2010) noted that even though the virtual mobility of remote internships could not match the intensity of social interaction or depth of cultural exchange found in in-person encounters that this should not limit employers or interns from taking advantage of the many constructive aspects that virtual internships have to offer. Gardner (2013a) also noted that employers' attitudes towards international student interns varied. In his study, 35% of 1900 U.S. employers surveyed responded that they would not select an international student and an additional 32% said they only might consider it in the future but not at present. Only 11% indicated that they regularly offer internships to international students. Reasons cited were differences in the dynamics of U.S. workplace culture compared with other countries, moral issues regarding offering internships to international instead of domestic students, language proficiency issues, and lack of return-on-investment for those looking for potential employees. Employers and interns in the current study did not face these issues because all interns were U.S. citizens and they interned with U.S. companies who had offices in international locations. However, as in my experience, interns may also have had non-U.S. citizen supervisors working in international offices and several interns in this study worked with citizens of other countries as part of their internship.

Recommendations

     Bridging two cultures. Two key insights from this study were that supervisors and interns engage an internship from the perspectives of different cultures and that participants were not just the roles they played but individuals with frequently different expectations and differing styles of interaction. However, this study showed that there are common elements about that nature of internships and specifically virtual internships, and about supervisors and interns in general, that can be viewed as recommendations for prospective internship developers and participants. The first is understanding that the purpose for engaging in an internship almost always involves conducting work and learning, the principal missions of the two cultures.

     Purposes for an internship - supervisors. The supervisor wants to accomplish work. She may also be looking for talented people as potential employees. This study indicated that those two objectives were the favorite experiences of supervisors during their internships. In an academic internship, representatives of the academic and business entities help to bridge the two cultures by agreeing on expected learning outcomes. This prior arrangement also reminds the supervisor that the intern is a student. Without this agreement, supervisors focused on accomplishing work may view the intern as a temporary, frequently unpaid, employee.

     While viewing student interns as temporary employees seemed to be the approach of many of this study's supervisors, it was clearly not universal because another favorite experience that supervisors reported was talking to interns about school. This practice served several purposes. One fulfilled the objective of learning more about the intern as a potential employee. Another was to learn about potentially competing interests and events that could impact work, such as preparing for exams or school holidays. A third was assisting the needs of the student intern to learn about the work environment and how to turn the internship into a bridge between

school and the working world. Still another was to reconnect in some way to that familiar culture that most supervisors experienced either as a student and sometimes as teacher.

Purposes for an internship - interns. The intern wants to learn. She likely wants to learn about the work and work environment of the sponsoring organization, but interns frequently had other purposes for taking the time and effort to engage in an internship. This study indicated that one of these was learning if academic and other preparation could yield work that is useful to a real-world work community. Another purpose was learning how to leverage the internship to further career plans.

Strategies to fulfill internship objectives. The supervisor is in a position of power in the internship relationship and so has a strong influence over that relationship. One strategy that will help to satisfy the interests of both parties is to develop a good relationship with interns by learning of their objectives and helping them to fulfill them. For supervisors, this will also have the benefit of reducing conflict and unexpected interruptions in work and reduce the likelihood of dissatisfied interns who may view the organization and its work less favorably than they would if they felt more respected and appreciated by recognizing and accommodating their learning objectives.

If a good relationship took more time and effort than the supervisor had available, then this study showed that good work could still be accomplished if the supervisor or other decision maker included three things in their planning. The first was to select a student who most closely resembled an employee who could best do the work, such as a graduate student with work experience, who required less 'hand-holding' and could likely work independently, had good work-related social skills, and could produce quality work. While this may defeat some of the purposes of inexperienced students engaging in internships to learn about the working world, it

would increase the likelihood of accomplishing work. This appeared to be the strategy used by about a third of supervisors or organizations in this study. The second was to have interns conduct work that was easily described and was routine and predictable. The third was to use the correct supervisory strategy based on the power position they used.

Strategies in a strong power position. With the supervisor in a strong power position, theory shows that it is not necessary to establish a good relationship between the supervisor and interns, just an internship with a high degree of structure so interns know what work is to be done and how and when to do it. This may produce good performance and fulfill the objectives of the interns who want to validate their academic preparation and their ability to apply knowledge and skills to internship work, but not the interns who want to know the purpose for their work in the work community, to learn about the work environment, or develop a network and knowledge about future work.

Strategies in a weaker power position. A supervisor, who for expediency or other reasons designates a student or other to be a proxy supervisor, or has a minimal supervisory relationship, is in a weaker power position. In this case, theory shows that good performance is still possible provided the supervisor and interns have a good relationship, or else low structure to provide interns with freedom to work independently if the relationship is less good.

Strategies for forming working relationships. A supervisor whose objectives for the internship includes learning about the intern or helping the intern to fulfill her objectives may want to consider two strategies that are most applicable in virtual internships. The first is to ensure the intern has the same information that a new employee may get during orientation. Even though an intern is a temporary worker, this may be perceived by the intern as respecting them.

At the very least, the supervisor needs to share and sometimes discuss basic information such as the duration of the internship, compensation, relevant policies, the nature of the work, the work schedule, due dates, what successful work looks like, with whom the intern will work in addition to, or in some cases instead of, the supervisor, and logistics about communications since they will be conducted in a virtual environment, including how the supervisor would like to approach questions and resolve any conflicts.

Additional information can include sharing how each party fits into their own work environment such as their principal work and with whom they work and who in the organization is affected by it. Each can share their primary objectives for engaging in the internship. The supervisor can share the nature of the work and what it will be used for and in general by whom. Interns in this study also expressed a need to learn the supervisors' expectations of them early on, who they will work with, and what resources are available to conduct work. Nearly all supervisors in this study shared logistical information, but few shared this type of relational information, even though interns indicated that they would like to have known it.

Interns should be encouraged to share what they would like to get from the internship besides working and what may compete with work in their lives. Supervisors may want to be proactive in asking questions rather than more passively stating that they are open to questions at any time. Supervisors who really want to learn about their interns could ask about the intern's professional aspirations. They could also share their own experiences with learning how to transition from school to the working world. I saw no evidence from any supervisors in this study, even the most work-oriented, that they would not welcome an exchange of this nature.

Since theory shows that individual interns may react differently to the same set of conditions, a useful conversation that might reduce surprises later would be about how

comfortable or practiced interns are with asking questions when they do not know or need

something (passive or active approach to work) and in working independently or being more

dependent on instruction. In addition to this conversation on communication, the technical

aspects of communicating and working in a virtual environment also need to be clear.

Bridging the communications gap. Both supervisors and interns appreciated the

advantages of a virtual internship, specifically the opportunities it provided. For supervisors, this

included a wider range of intern selection and reduction of logistical needs such as providing

interns with a physical workspace or monitoring them at work. For student interns, a virtual

internship expanded opportunities to work anywhere in the world with people from other

cultures and nations. However, there are communications issues that are particularly present in

virtual internships that should be resolved.

School versus work gap. The first issue is that students and employees are from cultures

in which interpersonal interactions are typically different. This does not mean that every student

applying to the internship is not also an experienced employee. Three quarters of college

students work while attending school and a third of these are over 30 years of age and may have

considerable life experience as well (Carnevale, Smith, Melton, & Price, 2015). But others may

be quite inexperienced. Even students with work experience may not have the type of experience

needed by some employers. Inexperienced students may view the supervisor more as a teacher

and expect more interaction than is typical in a work environment.

Student interns may also need to understand that most work environments are not as

predictable as a course schedule or syllabus. Work most often is not modular and requires

problem-solving skills that requires applying all knowledge and skills at work and in life that an

employee can bring to it. Work often requires flexibility to act, react, and change based on what

is happening in the work environment. Work also requires that students learn to be able to work with other people of different demographics. There was no evidence that participants of this study viewed this as an issue, but it is still an issue of which to be aware, particularly male-female, older-younger, supervisor-subordinate, and other relationships.

Culture gap. Gardner's (2013a) report of employer attitudes about international students may play a factor for some organizations and students interning outside their respective nations. Fully a two-thirds of U.S. employers reported that they would not select an international student for an internship at this time due to perceived differences in understanding work culture dynamics, language proficiency, and moral and business-related issues. To me, these reasons appear to more valid for supervisors who are primarily focused on accomplishing work or finding potential employees. However, just as interns reported that a favorite experience was being able to work and learn about the global aspects that are such a part of the working world today and will likely increase for today's students, speaking from the perspective of a long history of rewarding experience working with students and others from other cultures, would encourage supervisors open to including a more relationship-oriented approach to be more open to the opportunity for mutual learning that working with international students provides.

Physical gap. There is also no 'right' type of communications technology to use to bridge the physical gap between supervisors and interns. The choice of technology to mediate communication depends on the type of relationship required and the type of information that interns need to accomplish work with understanding. For some internships, email may suffice. Phoning or video features may be used for more dynamic situations or for a closer relationship. This and other studies have found that mediated communication may lack some of the natural cues of in-person interaction, but it can also connect people more easily. Relationships may be

slower to establish and more difficult to sustain, but people create and maintain relationship, not technology.

Extending the Study's Conclusions

This study was able to contribute significantly to the existing body of knowledge about working relationships in virtual internships. I also learned some significant lessons about myself and relationships with others. By sharing three stories here, I will show how the results of this study may be extended well beyond the scope of virtual internships.

The first story does not involve me, but I recognized striking similarities between it and this study that illustrates that the insights from this study may be applied in many other situations, and I believe readers will also. In 2016, a grandmother texted her grandson to invite him to Thanksgiving dinner, only she sent the text to the wrong phone number. The recipient, a young man of a different race, recognized that the text was not from his grandmother but accepted her invitation. As of the time of this writing, they continue to celebrate Thanksgiving dinner together (Andrew, 2019). Similarities between this story, this study, and other like situations include two people from different communities and cultures encountering each other, who likely had different perceptions of the event and each other, which they overcame by finding a common ground and purpose for relating to each other, and who did not let mediated communication to divide them but rather to connect them.

The second story is about an international not-for-profit organization that promotes free and open science education worldwide (The Science Circle, 2019). Members range from nationally recognized scientists to science enthusiasts and students from nearly all continents. Members on the Board of Directors, from The Netherlands, Australia, and the U.S., have coordinated over the years with well-recognized agencies from around the world and some

research is partly funded by the National Science Foundation (NSF). By disclosure, I am a founding member of the Board and one of the organization's first members back in 2007. With a few exceptions, members have never met each other in-person, even though some have been working together for more than a decade at the time of this publication. Like the previous story, this shares characteristics of people from multiple communities and cultures encountering each other, working through different perceptions of the meaning of the group and its activities and expectations of the other, which they overcame by finding a common ground and purpose for relating to each other, and who did not let mediated communication to divide them but rather to connect them. As an example of this, I was informed by another member of the Board that there was a member conducting research on how scientists viewed The Science Circle but wanted a co-author more fluent in English. I contacted her and discovered she was a young Palestinian woman. Despite several demographic and language differences, we learned to relate as fellow researchers via mediated communication and our peer-reviewed paper was accepted at an international conference later that year (Hayek & Youngblood, 2015).

The third story is personal, but other readers may identify with it. I started my first doctoral program nearly 20 years ago. At that time, I thought that my life experience was enough to see me through. After all, I was entering my fifth decade, having just retired from a military career, which followed the beginnings of a career in research biochemistry that culminated in a peer-reviewed co-authored paper in an international journal. What I did not count on was that a dissertation is more than a research paper. It is a window into different ways of thinking and learning how others have explored our world and it can only be opened with the aid of others. What I did not count on was that the doctoral process prepares participants to become

researchers and that research is not a solitary process. Rather, researchers feed off the ideas of others, who share what they discover publicly and invite professional critique.

What I did not count on was how much relationship played a real part. It is not just that the doctoral process can be a long one, and lonely without the support of fellow students, but it is also an impossible quest without establishing and sustaining a relationship with faculty members first in courses and then on the dissertation committee. The relationship with the committee has similarities to that of supervisor and intern in that I start by approaching the faculty from a different cultural perspective and with a different perception of the dissertation and the roles of committee members which we overcame through communication.

The final thing I did not count on was how the doctoral program would transform not just my intellectual thinking but also my thinking about relationships. In my first doctoral attempt, I failed to form meaningful relationships with faculty or with fellow students and I did not complete my dissertation. Over the course of my second doctoral program, I slowly learned the lessons I have described here, which were confirmed by what I discovered in this research study. Over more than a decade since I discontinued my first doctoral program, I have often thought about writing a letter to the head of the program about how unfair I thought the process was because of how poorly prepared students for the dissertation process. Later, I thought to add the differences between what I understood of that program compared to the entirely different program I experienced this time. Now I realize that my poor experience the first time was a result of both my supervisor and me failing to communicate and subsequently failing to relate. The fact that most of the communication was via technology complicated the relationship, but it was up to us to make it work. My letter now will be worded very differently as an exercise in sharing the results of my research as a peer with the fellow researchers whom I have joined.

Future Research

The managers of the researched internship program and several of the supervisors and student interns in the study expressed an interest in learning its results. I intend to share this report with the program managers so they may decide if and how they would like to pass on this information to supervisors or interns.

The program managers invite all supervisors and interns to respond to an online survey at the end of the internship. The managers informed me that they would share that anonymized results of years of surveys with me. I am interested in gaining access to this database for the purpose of analyzing it to compare findings from this study with those of a much larger data set.

Virtual internship programs exist worldwide. I would be interested in contacting the managers of those programs concerning what they have learned about working relationships in virtual internships and if they are aware of other studies on this subject.

After I learn more about virtual internships from this future research, I or other researchers could develop an intervention that appears to be most likely to result in an improvement of practice, then conduct action research by coordinating with supervisors or interns to implement the intervention, evaluate the results, and reflect on the results to improve the intervention strategy in a subsequent internship.

Final Thoughts

The results of this study revealed that a virtual internship differs from in-person internships in ways that are important to internship-sponsoring organizations and student interns, and that this relatively recent option is a viable alternative provided that both parties understand the differences. The study also revealed that there is no correct way to conduct a virtual internship and no sole way for supervisors and interns to relate, but there are recommended

suggestions for how supervisors and interns should relate that participants showed were important to fulfilling the objectives of both parties.

As with most relationships, honest and proactive communication is the key to success in terms of conducting reliable and effective work, and satisfaction in terms of how both parties feel about the internship experience. Much of the responsibility for effective communication falls to the supervisor because of the nature of the internship and special nature of virtual internships. The supervisor holds a position of formal power in the internship team and work community, but also holds the power of knowledge about the nature of the work, the work environment, and access to resources. This is particularly true for virtual internships because interns are essentially 'blind' what they want to learn because they cannot see or experience the work environment firsthand, although this may be ameliorated to some extent if there are other interns or others in the organization to whom the intern can turn.

An internship may also represent an important bridge between school and full-time work for student interns, which may make it less likely that a student approach a supervisor proactively for fear of seeming to be ignorant about things the student cannot be expected to know. Students may respond to these circumstances in different ways because of their individual nature as followers. A supervisor who wants to increase the likelihood of that the internship is successful will therefore be proactive in providing student interns with at least the same information that they would in-person interns, in finding ways to acknowledge and work with interns individually if possible, and to learn the objectives that each student intern has. The study showed that these objectives are frequently to validate academic preparation in doing real-world work, learn how the work will be used in the real world, and learning how to further their career objectives. For most student intern participants, this constituted the respect and appreciation that

they sought, which gave them a more favorable view of the type of work they did and the organization in for which they interned.

Communication mediated via technology may slow the process of understanding work and the work environment, and complicate relationship development, but it does not impede it. Relationships are developed by people, not technology. This study showed that while student intern participants wanted to learn, some supervisors circumvented the purpose of selecting students by viewing them as employees working for free. This was an acceptable assumption when students understood this and were primarily interested in work experience. This did not work as well when students had other objectives. Other supervisors realized that interns were students who wanted to learn and were able to accomplish the work they needed while also acknowledging the objectives of their interns. Honest and proactive communication was the key to good performance, a satisfying experience, and a satisfying return on the investment and risk that both parties undertook by participating in a virtual internship.

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Appendices

Appendix A: Adopted Survey Instrument

The study's survey is based on a survey used by the North Dakota State Government until July 2017, and was still accessible at https://www.surveymonkey.com/r/Internship_Student_Feedback through at least January 2020:

Intern Feedback

Please take a moment to complete this survey about your internship experience in North Dakota State Government. Your answers will help us to grow the internship program, providing a valuable experience for both the student and the agency.

* **1. What agency or department did you work in?**

* **2. Was the work a valuable experience in relation to your academic studies?**

○ Yes

○ No

Comments:

Survey questions continue:

3. Were you given responsibilities that enabled you to apply the knowledge and skills you are learning through college work?
4. Were you allowed to take the initiative to work beyond the basic requirements of the job? *Yes/No __comments__*
5. Did the organization and/or supervisor work with you regularly? Were they available to answer questions when necessary? *Yes/No __comments__*
6. Briefly note new skills, techniques and knowledge gained in this position.
7. What was your favorite experience of the internship?
8. What was your least favorite experience of the internship?
9. In there anything that was not covered that should have been covered in the internship program?
10. Do you think your academic program adequately prepared you for this internship?
11. Would you recommend this internship to other students?

The survey's author gave me permission to use the wording in the survey and to modify the wording as needed for this study:

_____, ___ ___ _____@nd.gov Wed 21-Feb, 16:11

Hello Phil,
Yes, you have the State of North Dakota's permission to use the wording in the survey. You may also make wording changes to the survey as you see fit for your research.
Please let me know if you need anything further.
Thank you,
_____ _____, ___ Human Resource Management Services
[Address] | Bismarck, ND 58505-[Zip Code]

Appendix B: Survey Instruments for Interns and Supervisors

I published the following survey to SurveyMonkey and shared the link with interns and supervisors in the survey invitation. Slight differences in wording on the intern survey and supervisor survey are listed in parallel below for easier comparison.

Student *Intern* Survey / Intern *Supervisor* Survey

My name is Phil Youngblood. I was a [program] intern who now teaches an internship course. You are invited to participate in a research study about what defines a meaningful professional relationship in a virtual internship to aid interns and their supervisors, internship developers, and potentially my students, to make informed decisions about, prepare for, and participate in virtual internships.

This survey should take 10-15 minutes to complete. In it I will ask you about how your internship related to your studies, the nature of your internship work, your relationship with your supervisor, and your internship experience.

At its end, I will ask if you will consent to be interviewed about these and related questions. If you agree, I will ask you for contact information, to describe your internship work and your relationship with your supervisor, to mark ways you and your supervisor differ significantly (if applicable), and to describe any previous internship experience you have had (if applicable).

Your responses will be collected by SurveyMonkey (https://www.surveymonkey.com/) in a spreadsheet I will download, encrypt, and store on a password-protected hard drive that I control. I am not correlating intern responses with supervisor's and I will not divulge your responses to your supervisor, or publish any information that would identify you personally.

Your participation in the survey is completely voluntary. You may decline to answer any question and you may quit at any time without penalty. You will receive no direct benefit from me, but your participation will contribute to helping to learn how to make future professional relationships between interns and supervisors more meaningful. You may experience very minimal risk from taking the survey due to possible personal conflict resulting from describing interactions with supervisors or interns.

If you have any questions about the study, please contact me at youngblo@uiwtx.edu. For questions about your rights as a participant, to discuss problems, complaints, or concerns, or to obtain other information or offer inputs, contact the UIW Institutional Review Board (IRB) at [Phone Number]. This research and tools are approved by the UIW IRB (#18-03-008).

1. I consent to participate in this study.

___ Yes   ___ No

Respondents who consented to participate were directed to the next section with questions.

2. *Interns*: How well did your academic program prepare you for your internship?
   Supervisors: How well did their academic program prepare your interns for their internship?

3. *Interns*: To what extent were you given tasks or responsibilities that enabled you to apply what you learned in your academic program?
   Supervisors: To what extent were your interns given tasks or responsibilities that enabled them to apply what they learned in their academic program(s)?

4. *Interns*: How much opportunity did you have to work outside the stated requirements of your internship?
   Supervisors: How much opportunity did your interns have to work outside the stated requirements of their internship?

5. *Interns*: What kinds of new skills, techniques, or knowledge did you learn in your internship?
   Supervisors: What kinds of new skills, techniques, or knowledge did your interns learn in their internship?

Next page…

6. *Interns*: Describe your relationship with your supervisor.
   Supervisors: Describe your relationship with your intern(s).

7. *Interns*: To what degree did you work with your supervisor to accomplish your work?
   Supervisors: To what degree did you work with your interns to accomplish their work?

8. *Interns*: How satisfied were you with how your supervisor answered questions you had?
   Supervisors: How well were you able to answer questions your interns had?

Next page…

9. What was your favorite experience of the internship?

10. What was your least favorite experience of the internship?

11. What would you have wanted to know before beginning your internship?

12. Is there anything that should have been covered in the internship that was not?

13. *Interns*: How well would recommend this internship to other students?
    Supervisors: How well would recommend this internship with other students?

Next page…

_____

I was a virtual intern this year and would really like to hear more about your experience.

Interns: I particularly want to learn more about your professional relationship with your supervisor.
Supervisors: I particularly want to learn more about your professional relationship with your intern(s).

Together we could help student interns and supervisors in years to come to have a more meaningful experience.

14. Would you please consent to being interviewed about your experience?

Yes, I will help _____   No, thank you _____

Respondents who consented to be interviewed were taken to the following page:

15. Contact information: _____

16. *Interns*: Describe your primary work during your __virtual__ internship:
Supervisors: Describe the primary work of the __virtual__ internship:

17. Describe any previous internship experiences:

18. *Interns*: In what ways were you and your supervisor significantly different?
Supervisors: In what ways were you and your intern(s) significantly different?

Gender _____   Age _____   Nationality _____   Culture/ethnicity _____
Other _____

Respondents who choose not to be interviewed are taken to the following page:

Thank you for responding to my survey!

Appendix C: Survey Invitation

I had access to the sponsoring organization's social media site for interns, so I asked for and received permission from organization managers and their social media administrator to post the following invitation to student interns:

Survey Invitation for Student Interns

Hi! My name is Phil Youngblood. I am a current ___*virtual intern*___ who also teaches an internship course. You are invited to participate in a research study about what defines a meaningful professional relationship in a virtual internship. Please take 10-15 minutes to provide feedback about how your internship related to your studies, the nature of your internship work, your relationship with your supervisor, and your internship experience. At the end, I will ask if you will consent to being interviewed about these and related questions. If you would like to help me with my research, and to help internship developers, interns, and supervisors to learn how to relate better with each other, please complete the survey at ___*web link*___. The survey will be available until ___*two weeks after posting*___.

I did not have access to the sponsoring organization's intern supervisors, so I asked Program Directors to send the following invitation to internship supervisors:

Survey Invitation for Intern Supervisors

Hi! My name is Phil Youngblood. I am a current ___*virtual intern*___ who also teaches an internship course. You are invited to participate in a research study about what defines a meaningful professional relationship in a virtual internship. Please take 10-15 minutes to provide feedback about how the internship related to the intern's studies, the nature of the internship work, your relationship with your intern(s), and your internship experience. At the end, I will ask if you will consent to being interviewed about these and related questions. If you would like to help me with my research, and to help internship developers, interns, and supervisors to learn how to relate better with each other, please complete the survey at ___*web link*___. The survey will be available until ___*two weeks after posting*___.

Appendix D: Interview Protocol

The interview protocol consisted of the following topics.

How was your virtual internship this year?

Why did you participate in this internship?

Describe the professional relationship you had with intern(s)/supervisor/others.

How did you develop and sustain the relationship?

What kinds of communications did you have with your intern(s)/supervisor?

What do you think helped or hindered your relationship with your intern/supervisor?

Describe an ideal professional relationship between intern/supervisor.

How satisfied were you with the internship? Development

Briefly describe, in general terms, the type of work you/your intern did for the internship.

How prepared were you for this internship?

What would you like to have known before starting the internship?

What else would you share to help others understand your experience or virtual internships?

- Individualized question sets were constructed for each interviewee. In addition to the common set of questions, participants were asked additional questions derived from survey responses and analysis, including questions directed towards all supervisors or all interns, plus questions to clarify individual survey responses.

Individualized question set for [Supervisor F]:

How was your virtual internship this year?

Why did you participate in this internship?

    --- *Why did you do this internship when you already had prior internships?*
    --- *What did you expect of the internship? Were your expectations met?*
    --- [All supervisors]: *How was supervising an intern different from supervising an employee?*
    --- NOTE: [Supervisor F] mentioned "years of [virtual internship] engagement" on survey

Describe the professional relationship you had with intern(s)/supervisor/others.
    --- *Did you work with more than one intern at a time? Were there other supervisors? Did the interns work with others besides you (and other interns or others)?*
    --- *How would you describe the type of relationship? Why?* [e.g., closely supervised, collaborative, independent? Was your relationship teacher, facilitator, or supervisor?]
       --- *Please describe your intern's work ethic or attitude towards the internship.*
       --- *How did your relationship with your super(s) differ from that of prior internships?*

How did you develop and sustain the relationship?
- --- *How did you develop <u>trust</u> between you and your supervisor(s), or did you need it?*
- --- *How would you describe the <u>quality</u> of your relationship?* [e.g., functional, supportive, not close?]
- --- *How did you <u>conclude</u> your relationship with your supervisors(s)?*

What kinds of communications did you have with your intern(s)/supervisor?
- --- *What virtual communication <u>technologies</u> did you use?* [e.g., email, call/Skype, online, in person?]
- --- *How well did <u>virtual</u> communication <u>work</u> for you?*
- --- *Did the <u>way</u> you interacted or communicated affect your professional relationship?*
- --- *Did you meet your intern <u>in person</u>? How did this <u>affect</u> your professional relationship?*
- --- *How frequently did you <u>communicate</u> with your intern(s)?* [e.g., weekly, as needed, as scheduled]
- --- *Did the type or frequency of communication <u>change</u> over the internship?*
- --- [All supervisors]: *How did interns know when you were <u>available</u>?*
- --- [All supervisors]: *Did you provide <u>feedback</u> on work/performance* [e.g., time mgt., planning, writing]
- --- [All supervisors]: *Did your intern ask <u>questions</u>? Were you able to <u>answer</u>? How did you <u>know</u>?*
  [for those with multiple interns] *Did you address questions <u>individually</u> or as a <u>group</u>?*
- --- [All supervisors]: *<u>To whom or where did you refer</u> interns if you were not able to answer?*

What do you think helped or hindered your relationship with your intern/supervisor?
- --- *Were there <u>differences</u> between you and your supervisor(s)?* [e.g., culture, gender, age]
- --- *How did you <u>discover</u> there were differences?*

Describe an ideal professional relationship between intern/supervisor.

How satisfied were you with the internship?
- --- *What did <u>you</u> <u>get out</u> of the internship for the <u>effort</u> you <u>put in</u>?*
- --- *What did you <u>learn</u> during the internship?*
- --- *What were your <u>favorite</u> and <u>least favorite</u> experiences with this internship?*
- --- [Supervisor F] *Why are you a champion of the* [Internship Program] *internship at your agency?*

Briefly describe, in general terms, the type of work you/your intern did for the internship.
- --- *What kind of <u>flexibility</u> did you have in internship activities?* [e.g., working outside of specified tasks]

How prepared were you for this internship?
- --- *Were your internship experiences <u>traditional or virtual</u>? Was there any difference?*
- --- *How did this internship <u>compare</u> with prior experiences?*
- --- *Have there been <u>differences</u> or <u>trends</u> over the years?*
- --- *How <u>prepared</u> were your <u>supervisor</u>(s)?*
- --- *How did your <u>work</u> experience prepare you to be a supervisor?*
- --- *How did your <u>academic</u> <u>experience</u> prepare you?* [e.g., subject? teamwork? history? tech? psych?]
- --- [All supervisors]: *Have you been an <u>intern</u>? How did this influence your <u>supervisor</u> experience?*
- --- [Supervisor F] *Were your "years of [virtual internship] engagement" as <u>intern</u> or <u>supervisor</u>?*
- --- [Supervisor F] *Describe how your intern was "not at all prepared" in needed soft skills?*
- --- [Supervisor F] *You wrote about "technology skills" or "technical skills" – please clarify.*
- --- [Supervisor F] *You mentioned that your intern(s) "refined their soft skills." Explain.*
- --- [Supervisor F] *You wrote this was "something they wouldn't have done… in academic work."*
- --- [Supervisor F] *What would you have done if your intern(s) did not achieve a transformation?*

What would you like to have known before starting the internship?
- --- *What kind of professional relationship would you <u>like to have had</u> with your intern(s)?*
- --- *How would you <u>change things</u> if you did another <u>virtual internship</u>?*

What else would you share to help others understand your experience or virtual internships in general?

Individualized question set for Intern K:

How was your virtual internship this year?

Why did you participate in this internship?
   --- *Why did you do <u>this</u> internship when you already had <u>prior</u> internships?*
   --- *What did you <u>expect</u> of the internship? Were your expectations <u>met</u>?*
   --- [All interns]: *Did you get to <u>use knowledge or skills you learned</u> in school?*

Describe the professional relationship you had with intern(s)/supervisor/others.
   --- *Did you work with <u>more than one intern</u> at a time? Were there other supervisors? Did the interns <u>work with others besides you</u> (and other interns or others)?*
   --- *How would you describe the <u>type</u> of relationship? Why?* [e.g., closely supervised, collaborative, independent? Was your relationship teacher, facilitator, or supervisor?]
   --- *Please describe your super's <u>attitude</u> towards the internship.*
   --- *How did your relationship with your super(s) differ from that of <u>prior</u> internships?*
   --- [All Interns who supervised or were supervised by other interns]: *Did you work <u>independently</u>, follow a <u>schedule</u>, or get <u>direction</u> from your supervisor?*
   --- [Intern K] Question C3: *Please <u>compare</u> your <u>first and second</u> [Internship Program] internships. What did you mean by your supervisor being "incredibly supportive?"*
   --- [Intern K] Question C4: *Was this <u>expected</u> or <u>desirable</u>?*

How did you develop and sustain the relationship?
   --- *How did you develop <u>trust</u> between you and your supervisor(s), or did you need it?*
   --- *How would you describe the <u>quality</u> of your relationship?* [e.g., functional, supportive, not close?]
   --- *How did you <u>conclude</u> your relationship with your supervisors(s)?*

What kinds of communications did you have with your intern(s)/supervisor?
   --- *What virtual communication <u>technologies</u> did you use?* [e.g., email, call/Skype, online, in person?]
   --- *How well did <u>virtual</u> communication <u>work</u> for you?*
   --- *Did the <u>way</u> you interacted or communicated affect your professional relationship?*
   --- *Did you meet your intern <u>in person</u>? How did this <u>affect</u> your professional relationship?*
   --- *How frequently did you <u>communicate</u> with your intern(s)?* [e.g., weekly, as needed, as scheduled]
   --- *Did the type or frequency of communication <u>change</u> over the internship?*
   --- [Intern K] Question Q4: *With whom (or what roles) did you <u>network when you visited your supervisor's office</u>?*

What do you think helped or hindered your relationship with your intern/supervisor?
   --- *Were there <u>differences</u> between you and your supervisor(s)?* [e.g., culture, gender, age]
   --- *How did you <u>discover</u> there were differences?*

Describe an ideal professional relationship between intern/supervisor.

How satisfied were you with the internship?
- --- *What did you get out of the internship for the effort you put in?*
- --- *What did you learn during the internship?*
- --- *What were your favorite and least favorite experiences with this internship?*
- --- [All Interns]: *Did you expect to get paid? Would you like to have been paid?*

Briefly describe, in general terms, the type of work you/your intern did for the internship.
- --- *What kind of flexibility did you have in internship activities?* [e.g., working outside of specified tasks]
- --- [Intern K] Question C4: *What kind of assignments did you have? Was there a schedule?*
- --- [Intern K] Question Q5: *Did you learn more about public speaking in-person or online?*
- --- [Intern K] Question Q9: *How did the event you planned and hosted "wrap up everything" you had learned during your internship and "connecting with the local people" you had met? Did you meet local people in person? Did you plan and host this event in person?*
- --- [Intern K] Question Q10: *Why were you asked to perform basic data entry in your second virtual internship?*
- --- [Intern K] Question Q13: *What did you mean by loving the flexibility of the virtual internship?*

How prepared were you for this internship?
- --- *Were your internship experiences traditional or virtual? Was there any difference?*
- --- *How did this internship compare with prior experiences?*
- --- *Have there been differences or trends over the years?*
- --- *How prepared were your supervisor(s)?*
- --- *How did your work experience prepare you to be a supervisor?*
- --- *How did your academic experience prepare you?* [e.g., subject? teamwork? history? tech? psych?]
- --- [All interns]: *How did your prior experience as an intern affect your internship this time?*

What would you like to have known before starting the internship?
- --- *What kind of professional relationship would you like to have had with your intern(s)?*
- --- *How would you change things if you did another virtual internship?*
- --- [Intern K] Question Q11: *How did you discover you could have worked in person in DC?*
- --- [Intern K] Question Q12: *What kind of career information would you like to have had?*

What else would you share to help others understand your experience or virtual internships in general?

Appendix E: Informed Consent Letter for Interviewees

Interview Informed Consent Letter

Exploring Professional Relationships Between Interns and Supervisors in Virtual Internships

My name is Phil Youngblood. I am a current [Internship Program] intern who also teaches an internship course. You are invited to participate in a research study about what defines a meaningful professional relationship in a virtual internship to aid interns and their supervisors, internship developers, and potentially my students, to make informed decisions about, prepare for, and participate in virtual internships.

You have been selected to be interviewed because I am seeking to talk to virtual internship participants who expressed a range of responses to survey questions. If you agree to be interviewed, I will ask you to schedule a time and interview you using Zoom (www.zoom.us), a free video and audio conferencing platform.

During the interview that should not take more than an hour, I will ask questions about your responses to some of the survey questions and may ask follow-up questions to learn more about your professional relationship with your [Internship Program] supervisor(s). ← *wording for interns* / intern(s). ← *wording for supervisors*

I will record your interview as either a video or audio file as you choose, encrypt it, and store it on a password-protected hard drive that I control. I will transcribe the interview and interpret the meaning of my observations of your oral or non-verbal communication cues. I will ask you if you would like to review my interpretations for accuracy. I will also try to contact you if I have significant questions about what you meant in parts of the interview.

Your participation in the survey is completely voluntary. You may decline to answer any question and you may quit at any time without penalty. You will receive no direct benefit from me, but your participation will contribute to helping to learn how to make future professional relationships between interns and supervisors more meaningful. You may experience very minimal risk from taking the survey due to possible personal conflict resulting from describing interactions with supervisors or interns.

If you have any questions about the study, please contact me at [email address]. For questions about your rights as a participant or to discuss problems, complaints, or concerns, or to obtain information or offer input, contact the UIW Institutional Review Board (IRB) at [phone number]. This research and survey/interview tools are approved by the UIW IRB (#18-03-008).

If you agree to be interviewed, please confirm this by returning this form to me by email with your signature on it. I will print your form and store it in a locked drawer in my office. You may keep a copy of it.