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Preventing the Onset of PhD Attrition: A Self-Determination Theory Perspective

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Abstract

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The purpose of this study is to explore the PhD experience through a self-determination theory lens, focusing on former PhD students from the field of education. Specifically, this study examines how and why the characteristics of the PhD experience such as the *structure* of PhD programs (e.g., coursework requirements, degree requirements, faculty advisor selection process, etc.) help or do not help students to feel competence, autonomy, and relatedness while they were students. This study also probes the degree to which *graduate faculty advisors* help PhD students to feel competence, autonomous, and relatedness during their experience. This study also investigates if participants report having any *prior exposure* to PhD programs before entering their respective graduate programs (e.g., prior interactions with graduate faculty members, students, or staff, orientation to the culture and structure of programs, having attended any prior academic conferences, taken any graduate level courses, etc.), and the extent to which this prior exposure may have helped students to feel competence, autonomy, and relatedness during their PhD experience. Overall, this study proposes to take a deeper look into the experience of being a PhD student, and specifically

examines how certain elements of the experience motivate or discourage students from successfully completing their degree.

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DEDICATION

This dissertation is dedicated to all future PhD students. May your journey be positive, successful, and filled with life-changing experiences that will influence your lives forever.

CHAPTER 1

STATEMENT OF THE PROBLEM

Opening Remarks

What has been regarded as a “scandal” and one of the most devastating and “central issues in doctoral education today” (Smallwood, 2004, p. A11) is the approximate 50 percent attrition rate cutting across PhD programs throughout the United States. It is unarguable that the experience of being a doctoral student can be incredibly stressful and difficult (e.g., Lovitts, 2001). At the same time, certain student populations such as underrepresented minorities as well as women have shown to have an exceptionally difficult experience compared to their peers, leading to a higher likelihood of withdrawing from their PhD programs (Kerlin, 1993).

For example, Kerlin (1993) found that doctoral students who are of Hispanic, African-American, or Native-American origin often encounter a very hostile experience during their PhD experience. And, this is especially true at predominately white universities (Kerlin). Nettles (1990) discovered that Black students were of the lowest economic strata, yet they received the fewest opportunities for funding such as teaching and research assistantships. Many women doctoral students also encounter substantial doubt from faculty members regarding their ability to successfully complete their PhD (Hall & Sandler, 1982). Hall and Sandler note that male faculty gave preferential treatment to male doctoral students, especially when it came to funding decisions such as teaching and research assistantships. Women doctoral students also have been subject to sexual harassment or other negative behavior by graduate faculty or from other graduate students (Morris, 1989).

In addition to the specific groups of doctoral students who often face a very challenging and discriminating experience, there are several other factors that PhD students may encounter that have shown to increase their likelihood of withdrawing from their programs. For example, doctoral attrition has been linked to accessibility to faculty, research topics, relationships with significant others, demands from friends, time constraints, family responsibilities, issues, and or challenges (Lovitts, 2001). Many organizational factors have also shown to be linked to doctoral attrition, including the student selection process, program structure, apathetic and or non-caring graduate advisors or mentors, as well as a lack of graduate program flexibility (Boes, Ullery, Millner, & Cobia, 1999; Gumport & Snyderman, 2002; Lipschultz, 1993; Lovitts).

The most significant reasons why PhD students withdraw from their programs are directly linked to the feelings of stress and social isolation (e.g., Lovitts, 2001). Generally speaking, students are not being provided with a sufficient level of social support throughout their doctoral experience (Lovitts). Social networks can be defined as people within an individual's environment who can influence the perceptions of one's environment (Kelly, 2005). These people can include family, friends, colleagues, peers, and mentors (Kelly). Social support can encompass emotional support, professional support, as well as practical support (Kelly).

Generally speaking, PhD students can also encounter a substantial amount of stress during their PhD experience (Lovitts, 2001). This stress can stem from an array of factors such as academic demands or coursework expectations, fear of failure, as well as non-academic demands such as funding as well as family obligations (Lovitts). Often times,

social support can significantly alleviate stress (Berkman, 1995). However, for PhD students, many are not provided with enough social support throughout their program.

In addition to feeling stressed and socially isolated, many PhD students have misconceptions about their doctoral programs as well as their career opportunities upon graduating. For example:

- Many applicants apply to PhD programs with a misunderstanding of the culture, structure, and processes of their respective programs (e.g., Lovitts, 2001; Golde & Dore, 2001).
- Many applicants appear to believe that entering a PhD program will be similar to their undergraduate experience (e.g., Lovitts; Golde & Dore).
- Countless applicants believe that the only option available to them upon earning their degree is to assume a tenure-track faculty position (e.g., Lovitts; Golde & Dore).

For many PhD applicants, these misconceptions about a doctoral program stem from a lack of exposure to the culture, structure, and processes of graduate programs (Lovitts, 2001). This lack of exposure may create a sense of “culture shock” once they enter. Culture shock can be defined as:

a sense of confusion and uncertainty sometimes with feelings of anxiety that may affect people exposed to an alien culture or environment without adequate preparation (Merriam-Webster, 2003).

This sense of *PhD culture shock* can create a substantial amount of stress for the student who may have had very little to no exposure to a PhD program (Lovitts, 2001). In this context, culture shock can produce significant stress on the student that, in turn, may

increase the chances that he or she will withdraw from the program (Lovitts). Even though PhD students are among the most academically talented individuals in the world (Ali & Kohun, 2006; Gilliam & Kitronis, 2006), numerous fall victim to attrition each year (e.g., Lovitts; Ali & Kohun).

The Significance of the Problem

The PhD attrition rate is extremely costly to the student. The emotional impact of leaving a doctoral program can be devastating; research has shown that leaving a PhD program can have a negative personal impact on students. (Golde, 1996; Hinchey & Kimmel, 2000; Lovitts, 2001; Sternberg, 1981). It is tough on the non-completer who must explain why he or she did not earn the degree (Sternberg).

Many of these non-completers are students who never experienced much academic failure (Lovitts, 2001). Generally speaking, PhD students are among the most academically talented individuals in the world. They are known for being honor society members, academic scholarship recipients, and graduating with *summa cum laude* honors (Lovitts). Overall, the impact of withdrawing from their respective PhD programs can be a serious setback for them (Golde, 1996; Hinchey & Kimmel, 2000; Lovitts, 2001; Sternberg, 1981).

For many non-completers, the PhD is the academic credential that would have allowed them to pursue their most noble career and professional goals, such as scholars, researchers, university faculty, etc. Without this degree, many of these non-completers may have limited career potential in their respective industries and may need to rebuild their lives (Golde & Dore, 2001; Lovitts, 2001). Lovitts notes that students who withdraw may need to pursue a new career and develop a new professional image and lifestyle that is entirely

different from what they had previously planned. Like numerous students, these non-completers may have made significant sacrifices to attend their PhD programs, such as taking on huge debt and moving away from their families, friends, and or other supportive networks (Grasso, Barry, & Valentine, 2009; Lovitts).

PhD attrition also wastes university resources, primarily human and financial resources (Kerlin, 1995; Smallwood, 2004; Lovitts, 2001). One study conducted at the University of Notre Dame indicated that if attrition went down by 10 percent, the University of Notre Dame would save \$1 million annually in stipends alone (Smallwood, 2004).

In addition, at the doctoral level, coursework is generally expensive because of the higher teacher to student ratio compared to undergraduate courses (Grasso, Barry, & Valentine, 2007). Many doctoral students will require one-on-one research supervision by a faculty supervisor, which translates into a significant amount of time and energy that faculty members spend towards their students as well as their respective research project(s) (Grasso, Barry, & Valentine). Bowen & Rudenstein (1992) note that the cost of attrition increases the longer a student is in his or her respective PhD program.

Graduate faculty members are also often dependent on their students to take a lead role in carrying out research and other projects, and this is true in any number of disciplines (e.g., medicine, education, history, social sciences, etc). When students leave, the research and other projects that faculty and their students were working on may be put on the backburner, might require the faculty to expend substantial time retraining a new student, or the project or research might even be terminated.

Individuals who earn a PhD are also extremely advantageous to society. Not only can individuals with this degree be found teaching in college classrooms and or conducting

groundbreaking research in any number of disciplines, individuals who have earned a PhD are extremely beneficial to society in countless other ways. These individuals may use their knowledge and expertise to serve as congressional representatives, directors of non-profit organizations, directors of historic perseveration associations, or serve as CEO's in any number of companies (Lovitts, 2001). When students withdraw from their programs, society loses out on their expertise in ways that seriously impedes their productive manner as highly trained and educated individuals.

Three Primary Perspectives into PhD Attrition

Many scholars, notably, Barbara Lovitts, Chris Golde, Timothy Dore, and Cary Nelson have sought to explain what is occurring within the walls of academia that is leading to such a high PhD attrition rate. Perhaps the most robust explanation is offered by Barbara Lovitts' (2001) book, *Leaving the Ivory Tower*. Lovitts offers three overarching perspectives that seem to be leading to such a high PhD attrition rate. These reasons include:

- The lack of opportunities for doctoral students to integrate into their PhD programs.
- The organizational structure and culture of graduate education.
- The perceptions of graduate faculty towards PhD students.

Each of these perspectives will now be further explained, elaborating where possible with supporting literature.

Perspective # 1: The Lack of Opportunities for Integration

The first primary perspective regarding the high PhD attrition rate can be attributed to the lack of opportunities for students to integrate into their programs. This issue, in fact,

stems from prior to the applicants' entrance into a doctoral program. Many undergraduate students receive little to no exposure to information about graduate education during their time as undergraduates, and consequently, they can develop inaccurate and idealistic expectations about their life as a graduate student (Baird, 1976; Green, 1991). Graduate programs also operate under the assumption that applicants have received satisfactory preparation towards the norms, values, and expectations of graduate study prior to being accepted into their respective graduate program (Bucher, Stelling, & Dommermuth, 1969). This assumption leads to a mismatch between the perceived preparation to enter a graduate program with their actual preparation to enter a PhD program (Bucher, Stelling, & Dommermuth).

In a large study funded by the Pew Charitable Trusts, Golde & Dore (2001) found that PhD students did not understand the nature of earning a PhD. They found that countless students entered their doctoral programs without having a clarity of purpose, while lacking an understanding of the time, money, and perseverance needed to successfully complete their program (Golde & Dore). Golde & Dore also discovered that students had a limited understanding of their career options upon graduation. Lovitts (2001) discovered that what students hoped and expected to learn from their PhD experience, compared with what they actually learned, were significantly different outcomes. One might conclude that universities need to strengthen their efforts aimed at integrating prospective or new graduate students. Such integration efforts might have the goal of increasing the exposure that students receive prior to entering graduate school so as to provide them with a mental framework of the culture, structure, processes, and overall nature of graduate school life.

Given the above, there is a strong need to increase the quantity and quality of efforts for PhD students to successfully integrate into their doctoral programs. The integration efforts for students could somewhat parallel the integration efforts that often occur for high school or middle school students. For example, depending on their resources and the structural opportunities that are available to them, middle school and high school students may preview a local college or university on several different occasions throughout their pre-teen and teenage years. While in these pre-orientations to college life, students may work on science or math projects and or take a condensed college level course.

At Washington State University, for example, middle school and high school students can enroll in Cougar Quest, a two-week camp that is designed to begin the socialization process into college life (Washington State University: Cougar Quest, 2013). Students are taught by professors and are exposed to several elements of college life. At Harvard University, high school sophomores, juniors, and seniors can enroll in a summer program, the Cambridge Harvard Summer Academy, in which students generally take eight credits of coursework over a seven-week period (Harvard, 2013). Camps like Cougar Quest and the Cambridge Harvard Summer Academy are attempts to increase students' readiness to enter college (e.g., Harkness, Johnson, Hensley, & Stallworth, 2010). Overall, the exposure that students receive prior to entering college can start to provide them with a mental framework of the culture, structure, processes, and overall nature of college life.

There may need to be more programmatic efforts like Cougar Quest and the Cambridge Harvard Summer Academy tailored to prospective PhD applicants. These programs could help expose prospective applicants to the culture, structures, processes, and overall nature of the PhD experience. As has been previously discussed, countless applicants

have not received a sufficient amount of exposure to their respective program, and consequently, they do not have a clear understanding of the culture, structure, and processes of their respective PhD programs.

One major issue that can stem from a lack of exposure to PhD programs is that many students enter into their programs without having a clear sense of the career options available to them upon graduating (Golde & Dore, 2001). Countless students also enter doctoral programs expecting to take a tenure-track faculty position at a college or university upon earning their degree (Golde & Dore). However, per annual basis, there are far too few faculty positions available to match the number of graduates who aspire to a tenure-track faculty position (Golde & Dore; Hamilton, 2003).

Even though numerous PhD applicants have had very little exposure to what it means to be a doctoral student, and this minimal exposure can lead to some of the attrition rate, approximately 50 percent of PhD students do cross the finish line each year. Thus, it is important to learn and inquire about the experiences of the students who did graduate. For example, do PhD graduates have more exposure to both the academic and non-academic characteristics of PhD life, prior to entering their program? Did the structures of their undergraduate institutions provide them with more of an opportunity to be exposed to PhD life?

Kierniesky (1984) found that private liberal arts colleges might do a more sufficient job of preparing undergraduates to enter a PhD program because of a strong focus on helping students complete out-of-class research projects. At Kalamazoo College, for example, every college senior is required to conduct an individualized research project that is sponsored by a faculty advisor (*Leila, personal communication, Jan. 13th, 2013). In fact,

one of the primary goals from this individual research project is to acquaint students with graduate study (*Leila, personal communication, Jan. 13th, 2013).

McDonough (1997) looked at the structural factors at the high school level that enable and or constrain students in their undergraduate college choice. McDonough examined how social class and high schools structure opportunity for seniors entering as undergraduates. McDonough discovered that students' cultural capital becomes a function of entitlement; students feel that they are entitled to a specific kind of collegiate education based on their family characteristics and class status. Students essentially frame their college choices around very specific kinds of institutions (McDonough).

McDonough (1997) also found evidence to support the notion that the structure of high schools can have a substantial impact on the perceived preparedness of high school graduates' readiness to enter college. Some of these structural factors include: (a) the amount of college coaching faculty and staff provided for students, (b) whether students' high schools sponsored trips to local colleges and universities, and (c) the expectations schools had for high school graduates to enter college.

Similar to how high schools structure opportunities for preparing high school students to enter college, the structures of particular kinds of postsecondary institutions might also influence the perceived preparedness for undergraduates to enter graduate school. Institutions that contain the structural elements to help undergraduates become prepared to enter a graduate program, and specifically a PhD program, may help reduce the primary factors that lead to PhD attrition, feelings of stress and social isolation (e.g., Lovitts, 2001).

Perspective # 2: The Organizational Structure and Culture of Graduate Education

Organizational structure. The organizational structure of PhD programs can appear to propel students to successfully complete their degree. The structure of a PhD program contains several elements including departmental objectives, faculty hierarchy, budgets, course requirements and course sequences (Gumport & Snyderman, 2002). The structure of programs can also include the process of selecting a faculty advisor, degree requirements such as coursework, comprehensive exams, and the dissertation (Lovitts, 2001).

However, sometimes the structure of PhD programs have been shown to create a significant amount of confusion and frustration for students, especially when the program has a loosely coupled structure (Lipschutz, 1993). In these situations, the structure of programs can be poorly organized and fail to address students' concerns and needs, leading to stress and confusion for the student (Smith, Maroney, Abel, et. al., 2006).

For example, often times PhD programs do not have a cohort model. Specifically, students follow their own course of study, independent of their peers. Students take their own courses and, with the help of their faculty advisors, develop their own paths to completing their degrees (Lovitts, 2001). In several cases, however, students may not have the best relationship with their faculty advisors, and or may not have mentors and peers who can effectively advise them into the most appropriate course of study. This lack of guidance can lead to frustration, confusion, and disorientation for these PhD students (e.g., Lovitts).

The stress that stems from the structure of PhD programs is also generally linked to students' decisions to leave their programs, often within the first or second semester (Smith, Maroney, Abel, et. al., 2006). These students report feeling helpless and isolated from their studies (Smith, Maroney, Abel, et. al.).

On the other hand, sometimes PhD programs can be too structured (Lipschutz, 1993; Schellekens, Paas, & Van Merriënboer, 2003). In these cases, students may feel that they do not have much autonomy in their program and must follow the traditional route to keep the organization running efficiently and effectively (Lovitts, 2001). Traditional programs often contain many strict guidelines that every student must follow and may contain substantial hurdles that students must “jump over” to successfully progress and earn their degree (Smith, Maroney, Abel, et. al., 2006). Often, students with other personal and or professional demands such as supporting a family or working a full-time job while earning their degree, may simply feel overloaded and leave their program (Smith, Maroney, Abel, et. al.).

Organizational culture. The organizational culture of PhD programs also has been shown to have a substantial impact on students’ decisions to stay or leave their programs (Lovitts, 2001). The organizational culture of doctoral programs can be very socially isolating; one of the most significant factors that leads to attrition (Lovitts). For example, in many programs, students embark on their own individualized path, where opportunities for integration and collaboration are low, which in turn, can promote a socially isolating experience (Owler, 2010; Lovitts & Nelson, 2000). Students generally complete a series of courses while working on their own individual research. As students advance in their programs, they generally take a comprehensive exam and conclude their journey with their dissertation, primarily working alone and with their graduate advisor (Owler; Lovitts & Nelson).

Conversely, in some PhD programs, students work very collaboratively with their peers. In the science fields, for example, students generally work in groups, where

collaboration and social integration are high (Lovitts & Nelson, 2000). During their first year, students generally work in labs together and rotate to different labs several times a year. This rotation provides opportunity for social integration with their peers as well as with multiple faculty members and other instructors, allowing for a more collaborative and supportive culture (*Josh, personal communication, Feb. 25th, 2013).

A lack of understanding. As was previously discussed, countless students enter PhD programs without understanding the culture and structure of the program (e.g., Golde & Dore, 2001). Students often report that they did not understand that their respective programs had a socially isolating culture (Lovitts). Many of these students may not have known the strategies behind reaching out to professional colleagues in the academic community (Lovitts, 2001). Numerous applicants and first year students falsely believe that the culture and structure of their program will be similar to that of their undergraduate experience (Lovitts, 2001; Golde & Dore, 2001).

Perspective # 3: The Graduate Faculty Perception

This perspective centers on the notion that many graduate faculty appear to place all the blame on the PhD student for withdrawing, rather than attributing any of the responsibility to the organizational culture, structure, and processes of their graduate programs (Lovitts; 2001; Berelson, 1960). Many faculty term those who left the program as *dropouts* to reinforce the notion that the problem is with the student, as opposed to the program (Lovitts & Nelson, 2000).

One unfortunate consequence of placing full blame on the student is that the 50 percent attrition rate will, most likely, continue to prevail and programs will not challenge

themselves to improve. Lovitts (2001) as well as other scholars (Hamilton & Roach, 2003; Golde & Dore, 2001; Bowen & Rudenstein et.al., 1992; Council of Graduate Schools, 1991; Garcia, 1987) explain that the problem of PhD attrition stands within the organizational culture and structure of graduate programs. To attempt to lower the attrition rate across PhD programs, many graduate faculty members have tightened admission standards into their doctoral programs, operating under the assumption that tightening standards will automatically filter out students who are most likely to withdraw from their program and admit those who should successfully complete their degree (Lovitts, 2001).

Yet, as Lovitts (2001) has argued, academic demands are generally not the reasons why PhD students withdraw from their programs; rather it is more likely attributable to a lack of community and social support within their program. Therefore, through tightening the admission standards, graduate faculty appear to be solely focusing on the academic factors; factors that are not strongly correlated to PhD student attrition (Hamilton & Roach, 2003; Golde & Dore, 2001; Bowen & Rudenstein et.al., 1992; Council of Graduate Schools, 1991; Garcia, 1987).

Evidence has suggested that many PhD students are withdrawing because they are not provided with the knowledge, key resources, and skill-sets to minimize feelings of stress and social isolation during their experience (Fishcer & Zigmund, 1998; Wasburn, 2002; Lovitts, 2001). These students are generally lacking a strong sense of community within their programs (Fishcer & Zigmund; Wasburn; Lovitts).

At the same time, many students have not obtained the knowledge and skill-sets to effectively know how to build a relationship with one's graduate advisor and or other faculty members who could serve as mentors for the student (Fishcer & Zigmund, 1998;

Wasburn, 2002; Lovitts, 2001). Many faculty members also need further professional development training to help them become more effective advisors and mentors for their students (Lovitts).

Lovitts (2001) further explains that having a mediocre to poor relationship with one's graduate advisor can significantly increase both stress and feeling socially isolated in a PhD program. In fact, the graduate advisor can be the most important resource for the student, providing guidance and clarity as well as someone who can connect the student to other students and faculty who may share similar research and or professional interests (Golde & Dore, 2001; Fishcer & Zigmund, 1998; Wasburn, 2002). Choosing a graduate advisor can be the most important decision that the student makes in his or her doctoral career.

Unfortunately, many graduate faculty members may not be fully aware of the mentoring that graduate students need, particularly when it comes to the students' abilities to successfully navigate the non-academic components of their PhD programs (Golde & Dore, 2001; Lovitts, 2001; Council of Graduate Schools, 2001). For example, several graduate faculty members may not realize which specific skill-sets that students need to navigate the non-academic factors of PhD life. Such skill-sets could include: (a) knowing the strategies of how to network and build relationships with other individuals in the field, (b) developing a strong sense of agency in their doctoral program, (c) knowing how to craft their personal statement, (d) knowing how to tell their narrative and make a good impression to other students, faculty, and peers in their respective fields, and (e) knowing what types of careers are available to them once they graduate. Overall, the lack of the non-academic preparation that students contain both prior to entering their programs as well as during their

experience may be exacerbated when graduate faculty are not fully aware of the non-academic issues and or challenges that many students are dealing with.

Purpose of Study

There has been a fair amount of research looking at PhD attrition. After all, attrition happens across all institutions and across all fields. This study will look at PhD completion and attrition in the field of education. The field of education is a notable field to study PhD completion and attrition for two reasons: the sheer numbers of graduate students pursuing a doctoral degree in education, and the diversity of disciplinary orientations and resultant career choices available to those pursuing a degree in the field of education. Each of these is elaborated upon below.

First, historically, more PhDs have been awarded in education compared to all other fields (Survey of Earned Doctorates, 2011). For example, in 1981, 7,497 PhD's were awarded in education, comprising 23.9 percent of all PhDs awarded (Survey of Earned Doctorates). However, in more recent times, the Survey of Earned Doctorates shows that the fewest number of PhDs are awarded relative to all other disciplines. For example, in 2011, 4,691 PhDs were awarded, comprising 9.6 percent of all PhDs awarded (Survey of Earned Doctorates). Another noteworthy trend in the field of education is that 40% of all African Americans who earn a doctoral degree, earn a PhD in education (Barbett & Korb, 1997; NCES, 1990). Overall, this data presents some interesting trends that make the field of education a notable field to study PhD attrition and completion.

Second, the field of education is also a relatively large and complex discipline that encompasses several fields. Education departments span the disciplines, offering programs

rich in a humanities orientation (e.g., foundational programs in the history of education, or the philosophy of education); programs firmly steeped in the sciences (e.g., cognitive or neuroscience programs, computer science-oriented programs, programs in allied health fields, and programs aimed at improving science and mathematics education); as well as programs across the entire array of the social science disciplines (e.g., economics of education, sociology of education, anthropology of education, linguistics, etc.).

Furthermore, education programs can consist of programs that prepare students to enter elementary, secondary education, and higher education, as well as train students to become policy makers at the local to national level. Education programs can prepare students to become scholars, researchers, and professors. Education graduates can also seek employment in the non-profit or for-profit industry, among several other possibilities. In general, the career options for graduates are more expansive compared to other fields and disciplines.

Overall, the complexity of education departments can make them an attractive field to study PhD completion and attrition. Given the sheer size of the cohorts of doctoral students, nationally, pursuing an education degree, and the disciplinary diversity and career choices available to these graduate students, the field of education represents a broad enough field to capture virtually any of the “good, bad, and ugly” that can occur during the graduate school years. Likewise, any possible reforms aimed at improving graduate education can, when applied to those pursuing a graduate degree in the field of education, promise to impact a substantial number of the nation’s graduate students. In short, the field of education offers a convenient and useful domain from which we can diagnose what does

not work well in graduate education, and a promising laboratory within which we can examine the effectiveness of any reforms.

As has been previously discussed, a good portion of PhD attrition research has examined: (a) how the culture and structure of PhD programs might lead to attrition, (b) the perceptions of graduate faculty, and how these perceptions might lead to attrition, as well as (c) how the lack of opportunities to integrate into a PhD program might lead to attrition. However, what is lacking in the body of this research are insights into how can these students become motivated to successfully complete their degree.

There has not been much attention given to the ways PhD programs can help students continue to have motivation to persist when they encounter significant stress and difficulty during their experience. And there has not been much attention paid to how programs might need to revamp their cultures and structures to foster the motivation and drive in their students to successfully complete their degrees and complete their degrees in a reasonable amount of time. Many students have an incredibly exciting and remarkable experience as doctoral students. It is these positive experiences that have encouraged me to bring perspective and insight into the field of doctoral student attrition.

The purpose of this qualitative study is to closely examine the PhD experience through a self-determination theory lens, focusing on former PhD students from the field of education. The self-determination theory, which will be further elaborated on in the next chapter, is rooted on the notion that individuals need to feel a sufficient level of competence, relatedness, and autonomy to have the motivation, persistence, and overall drive to push through difficult challenges (Ryan & Deci, 2000). This study will examine the extent to which the major components of the PhD experience help students feel:

a) a requisite ability and or adequate ability to excel in their respective program (i.e., referred to as **competence** in this study); b) connected by reason in their program (i.e., referred to as **relatedness** in this study); and c) ownership and control over their experience (i.e., referred to as **autonomous** in this study and), and why or why not?

One major component that this study will investigate is whether the structure of PhD programs (e.g., cohort model versus more autonomous model, course requirements, course sequences, faculty advisor selection process, etc.) influence if study participants felt a sense of competence, relatedness, and autonomy during their PhD experience, and why or why not?

Another major component of the PhD experience that this study will examine centers on whether *faculty advisors* helped students to feel a sense of competence, relatedness, and autonomy during their PhD experience, and why or why not? For example, did faculty advisors give their students opportunities to shape their own experience, opportunities to meet other students, opportunities to build their own academic and professional skill-sets and utilize these skill-sets? Did these opportunities help students to feel autonomy, relatedness, and autonomy, respectively, and if so, to what extent?

This study will also look whether participants had any *prior exposure* to PhD programs before entering (e.g., prior interactions with graduate faculty members, students, or staff, orientation to the culture and structure of programs, attended any prior academic conferences, taken any graduate level courses, etc), and if this prior exposure helped students to feel a sense of competence, relatedness, and autonomy during their graduate school experience and, if so, why?

Defining the Terms: Competence, Relatedness, and Autonomy

Competence. Competence can be defined as having requisite or adequate ability or qualities (Merriam-Webster, 2003). Feeling competence in a PhD program can be evidenced by a demonstration of the skill-sets needed to excel in the program. This can include a strong familiarity with the culture, namely norms, values, and expectations within the program. This may also include having a sufficient understanding of the structure and processes of their program, such as knowing all of the requirements and expectations necessary to earn the degree, as well as having the skill-sets and overall knowledge base to successfully complete these requirements. Last, feeling competence in a PhD program may also include knowing the available academic and non-academic resources to help the student excel and develop the necessary skill-sets and knowledge base to successfully earn their degree.

Relatedness. Relatedness can be defined as connected by reason of an established or discoverable (Merriam-Webster, 2003). Feeling relatedness may include having a sense of connection to the PhD program and of their respective department and postsecondary institution, writ large. This also can include having relationships with several members of their respective department, such as faculty, staff, and other students in the program. This might also include spending time with their classmates, peers, and colleagues outside of their program and postsecondary institution. Feeling relatedness can also encompass having mentors, advisors, as well as other colleagues who can help guide the student, in both his professional and personal life.

Autonomy. Autonomy can be defined as the quality or state of being self-governing (Merriam-Webster, 2003). Feeling autonomy can include feeling a strong sense of agency to

take ownership over his or her PhD experience. This can include knowing the requirements and expectations to successfully earn the PhD and then tailoring their own experience to make it their own. Autonomy can also include choosing the academic and non-academic activities to become involved with during their time as students. Autonomy can also include having the confidence to successfully progress and complete their degree.

In looking at these factors, this study will take a retrospective approach and examine former PhD students who graduated from their respective programs as well as students who withdrew from their programs. In doing so, this study will incorporate the following for the theoretical framework: (a) the self-determination theory, (b) the cognitive map theory, and (C) the self-determined cognitive map model. The following chapter will offer a more comprehensive understanding of these theories.

CHAPTER 2

THEORETICAL FRAMEWORK

In the previous chapter, I focused on the three major factors that may be leading to the PhD attrition rate. These factors included: (a) the perceptions of graduate faculty members towards PhD students, (b) the lack of opportunities for doctoral students to integrate into their programs, and (c) the organizational structure and culture of graduate education. In this chapter, I will focus on discussing the theories that will guide this study. These theories include the self-determination theory, the cognitive map theory, and the self-determined cognitive map model. As was previously mentioned, one of the outcomes of this study will be to further develop and refine the theories as they specifically relate to the PhD experience.

The first section of this theoretical framework outlines the self-determination theory, a motivational lens that examines the social-contextual characteristics that promote or prohibit self-motivation. This theory looks at how and why people can be proactive and engaged or passive and alienated. The self-determination theory has been utilized in several domains including health care, education, work, sports, religion, and psychotherapy (Ryan & Deci, 2000).

The Self-Determination Theory

The self-determination theory articulates a large overview of the study of human motivation and personality. This theory examines individual's inner resources for personality development as well as their behavioral self-regulation (Ryan, Kuhl, & Deci, 1997). Specifically, the self-determination theory investigates the psychological needs that

provide the ability to become self-motivated, and the environmental characteristics that are critical for their self-motivation to emerge (Ryan & Deci, 2000). Overall, this theory is built on the assumption that individuals are inherently active organisms with a natural desire to set and accomplish goals; individuals seek out challenges, but they need the motivation to reach their goals (Self-Determination Theory, 2013).

Motivation stems from a few essential positive attributes including energy, direction, persistence, and equifinality (Ryan & Deci, 2000). Motivation has been of significant concern and inquiry due to its outcome of production, and has been of high importance to people who are in leadership and management roles (Ryan & Deci). Moreover, research has shown that individuals are often encouraged to excel from a result of external factors such as money, prestige, and fame (Self-Determination Theory, 2013). People are also motivated by intrinsic factors such as their interests, creativity, and passions (Self-Determination Theory).

The self-determination theory claims that the motivation people need to accomplish their goals is a direct function of their environment (Self-Determination Theory, 2013). Ryan & Deci (2000) claim that to feel motivated, individuals must have three psychological needs met. These factors include having competence (Harter, 1978; White, 1963), relatedness (Baumeister & Leary, 1995; Reis, 1994), and autonomy (Deci, 1975). When environments contain these vital components, people will possess energy, direction, persistence and equifinality in their endeavors (Ryan & Deci, 2000). With the absence of just one of these factors, individuals can experience ill being, mediocre functioning, and a lack of persistence and resilience (Self-Determination Theory).

The self-determination theory may provide a useful lens to examine the PhD attrition rate. Specifically, this theory speaks largely to the environmental characteristics that influence motivation, namely persistence and drive, to accomplish tasks within individuals' environments.

As has been well documented, numerous PhD students drop out of their programs from feeling socially isolated (Ali & Kohun, 2006; Hawlery, 2003; Lewis, Ginsberg, Davies, & Smith, 2004) and from feeling a significant amount of stress (Lovitts, 2001). As many students feel isolated from other students in the program, as well as from their advisors, other faculty members, and the academy at large (Ali & Kohun, 2006; Lovitts, 2001), they may be lacking in the relatedness factor proposed by the self-determination theory (Ryan & Deci, 2000).

The stress that many PhD students encounter often stems from feeling inadequate and, in some cases, completely unprepared to navigate a PhD program. Students are often stressed for multiple reasons throughout their experience in their doctoral programs. Some of the primary reasons why students are stressed stem from the fear of failure, the lack an understanding of coursework and degree expectations, time constraints, and in many cases, living in relative poverty (Bowman & Bowman, 1990; Esping, 2010). These difficulties that students encounter may lead to a lack of feeling competence as well as overall control of their doctoral experience.

The next theory that is incorporated into this theoretical framework is the cognitive map theory. This theory has been utilized to help explain and describe PhD attrition and focuses on the lack of integration, understanding, and misconceptions that both prospective and current PhD students have towards their programs (Berelson, 1960; Bucher, Stelling, &

Dommermuth, 1969; Etzkowitz, Kemelgor, Neuschatz, & Uzzi, 1992; Lovitts & Nelson, 2000; Golde & Dore, 2001; Lovitts, 2001; Ali & Kohun, 2006). Numerous PhD students:

- May not have considered program fit prior to applying to their program.
- May not be aware and or may be confused about the nature of PhD coursework, coursework expectations, and conducting their own individual research.
- May not be aware of the culture, structure, and processes of PhD programs.
- May not be aware and or may be confused about the career options that are available to them upon earning their degree.

Yet, many graduate programs assume that entering students have a sufficient understanding of the norms and values of graduate school, prior to entering the program (Bucher, Stelling, & Dommermuth, 1969). This assumption has shown to generally be incorrect (Etzkowitz, Kemelgor, Neuschatz, & Uzzi, 1992; Lovitts, 2001). Given the lack of understanding as well as the confusion that countless PhD students encounter during their PhD experience, it seems appropriate to incorporate a theory that centers on individuals' mental models towards their environments.

The Cognitive Map Theory

The cognitive map theory stems from the social cognitive theory proposed by Albert Bandura which states that individuals are not just reactive organisms that are shaped by environmental events and or inner forces, but rather they are self-organizing, proactive, self-reflecting, and self-regulating organisms (Bandura, 1986). Individual development and change is a function of the social system, and therefore, personal agency is within a wide

array of socio-structural influences (Bandura, 2001). Within these domains, people are both producers and products of their social systems (Bandura, 2001).

Cognitive maps contain *schemas* (Morgan & Schwalbe). A *schema* is a representational structure into which memory is organized; the representation may be a *prototype* which represents knowledge about particular people and or events, or a *script* which represents knowledge about specific types of events (Morgan & Schwalbe). Overall, information becomes most effective when it is both well organized and generalizable (Morgan & Schwalbe).

The cognitive map theory stems from the notion that cognitive activity encompasses the interplay between current experience and previous knowledge. A prior established mental representation will serve as a benchmark for the perception and development of new knowledge that a person is acquiring (Morgan & Schwalbe). As a person obtains and processes new information from his or her environment, the individual utilizes previously stored representations as a benchmark but then will modify and select which representation to store the incoming information (Morgan & Schwalbe).

Cognitive maps are mental frameworks that individuals develop that are based on highly organized and structured information; at their core, these maps help people navigate through their environment (Howard, 1995; Morgan & Schwalbe, 1990). These maps provide people with skill-sets, action plans, conflict resolution techniques, and the ability to predict events within a given environment (Lovitts, 2001). Generally speaking, cognitive maps offer a framework with how to succeed within a particular environment, and the more developed an individual's cognitive map is of a respective context, the more likely he or she will integrate into the respective environment (Lovitts).

On the other hand, individuals who enter into an environment with a primitive cognitive map can experience stress, anxiety, as well as other difficulties compared to individuals who have more fully developed cognitive maps of an environment (Lovitts, 2001). People with primitive cognitive maps simply do not have a full understanding of how to navigate through their respective environment (Lovitts). Specifically, these individuals may lack an understanding of how to problem-solve in their particular environment and may lack the action plans, skill-sets, and other resources to help them successfully navigate their respective environments (Lovitts). Therefore, these people may not be highly successful in their respective environments.

There are two primary types of cognitive maps, the global map and the local map (Lovitts, 2001). The global map illustrates the overarching structures and processes of a particular context (Lovitts). In a PhD program, the global map might represent major components and milestones of the program, such as choosing an advisor, navigating coursework, taking a comprehensive exam, and writing the dissertation.

On the other hand, the local map represents smaller details of a particular context (Lovitts, 2001). In PhD programs, local maps might represent aspects such as selecting a specific research topic(s), finding particular student and support groups, developing professional relationships with other faculty in the program that have similar research and career interests, developing an understanding of the norms, values, and expectations (culture) of the particular program, as well as how to structure and cope with the ups and downs of day-to-day life.

The cognitive map theory may add a unique lens to examine the notion that numerous PhD students do not understand the nature of their program, such as the structure,

culture, and coursework expectations, as well as the professional and career options available to them upon earning their degree. Stemming back to the social cognitive theory, many students may not have developed *schemas* or *prototypes* towards the PhD experience; this might be largely due to a lack of integration and exposure to graduate education and specifically PhD programs prior to becoming doctoral students. As a result of this, it might be argued that many students have weak primitive cognitive maps of their respective PhD programs, both prior to entering and while in their respective doctoral programs. This may help explain why many students lack a sufficient understanding of how to navigate both the academic and non-academic components of their programs.

The cognitive map theory does not adequately address the consequences of what might happen when people develop inaccurate cognitive maps of their environments. Specifically, the cognitive map theory may not fully address the mechanisms that need to be in place to prevent individuals from developing inaccurate perceptions about their respective environments. The following are a few points to consider about the perceptions of applicants towards their hopeful PhD programs:

- Many applicants apply to programs with a misunderstanding of the culture and structure of their respective programs (e.g., Lovitts, 2001; Golde & Dore, 2001).
- Many applicants appear to believe that entering a program will be similar to their undergraduate experience (e.g., Lovitts; Golde & Dore).
- Countless applicants believe that the only option available to them upon earning their degree is to assume a tenure track faculty position (e.g., Lovitts; Golde & Dore).

These misunderstandings can symbolize a lack of feeling competence towards their respective PhD program. According to the self-determination theory, a lack of feeling competence will lead to a lack of motivation and drive. In these cases, this lack of motivation may lead to stress and burnout, which in turn, can lead to doctoral student attrition (Lovitts, 2001).

One vastly important area of PhD students' cognitive maps that may be inaccurately formed surrounds their perceptions of the career options available upon earning their degree (Lovitts, 2001; Golde & Dore, 2001). As was previously mentioned, many students believe that they can only enter academia upon earning their degree (Lovitts). This false belief has been attributed to the notion that sometimes faculty members instill the belief that, once their students have completed their degree, they must enter academia as a scholar and researcher (Lovitts). This short sidedness can skew and or limit the opportunities that are available to doctoral students.

As was previously stated, many PhD students falsely believe that they can only enter one specific field and or do one specific thing, such as entering a tenure track faculty position, upon graduating with their degree. At some point during their PhD experience, students may realize that they do not want to become a tenure track faculty member and may decide to withdraw from their program because of not wanting to be a tenure track faculty member. Little did they know, that they could use their degree in countless other ways such as in government, the non-profit industry, and or education. In these cases, students' attrition from their program may have been entirely avoided if their cognitive map was not inaccurately developed in the first place.

Therefore, what I am arguing is that, in addition to having a cognitive map of a PhD program, it is equally important that students are receiving information to develop an accurate cognitive map of their respective program. Students who have formed inaccurate cognitive maps of their PhD program may have an increased likelihood of leaving their doctoral programs prior to earning their degree.

On the other hand, when PhD students have accurate and comprehensive cognitive maps of their program, there may be a higher likelihood that they can navigate events such as selecting an appropriate faculty advisor, setting a strong impression with students, faculty, other peers, as well as recognizing the full range of career and other professional opportunities available to them upon earning their degree. These students may have a much higher probability of making it to their graduation day.

There may need to be additional mechanisms to ensure that prospective and current PhD students are receiving information that is both accurate and holistic. One mechanism might be a series of required workshops for students that center on the career opportunities upon graduating with their degree. During these workshops, students could meet individuals who work both inside and outside of academia. For example, students could learn from people who work in industry such as the for-profit and non-profit sector, as well as who are in positions such as in government, education, and in other industrial positions.

The cognitive map theory does have its limitations and cannot entirely explain the PhD attrition rate. The cognitive map theory cannot explain reasons for attrition that are not related to students' understanding of their respective PhD programs such as financial, family, and career obligations (Bowen & Rudenstein, 1992; Ethington & Pisani, 1993; Nettles & Millett, 2006). Nonetheless, the cognitive map theory may add a unique lens to

examine the notion that numerous PhD students do not understand many of the components and the overall nature of their doctoral program.

A Potential Relationship

As has been previously discussed, PhD students who fall victim to attrition often do so because they lack an understanding of the structure, culture, coursework expectations, as well as the career and other professional opportunities that are available to them upon graduating from their program (Ali & Kohun, 2006; Lovitts, 2001; Golde & Dore, 2001). This lack of understanding towards these major components of the PhD experience may lead to a lack of feeling any or all of the following psychological needs: competence, relatedness, and autonomy within their respective program; the three vital needs that are integral to foster motivation, persistence, and drive to excel in a challenging endeavor (Ryan & Deci, 2000).

For example, students who enter into a PhD program without having much exposure, integration, and overall preparation into navigating both the academic and non-academic factors of doctoral programs, may end up lacking a sense of *competence*. These students simply may not be aware of the culture and structure of their respective program, and they may not have an understanding of the skill-sets, resources, and overall knowledge they need to have to excel and successfully graduate from their program. This lack of competence can lead to a total loss of motivation to remain a PhD student (Ryan & Deci, 2000).

At the same time, PhD students who enter into a program without a well-built cognitive map may end up feeling a lack of *autonomy*. They may not be aware of the options that are available to them in terms of the academic and non-academic elements of

their experience. They may not recognize the agency they have to shape their doctoral experience. They may not be fully aware of their ability to shape their course of study and research agenda. They may also not be aware of their autonomy to seek out professional mentors both inside and outside of their respective postsecondary institution. Once again, this lack of autonomy can lead to a total loss of motivation to continue to pursue their PhD (Ryan & Deci, 2000).

PhD students who enter into a program without having a strong cognitive map may also lack a sense of feeling *relatedness* within their program and or towards their peers and colleagues within the program. These students may not feel a sense of relatedness in their professional lives; they may lack a sense of belonging within their program, as they may be unfamiliar with the culture, structure, and processes of their respective program.

As was previously mentioned, the self-determination theory poses that individuals are inherently active and desire to master notable challenges (Ryan & Deci, 2000). A lack of feeling any one or all three of the psychological needs of competence, autonomy, and or relatedness within a particular context can pose a complete loss of motivation, drive, and persistence on an individual's performance within his or her respective environment (Ryan & Deci, 2000).

It can be well argued that earning a PhD is a notable goal that takes a tremendous amount of resources, primarily time (often several years), energy, persistence, and can be an expensive pursuit. Students need a significant amount of motivation to successfully earn their degree. And according to the self-determination theory, they need to feel competence, relatedness, and have autonomy to have persistence, drive, and overall motivation to excel throughout their program (Ryan & Deci, 2000).

The Self-Determined Cognitive Map Model: A Hybrid Approach

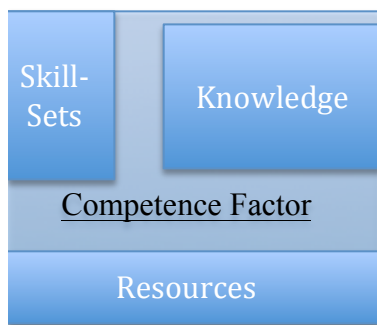
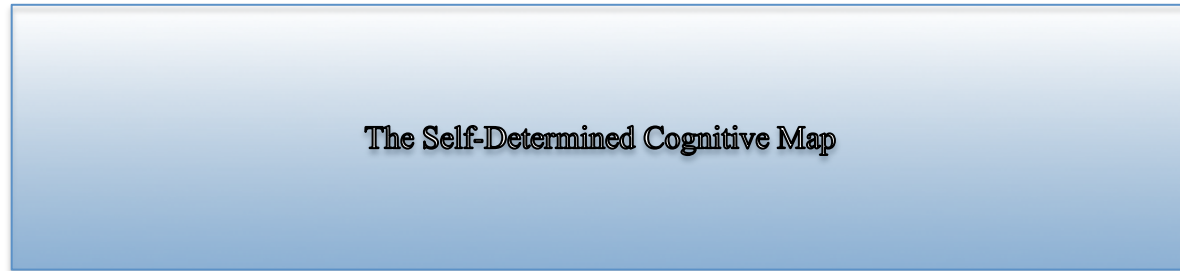
Since the cognitive map theory does not account for the psychological needs that must be fulfilled to allow individuals to have the motivation to excel in challenging endeavors (Ryan & Deci, 2000), nor does the self-determination theory adequately explain the importance of having a strong mental model of an environment, I am proposing a hybrid model that links the cognitive map theory with the self-determination theory. This hybrid model is called the self-determined cognitive map. I am proposing that the self-determined cognitive map may be more fully developed for those students who are more likely to complete their PhD and not fall victim to attrition. The following is a further explanation of the self-determined cognitive map:

Note: Please see Figure 1.0 for an illustration of the self-determined cognitive map.

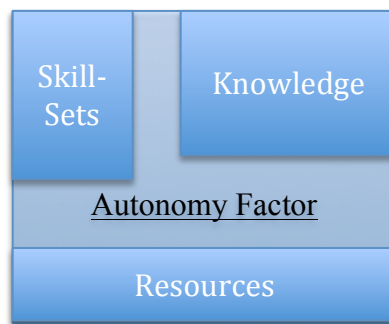
1. The self-determined cognitive map contains the major factors of the self-determination theory, which include the competence, autonomy, and relatedness factors (Ryan & Deci, 2000).
2. Embedded within each factor, is the knowledge, skill-sets, and resources that, if acquired by the student, can substantially help the student to navigate his or her experience as a PhD student.
3. Once a student gains the knowledge, skill-sets, and resources, this may allow the student to feel an adequate level of that respective self-determination theory factor (e.g., competence, autonomy, and relatedness). For example, PhD students who feel competence in their program feel this way because they have the competence knowledge, competence skill-sets, and competence resources to navigate their PhD program.

4. A student who has a well-developed self-determined cognitive map can be characterized if he or she feels an adequate level of each of the three factors. This map should allow the student to have a strong and accurate understanding of the PhD experience while having the motivation, drive, and persistence to both excel, and graduate from, his or her PhD program.

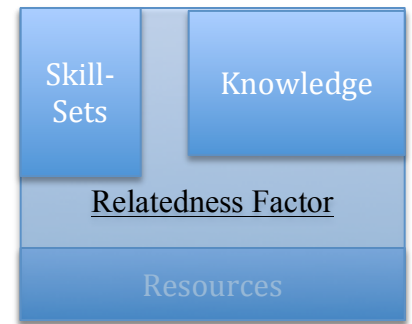
Illustration of The Self-Determined Cognitive Map



A PhD student may have a higher likelihood of feeling *competence* if he or she is both aware of and understands the *competence knowledge*, *competence skill-sets*, and *competence resources* towards his or her PhD program.



A PhD student may have a higher likelihood of feeling *autonomy* if he or she is both aware of and understands the *autonomy knowledge*, *autonomy skill-sets*, and *autonomy resources* towards his or her PhD program.



A PhD student may have a higher likelihood of feeling *relatedness* if he or she is both aware of and understands the *relatedness knowledge*, *relatedness skill-sets*, and *relatedness resources* towards his or her PhD program.

A PhD student who has a sufficient level of each of these three factors can be characterized as having a well-developed self-determined cognitive map.

The Components of the Self-Determined Cognitive Map

Measures of Feeling Competence: Knowledge, Skill-sets, and Resources

Competence knowledge. This can be referred to as knowledge that is directed towards helping PhD students to feel an adequate ability to excel in their respective program. Competence knowledge might include knowing the culture, namely norms, values, and typical behaviors in students' respective programs. Students will also be familiar with the structure and processes of their respective program. They will be acquainted with course offerings as well as completing the major milestones such as their comprehensive examinations.

Students will also understand the inherent differences between an undergraduate program, a master's program, and a PhD program. In having this understanding, students may be aware of the nature of often working in isolation as well as advancing theory and conducting their own individualized research. They will be recognize the importance of developing a professional identity and working with faculty and staff in their program as well as outside of their program. This factor may also include knowing several of the potential career opportunities available to them upon graduating with their degree.

Competence skill-sets. This can be referred to as skill-sets that are directed towards helping PhD students to feel an adequate ability to excel in their respective program. Competence skill-sets might include knowing how to build relationships with peers, colleagues, faculty members, and other individuals with whom one interacts. This might include scheduling office visits, coffee dates, and or attending other social events with their peers and colleagues.

PhD students may also know how to tell a compelling personal narrative. This will help prepare them to set a great impression with future colleagues, peers, as well as help them in an array of professional endeavors. These endeavors might include informational interviews, formal interviews, funding and scholarship applications, as well as in cover letters and other job application materials.

Other skill sets might include knowing how to effectively negotiate with their graduate advisors as well as other faculty members in terms of both individualized research projects and with coursework. Another skill set might include knowing how to ask for help from their graduate advisor and or other faculty members on campus about academic and or non-academic issues during their PhD experience. Overall, students who have developed these skill sets should have a much easier and more rewarding experience during their doctoral journeys.

Competence resources. This can be referred to as being familiar with resources that are directed towards helping PhD students to feel an adequate ability to excel in their respective program. Competence resources might include knowing the academic and non-academic resources that are available to students both inside and outside of their respective postsecondary institution. For example, they may know where to receive help on their academic endeavors such as on writing papers, creating presentations, as well as receiving help on every stage of the research process. They may also be in-tune with professional development workshops, events, and other resources that they can attend to build up these skills. Students may also be very acquainted with the library system at their respective postsecondary institution.

PhD students may also know where to receive help on their non-academic endeavors, such as with their impression management, interviewing, and networking skills. They may additionally know how and where to obtain information about their career options that are available to them, both inside and outside of their postsecondary institution. Again, these students may be aware of the events, workshops, and other resources both on and off of campus that can help them develop these non-academic professional development skills. Overall, a strong understanding of the competence structure of the self-determined cognitive map may significantly help students remain motivated and successfully navigate through their doctoral experience.

Measures of Feeling Relatedness: Knowledge, Skill-sets, and Resources

Relatedness knowledge. This can be referred to as knowledge that helps the PhD students to feel connected by reason within their respective program. Relatedness knowledge might include knowing the importance of finding friends, mentors, peers, and other supportive faculty across campus as well as outside of the students' respective postsecondary institutions. This factor may include knowing the importance of building a great relationship with their faculty advisor. This factor might also include knowing the socially isolating nature of programs, and therefore recognizing the importance of building a supportive community to help offset the social isolation that can occur while navigating through their doctoral program.

Relatedness skill-sets. This can be referred to as skill-sets that help the PhD students to feel connected by reason within their respective program. Relatedness skill-sets might include knowing how to develop relationships with individuals within their doctoral

program and outside of their respective program. Students who have developed these skill-sets will know how to find mentors and then cultivate those relationships. For example, they may recognize the value of attending faculty office hours, setting up coffee and lunch dates, as well as spending time with individuals outside of the academy.

Students might also have a strong sense of interpersonal competence and practice this trait in their social endeavors. These students might demonstrate strong listening skills as well as ensure their conversations are mutually beneficial. If done with appropriateness, these practices can help to strengthen the relationship between the two individuals. Other relatedness skill-sets that reside might include knowing how to ask a faculty member in their respective program to be their faculty advisor and or on their doctoral committee. Additional skill-sets might include knowing the importance of sending an occasional email to check in with others both within their PhD program as well as outside of the program.

Developing skill-sets such as sending an occasional email as well as scheduling times to meet can help students remain connected to the program. Students who demonstrate these skill-sets may also recognize the importance of building relationships with peers, mentors, faculty advisors, as well as friends inside and outside of their respective programs. Students may also understand that social gatherings such as going out for coffee, lunch, or dinner can really help to strengthen relationships.

Relatedness resources. This can be referred to as the resources that help the PhD students to feel connected by reason within their respective program. Relatedness resources might include knowing the personnel both within and outside of the program that can help students feel like valuable members of their respective program and can help them navigate both the academic and non-academic endeavors of their program. Again, these people may

include mentors, peers, friends, professors, as well as staff. Students may also know of events such as networking and other social engagements that can serve as a catalyst to meet other individuals.

Students who have a strong understanding of the resources available to them may have thoroughly researched several of the faculty members within their program and may know which faculty member(s) can serve as a valuable resource for them during their PhD experience. Also, students who have researched these faculty members may know which faculty members they want to work with as well as which faculty members they do not want to work with, prior to entering their program.

Students may also have identified other students and or staff members that they wish to develop a professional relationship with. Students may recognize the value that these individuals can bring to their PhD experience. Overall, faculty, staff, and current students can serve as a vital resource to help students to feel both relatedness and valuable within their respective program.

Some additional relatedness resources for PhD students that exist outside of the academy might include knowing faculty, students, and other individuals who reside across the United States and around the world. Students who have a well-developed relatedness factor may also realize the importance of attending academic conferences to meet with individuals in his or her field of interest. Overall, students who have a strong understanding of the skill-sets, resources, and general knowledge of the relatedness factor within a PhD program may help to (a) reduce their chances of withdrawing from their program, (b) encourage their motivation towards graduating from their program, and (c) help offset the social isolation factor.

Measures of Feeling Autonomy: Knowledge, Skill-sets, and Resources

Autonomy knowledge. This can be referred to as the knowledge that helps PhD students to feel ownership and control over their PhD experience. Autonomy knowledge allows students to feel a strong sense of autonomy and agency throughout their doctoral experience. The knowledge factor might include knowing the authority they have to shape a significant portion of their experience. A considerable amount of the knowledge factor may stem from an already developed sense of confidence and determination to shape their PhD experience.

PhD students who contain this element may understand the freedom they have to turn down an offer to collaborate on a research project and or other project, no matter who is asking (e.g., faculty advisor, other faculty member inside or outside of the department, or another student). They may recognize their agency to take academic courses of their choosing, engage in research and other opportunities of their choosing, as well as structure their experience in a way of their choosing. The autonomy knowledge factor might also include knowing that they can switch faculty advisors if they find someone who might be a stronger fit for their research and professional interests.

Autonomy skill-sets. This can be referred to as the skill-sets that help PhD students to feel ownership and control over their doctoral experience. The autonomy skill-sets might include having the skills to tactfully say “no” to a faculty advisor or to another faculty member who offers research opportunities, funding opportunities, or other extracurricular opportunities that are offered to the student. These skill-sets might even include knowing how to negotiate the job description of a research or teaching assistant position to further

tailor the position for the specific student. Overall, these skill-sets allow the student to effectively tailor his or her doctoral journey.

Autonomy resources. This can be referred to as the resources that help PhD students to feel ownership and control over their PhD experience. Autonomy resources might include knowing personnel on campus that the student can talk with who can help the student gain more autonomy towards his or her doctoral program as well as further down his or her career path. These individuals might include, mentors, peers, friends, faculty advisors, staff, and other faculty members outside of their respective department. There may also be an array of people who can help the student gain more autonomy who are outside of the academy, including family members and friends. Overall, the resource factors may help students develop a stronger sense of autonomy while navigating throughout their program.

In summation, Ryan & Deci (2000) argue that individuals must have three psychological needs met to have motivation and determination to excel in a particular environment. These needs include feeling competence, relatedness, and autonomy. These factors will also help provide individuals with the motivation to overcome hardships and fuel the desire to master challenges. Foremost, they are absolutely crucial in promoting psychological well-being and an overall sense of personal satisfaction (Ryan & Deci).

PhD students who contain a well-developed self-determined cognitive map may know how to effectively utilize the resources, skill-sets, and knowledge that are contained within each of the major factors of the self-determination theory. I have hypothesized that the self-determined cognitive map may be more fully developed for those students who are more likely to complete their PhD and not fall victim to attrition as they may have the

motivation and determination to successfully navigate through, and graduate from, their respective program.

CHAPTER 3

METHODOLOGY

This study seeks to develop a more comprehensive understanding regarding if and how specific components of the PhD experience might motivate and or discourage students from successfully completing their degree. This chapter will discuss the methods that I have utilized to design and carry out this study. The primary outcome of this study is to bring insight into how to motivate and encourage PhD students to complete their degrees.

Research Questions

This study is guided by the following research questions:

1. Do former PhD students report feeling: (a) a requisite and or adequate ability to excel in their respective PhD program (i.e., referred to as **competence** in this study), (b) connected by reason in their PhD program (i.e., referred to as **relatedness** in this study), and (c) ownership and control over their PhD experience (i.e., referred to as **autonomy** in this study) and why or why not?
 - 1a. Did the structure of PhD programs influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience and why or why not?
 - 1b. Did faculty advisors influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience and why or why not?

1c. Did prior exposure and integration into a PhD program influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience and why or why not?

The subsequent sections of this chapter will rationalize why the methodology utilized for this study was an appropriate method to investigate the research questions. This chapter includes the following six sections:

1. Research Method and Design
2. Sample Selection and Characteristics
3. Data Collection and Procedures
4. Data Analysis
5. Validity and Reliability
6. Limitations

Research Method and Design

To help understand how the experience of being in a PhD program can help propel and or prohibit students to successfully complete their degree, this study employed a case-study methodology. Yin (2014) states:

A case study is an empirical inquiry that (A) investigates a contemporary phenomenon (the “case”) in depth and within its real-world context especially when (B) the boundaries between phenomenon and context may not be clearly evident (p. 16).

Case study research can be extremely valuable when the researcher seeks to understand a real-world case and assumes that there will be vital contextual conditions that

are essential to the case (Yin, 2014). As Lovitts (2001) explains, the advisor-advisee relationship, the structure and culture of PhD programs, as well as student exposure and integration into PhD programs are all vital contextual factors that are essential to completion and attrition.

Case study research is also appropriate when the researcher is seeking to develop theories through systematically building evidence to further develop and or replicate theories (Yin, 2014). Given that the theoretical framework used in this study has not been extensively used to examine PhD attrition in the past, case study methodology may help to further develop the theoretical framework as it pertains to doctoral student attrition. Case study methodology will be useful to examine the extent to which former PhD students felt competence, relatedness, and autonomy during their PhD experience and why or why not?

This case study will employ a multiple-case design. Multiple-case designs have clear advantages over single-case designs. For example, the data from multiple-case designs can be considered more compelling, allowing the study to be considered more robust (Herriott & Firestone, 1983). Each case will be carefully selected, allowing the researcher to predict a similar result (a literal replication) or a contrasting result, based on anticipatable reasons (a theoretical replication) (Yin, 2014). Foremost, a multiple case study can provide compelling support for the initial theoretical propositions guiding the study (Yin).

Given the extremely high complexity and variation of culture, structures, and processes of PhD programs across the United States, this study selected participants from just one department that is equally reputable at two universities. Specifically, participants were selected from the education department at the University of Washington and Stanford University. By including these two unique universities, I obtained more compelling

evidence to support the research questions guiding this study. Given that I am largely focusing on why there is such a high attrition rate as well as if, and the degree to which, PhD students felt competence, relatedness, and autonomy during their PhD experience, it was very important to note both the similarities and differences across both institutions. There were several reasons to include these two universities and their departments, for cases, for this study.

First, as was previously mentioned, both universities have equally reputable education departments. The Graduate School of Education at Stanford University and the College of Education at the University of Washington have been widely acclaimed for their academic offerings, contain nationally and internationally acclaimed scholars and researchers, have been nationally recognized as pre-eminent departments from listings such as U.S. News and World Report, and contain several graduate degree offerings as well as funding options for their students.

Second, a very unique and important distinction between the two departments that makes them worthy of investigation for this case study is that within the Graduate School of Education at Stanford, every PhD student belongs to a cohort of students. As a cohort, students will take courses, study, and work on research and other projects together. These students end up spending a substantial amount of time together. Conversely, within the College of Education at the University of Washington, PhD students do not belong to cohorts and generally take a very independent approach to going through their doctoral programs. Since this study investigates PhD attrition and completion through the lens of the self-determination theory, it was beneficial to examine if, and to what extent, former

students in the Graduate School of Education felt more *relatedness* to their peers and connected to their department compared to former students in the College of Education.

Third, both universities are widely known for their academic prestige as well as for their undergraduate, graduate, and professional education opportunities. The universities are members of the American Association of Universities (AAU). Stanford University and the University of Washington are very prestigious institutions. The universities contain large endowments that range in the billions, allowing undergraduate, graduate, and professional students to have access to a wealth of resources, including graduate student housing, extremely comprehensive libraries, graduate student funding, as well as several graduate student functions throughout the academic year. This prestige and availability of resources substantially contributes to why these universities are part of the upper echelon in higher education.

Fourth, even though these universities are some of the most prestigious universities in the world, these two institutions are not created equal. Stanford University has significantly more resources than the University of Washington. Stanford is a much wealthier university and has a much higher endowment compared to the University of Washington, allowing for more resources to be spent towards graduate students at the university.

For example, at Stanford, there are (a) more funding options for graduate students, numerous support structures for graduate students such as a graduate life center, focused on supporting and improving the lives of graduate students, (b) several opportunities for collaboration and socialization for graduate students, and (c) several options for graduate housing and exclusive graduate communities. In fact, at Stanford University, every PhD

student in the Graduate School of Education is guaranteed five full years of complete funding; typically each PhD student has a research assistantship (*Jane, Personal Correspondence, December 5th, 2013). The incredible wealth and resources at Stanford make this institution a unique university and case to be included in this study.

Fifth, the location of both universities is convenient. Given that I am located on the West Coast, each university is relatively close, providing ease of geographic accessibility.

In summation, by including these two universities and their education departments as cases for this study, I gathered more compelling evidence to support the theoretical propositions guiding this study; I compared and contrasted the experiences of participants from both institutions. It was also beneficial to examine the participants in terms of (a) the degree to which they felt an overall sense of motivation to complete their PhD, (b) the degree to which they felt competence, relatedness, and autonomy during their PhD experience, (c) the development of their self-determined cognitive maps towards their PhD program, and (d) if and how graduate faculty and advisors help the graduate students to feel competence, autonomy, and relatedness during their PhD experience.

Sample Selection and Characteristics

I incorporated a purposeful extreme group sampling strategy (Patton, 2003) to recruit participants for this study. This study focuses on former PhD students and included two groups of participants. The first group of participants included former PhD students who graduated with their PhD from the education department at their respective institution as well a few who did not graduate with their PhD from the education department at their respective institution. Within these participants, I recruited a heterogeneous sample based on

gender and race. Specifically, I included male, female, White, and minority participants. Minority participants include those who are Hispanic, Black, Asian, Asian Pacific Islander, as well as Native American.

The second group of participants consisted of a total of six graduate faculty members, and six student affairs professionals from the education departments at both Stanford University and the University of Washington ($n = 12$). I sought to include these participants because they can add substantial value, additional perspectives, and depth into this case study. Again, I sought a heterogeneous sample that included both male and female participants as well as participants who are White and of a Minority Status.

Overall, utilizing the theoretical framework that is outlined in Chapter 2 as a lens, this study seeks to answer the following questions:

1. Do former PhD students report feeling: (a) a requisite and or adequate ability to excel in their respective PhD program (i.e., referred to as *competence* in this study), (b) connected by reason in their PhD program (i.e., referred to as *relatedness* in this study), and (c) ownership and control over their PhD experience (i.e., referred to as *autonomy* in this study) and why or why not?

- 1a. Did the structure of PhD programs influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why or why not?

- 1b. Did faculty advisors influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

1c. Did prior exposure and integration into a PhD program influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

I attempted to answer these research questions by interviewing former PhD students from both Stanford University's Graduate School of Education and the University of Washington's College of Education. These participants may help to shed light onto how and why their experience as doctoral students has helped to motivate and or discourage them from completing their degree. Specifically, utilizing Ryan & Deci (2001) as a lens, this study investigates how and why PhD students' experience has or has not helped students to feel competence, relatedness, and autonomy during their experience as doctoral students.

To help add richness, depth, and perspective to this case study, it was important to include faculty members as well as student affairs professionals from both Stanford University and the University of Washington. These participants will bring additional insight that will be important to developing more holistic case study.

Data Collection and Procedures

This case study has followed the main criteria that Yin (2014) specifies to be beneficial to the case study research.

Gather several sources of data. Using multiple sources of evidence in case studies provides the researcher the opportunity to address a more comprehensive range of both behavioral and historical issues (Yin, 2014). Foremost, the use of multiple sources of data allows for the emergence of converging lines of data (Yin). Any case study finding or

conclusion will be more compelling and accurate if there are several sources of data to back up the claim (Yin).

In this study, one major source of evidence derived from conducting several in-depth semi-structured interviews with the participants, in person, at their respective institutions as well as via telephone. Through conducting these interviews, I gathered rich insight, explanations, as well as personal viewpoints into how and why the participants' PhD experience has motivated and or prohibited the student from successfully completing their degree.

Upon obtaining the interviewees' consent, I digitally recorded the majority of the interviews. Each participant was assigned a pseudonym to ensure confidentiality. All audio recordings were destroyed upon being transcribed. The interviews were then analyzed utilizing a basic qualitative analysis methodology (Creswell, 2009). Specifically, the interviews were coded based on *a priori codes* that stem from the theoretical framework utilized in this study.

To add context to this study, I also collected data through attending department events at each institution. This included attending events holiday parties, ceremonies, brown-bag lunches, and colloquiums. Overall, these events provided further clarity regarding the culture of each department. These events can provide useful social and environmental conditions to further add to the richness of the case study (Yin, 2014).

Case study database. The ultimate purpose of the case study database is simple; it becomes a means of organizing and documenting the data (Yin, 2014). This allows for both the ease of storage and retrieval of the data (Yin).

Chain of evidence. The main premise in maintaining a chain of evidence is to allow an external reader of the case to recognize the logic from the research question to the conclusion in the case study. Ultimately, establishing a chain of evidence increases the reliability of the study (Yin, 2014).

Data Analysis

Data was analyzed using a basic qualitative analysis approach (Creswell, 1998). The interviews were coded for emergent themes. According to Saldaña (2009), a code is generally a word or short phrase that is “symbolic of a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (p. 3). Coding also involves “aggregating the text or visual data into small categories of information, seeking evidence for the code from different databases being used in a study, and then assigning a label to the code” (Creswell, 1998, p. 184). Coding is also considered an exploratory problem-solving technique without exact formulas that the researcher is required to follow. In fact, coding is really the initial step in developing a more “rigorous and evocative analysis and interpretation for a report” (Saldaña, p. 8).

In this study, I am using *a priori codes* as part of the coding process. A priori codes typically stem from the conceptual framework and research questions (Creswell, 1998). Since I am examining PhD attrition and completion using the self-determination theory as a lens, I have selected three codes, which include:

- Competence
- Relatedness
- Autonomy

Using *a priori codes* limits the analysis to the use of these predetermined codes as opposed to opening up the codes to reflect the perspectives of the participants in a more traditional qualitative process (Creswell, 1998). To help offset this limitation, Creswell recommends that researchers be open to using additional codes that surface during the analysis.

Validity and Reliability

I heavily relied on Yin (2014) to bolster the validity and reliability of this study. Yin explains several tactics to integrate into a case study to increase the validity and reliability of the study. First, to ensure validity, I used multiple sources of evidence such as in-depth semi-structured interviews as well as event observation at both departments. I also established a chain of evidence and had key informants review the case study report. To ensure the reliability of the study, I developed a case study protocol (please see Appendix E for the case study protocol). Yin (2014) recommends including the following elements in a case study protocol:

Overview of the case study. This includes the overall mission and goals of the researcher, case study questions, hypotheses, and propositions, theoretical framework, as well as the role of the protocol in guiding the researcher.

Data collection procedures. This includes the names of the people doing fieldwork, data collection plan, as well as the anticipated preparation prior to fieldwork.

Data collection questions. This includes the specific questions that the researcher must keep in mind when collecting data for the study.

Guide for the case study report. This includes an outline, format for the data, use and presentation of other documentation, as well as bibliographical information.

I also developed a case study database to ensure the reliability of the study. Within this database, I included all of the data such as transcripts, documents, as well as any other notes collected during the study. This data is highly organized, allowing ease of retrieval by an outside reader.

To also help bolster the reliability and trustworthiness of the study, I also piloted my interview questions with peers as well as with a few of the participants. I sought feedback and then incorporated that feedback into my interview questions. On another note, I also had some of my participants read over the findings to seek out and incorporate their overall feedback into this study.

Limitations

Even though there were tactics to ensure the reliability and validity of this study, there were still several limitations. Case studies have been criticized for their lack of rigor, primarily due to the researcher failing to take adequate measures to ensure the reliability and validity of the study (Yin, 2014). Another primary concern about case study research is the issue of generalizability from case study findings. The main concern centers on the extent to which a researcher can generalize from a single case (Yin, 2014). However, case studies are generalizable to theoretical propositions (Yin). In addition, I also was very aware of the subjectivities that I have, and therefore, I ensured that I sought feedback from both peers and participants regarding my research questions, interview questions, as well as field notes. Overall, I attempted to triangulate the data as frequently as I could.

CHAPTER 4

DATA ANALYSIS

Opening Remarks: Cases

Two education departments are used in this study, each of which represents a case. These cases include the Graduate School of Education (GSE) at Stanford University and the College of Education (CoE) at the University of Washington. These two cases have comparable yet very contrasting differences. For example, the GSE and the CoE are considered to be equally reputable departments, yet the GSE is situated within a substantially wealthier university, allowing for a tremendous increase of resources for students compared to the CoE. Within the GSE, PhD students belong to a formal cohort and typically attend their program full-time, whereas many of the CoE PhD students attend part-time while working a part time to full time position outside of the CoE. Often, students in the CoE seek employment outside of the University of Washington, writ large. In addition, PhD students at the CoE do not belong to a formal cohort. Overall, these differences between the two programs, lend them to be particularly unique cases to study the experiences of PhD students, and particularly, as their experiences relate to their completion or attrition in their PhD program.

Brief Overview of Stanford University

Stanford University is one of the leading teaching and research institutions in the world. Stanford is located in California's Silicon Valley. The campus consists of 8,180 acres. As of this writing, there are approximately 16,000 students at Stanford. The university has seven schools: Business, Earth Sciences, Education, Engineering, Humanities and

Sciences, Law, and Medicine. As of this writing, the university has an endowment of approximately \$18.7 billion.

According to Stanford's website:

Stanford University is one of the world's leading research universities. Stanford is known for its entrepreneurial character, drawn from the legacy of its founders, Jane and Leland Stanford, and its relationship to Silicon Valley. Research and teaching emphasize interdisciplinary approaches to problem solving. Areas of excellence range from the humanities to social sciences to engineering and the sciences. Stanford is located in California's Bay Area, one of the most intellectually dynamic and culturally diverse areas of the nation.

The Graduate School of Education at Stanford University

The Graduate School of Education at Stanford sponsors twenty-five areas of specializations within the PhD, M.A., and M.A./Teaching Credential programs.

According to the Graduate School of Education's website, the mission of the GSE is:

Aiming towards the ideal of enabling all people to achieve maximum benefit from their educational experiences, the Graduate School of Education seeks to continue as a world leader in ground-breaking, cross-disciplinary inquiries that shape educational practices, their conceptual underpinnings, and the professions that serve the enterprise.

The Graduate School of Education is a wealthy school relative to other schools of education across the United States. For example, all PhD students are guaranteed five years of full funding. When I visited the GSE, I spent time within their extensive library, study lounges, the auditorium, as well as spent time observing students and faculty in the relatively large study spaces. I also spent time in the two primary buildings that comprise the GSE. In addition, the GSE sponsors frequent social events for its students, staff, faculty, and alumni. These events can include holiday parties, celebrations, end of the quarter events, as well as opportunities to collaborate, celebrate, and build community.

As I previously mentioned, a particularly important characteristic of the GSE is that PhD students belong to a formal cohort of students. When I visited the GSE, I was informed by several members of the GSE that the PhD cohorts are relatively small; there are approximately 30 to 40 students per cohort with approximately 65 faculty members in the GSE, providing a near 2:1 faculty to student ratio. This cohort model is largely designed to provide students with social support, extensive opportunities for collaboration, as well as an overall rich educational experience during their time at Stanford University. The majority of students are considered full-time students while attending to their research assistantship part-time.

In the Graduate School of Education, PhD students are paired with a faculty advisor. Working with their respective faculty advisor, students still chart out their own experience based on their research and professional interests. When I inquired about the graduation rate for PhD students, I was informed by an administrator that most PhD students graduate from the program, and rarely do students leave prior to earning their PhD.

It was important for this study to include a case that follows a formal cohort model in comparison to a case that does not follow this model. Given that Lovitts (2001) as well as many others have argued that social isolation is one of the most significant factors that leads to attrition, it is very valuable to include a case that has a very collaborative and tightly knit student body in comparison to a program that does not follow such a structure. As will be explained in a subsequent section, PhD students in the College of Education at the University of Washington do not belong to a formal cohort model. Given the theoretical propositions that are guiding this study, the degree to which PhD students felt *relatedness*,

competence, and autonomy during their experience will be important to compare in both cases. For example:

- Did the former PhD students from the GSE have a stronger sense of relatedness in comparison to students in the CoE, and if so, to what degree?
- And if so, to what degree did this appear to help motivate and encourage their persistence in their program?
- To what degree did their sense of relatedness appear to influence the other primary factors of the self-determination theory, specifically their feelings of competence and autonomy?

Overall, including a case that followed a formal cohort model with a case that did not follow such a model can help to inform the theoretical propositions guiding this study.

Brief Overview of the University of Washington

The University of Washington is located in Seattle, Washington and is the state's flagship university. It is one of the oldest universities on the West Coast. The university is a multi-campus university consisting of three campuses in the state of Washington and also has a preeminent academic medical center. The University of Washington contains 16 colleges and schools and offers over 1,800 undergraduate courses each quarter. In addition, the University of Washington awards more than 12,000 bachelor's, master's, doctoral and professional degrees. As of this writing, the University of Washington has an approximate student population of 50,000. According to the University of Washington's website:

The academic core of the University of Washington Seattle campus is its College of Arts and Sciences; the teaching and research of the University's many professional schools provide essential complements to these programs in the arts, humanities, social sciences, and natural and mathematical sciences. Programs in law, medicine,

forest resources, oceanography and fisheries, library science, and aeronautics are offered exclusively (in accord with state law) by the University of Washington. In addition, the University of Washington has assumed primary responsibility for the health science fields of dentistry and public health, and offers education and training in medicine for a multi-state region of the Pacific Northwest and Alaska. The schools and colleges of built environments, business, education, engineering, environment, information, nursing, pharmacy, public affairs, and social work have a long tradition of educating students for service to the region and the nation. These schools and colleges make indispensable contributions to the state and, with the rest of the University, share a long tradition of educating undergraduate and graduate students toward achieving an excellence that well serves the state, the region, and the nation.

The College of Education at the University of Washington

Though the College of Education can be considered an equally reputable department when comparing it to the Graduate School of Education, the College of Education differs in several ways. According to the College of Education, the mission of the CoE is:

The College of Education at the University of Washington believes that an effective public education system for a diverse citizenry is the cornerstone of a democratic society. To that end, we dedicate our resources to helping make an excellent education a daily reality for every student in every community across this state and across the country.

At the College of Education, PhD students are not guaranteed funding. Nonetheless, there are funding options such as research, teaching, as well as graduate staff assistantships. However, generally less than half of the PhD students on any given year are fully funded. I was informed that the reason why funding is limited to just a select group of students on any given year is because the college admits significantly more students than it can fully fund.

PhD students are not grouped by formal cohorts. Many of the College of Education students attend school part-time while working either part-time or full-time outside of the CoE and often outside of the University of Washington. Many of these students are working

professionals with families and other large responsibilities and are only on campus for class and or to attend to their other academic tasks.

The CoE also offers a Doctor of Education degree (Ed.D.). This degree is directed more towards preparing students for their professional practice. According to the College of Education's website:

A Doctor of Education degree is designed to prepare a student for advanced professional practice directed mainly toward the application or transmission of existing knowledge. The program of study leading to the Doctor of Education, as a professional degree, focuses on the utilization of research knowledge, rather than on the production of new research knowledge. Those who aspire to leadership positions as administrators, policy analysts, curriculum designers, or learning resource specialists, for example, would appropriately seek the Doctor of Education degree. Our graduates have a finely tuned specialty expertise, an understanding of research development and application for positions in administrations, policy analyst, curriculum designer, or learned resources specialist.

The CoE also offers undergraduate programs such as the Early Childhood & Family Studies major, whereas the GSE does not offer any undergraduate programs.

On the other hand, the College of Education is similar to the Graduate School of Education in several ways. The CoE has more than twenty-five area of specializations within its graduate programs. Similar to the GSE, students are paired with a faculty advisor, and this faculty member guides the student in their course of study based on the student's research and professional interests. The CoE also has some of the same resources as the GSE. For example, the CoE has a student lounge, computer labs, as well as additional study spaces for students. And similar to the GSE, the CoE offers several social events throughout the year such as celebrations, brown bag lunches, colloquiums, parties, and overall opportunities to build community.

Given the research questions guiding this study, the College of Education is a unique case to compare to the Graduate School of Education. As was previously discussed, because PhD students within the CoE do not belong to a formal cohort of students, it will be very valuable to compare their experience with former GSE students who did belong to a cohort. For the former students who came from the CoE, it will be interesting to inquire about the following:

- To what degree did they feel a sense of relatedness in comparison to the students from the GSE?
- To what degree did feeling relatedness appear to help motivate and encourage their persistence in their program?
- To what degree did feeling relatedness appear to influence the other primary factors of the self-determination theory, specifically their feelings of competence and autonomy?

Overall, including a case that does not contain a formal cohort model for the PhD students with a case that did follow a formal cohort model can help to inform the theoretical propositions guiding this study.

Opening Remarks: Participants

I interviewed former PhD students, faculty, as well as student affairs professionals from the Graduate School of Education and from the College of Education. Through interviewing faculty and student affairs professionals, I gathered additional perspectives and depth to add to the overall context of this study. It was beneficial to hear faculty and student affairs professionals' perspectives towards if and how they believe students are provided

with opportunities to feel competence, relatedness, and autonomy during their PhD experience. I attempted to gain additional diversity by including participants who differed by race, gender, and professional rank. The length of each interview ranged from 25 to 75 minutes. The interviews were either conducted at the participant’s professional office or via telephone, and the majority of the interviews were digitally recorded.

The Graduate School of Education

Former Students. I interviewed eight former PhD students from the Graduate School of Education. Three of the participants are female and five are male. Out of these eight participants, all were fully funded during their PhD experience, mostly through research assistantships as well as other grant funding. All of these participants attended their PhD program full-time. Out of these eight participants, two withdrew from the Graduate School of Education.

Bruce	Graduated
Laurie	Graduated
Peter	Graduated
Sarah	Graduated
Scott	Graduated
Dave	Graduated
Mike	Withdrew
Meghan	Withdrew

Graduate Faculty Members. I interviewed three graduate faculty members who have advised several students during their career as faculty members. The first faculty member is a full professor. The second faculty member is an associate professor, and the third faculty member is an assistant professor. All three faculty members are male.

Professor Jim

Professor Smith
Professor Amy

Student Affairs Professionals. I interviewed three full-time student affairs professionals who primarily assist students with their non-academic endeavors.

Rachel
Chris
Brian

The College of Education

Former PhD students. I interviewed nine former PhD students from the College of Education. Five of the former PhD students are female and four are male. Out of these nine former students, four had full-time positions outside of the University of Washington during their time as PhD students and attended their PhD program part-time, while only two of the students had graduate staff assistantships and attended the PhD program full-time. Out of these nine participants, three formally withdrew from the College of Education prior to earning their PhD.

Holly	Graduated
Isabella	Graduated
Johnny	Graduated
Margaret	Graduated
Steve	Graduated
Rachel	Graduated
Molly	Withdrew
Celine	Withdrew
Patrick	Withdrew

Graduate faculty members. I interviewed three graduate faculty members who have advised several students during their career as faculty members. The first faculty member is a full professor in the College of Education. The second faculty member is an associate professor. The third faculty member is an assistant professor. One of the faculty members is male and the other two are female.

Professor Desai
Professor Jay
Professor Roberts

Student affairs professionals. I interviewed three full-time student affairs professionals who primarily assist students with their non-academic endeavors.

Ryan
Kate
Michelle

Further Remarks: Cases and Participants

As Lovitts (2001) and others have indicated, the two most significant factors that lead to PhD student attrition are stress and social isolation. This study is largely framed within the context of the self-determination theory, which proposes that in order to persist through challenges and remain motivated to both set and accomplish goals, individuals must feel competence, relatedness, and autonomy (Ryan & Deci, 2000).

In the context of this study, it was important to compare a case that follows a formal cohort model with a case that does not have a formal cohort model. It was beneficial to include a case that follows a formal cohort model, simply because students may have more interaction and collaboration with their peers and thus a lesser degree of social isolation. With the case that does not follow a cohort model, students may have a lesser degree of

interaction and collaboration with their peers, and thus a higher degree of social isolation. From these cases, I am able to compare the experiences of students coming from two equally reputable, yet largely differing programs. I can specifically compare former students' experiences in terms of the degree to which they felt competence, relatedness, and autonomy during their doctoral student careers.

Former PhD Students: Interviews

When I interviewed former PhD students from the Graduate School of Education and from the College of Education, I asked these former PhD students questions that primarily centered on the degree to which they felt relatedness, autonomy, and competence during their experience in their doctoral program. For example, some of the questions that focused on the degree to which they felt relatedness during their doctoral experience targeted the kinds of social support they had during their journey. I inquired about the degree to which they were able to collaborate and interact with their peers on academic and non-academic endeavors. I also asked participants about the degree to which they were able to interact with their peers outside of their department.

In terms of the degree to which former students felt competence during their doctoral experience, I asked them questions that centered on the degree to which they were able to develop their academic skills. I inquired about the degree to which they felt they were able to develop additional skill-sets such as interviewing, networking, as well as resume and cv writing. I asked participants questions that centered on their familiarity with the overall structure and culture of their respective PhD program. I also inquired about any opportunities they had prior to becoming a PhD student that allowed them to become

acquainted with the culture, structure, faculty-advisor relationships, as well as the overall academic expectations of being a doctoral student.

In terms of the degree to which former students felt autonomy during their PhD experience, I asked them questions that focused on the degree to which they felt they had ownership and control over their doctoral journey. I asked them questions that centered on their freedom to select their own courses, research, and other academic projects. I also asked the former students about their ability to participate in additional extracurricular activities of their choosing. Please see Appendix A for the interview questions for the former PhD students.

Graduate Faculty: Interviews

When I interviewed faculty members from the Graduate School of Education as well as from the College of Education, I asked faculty members their perspective on students' ability to feel competence, relatedness, and autonomy during their doctoral experience. In terms of helping their students to feel relatedness, I asked faculty members to elaborate on the types of social support they provide to their students. I also inquired about their perspective on ways to increase the social support for students.

With regards to the degree to which students can feel competence during their PhD journeys, I asked faculty members about the different means students could develop their academic skills. I inquired about the different ways in which students could mature in their overall professional development. I also asked these participants their perspectives on how students could better collaborate with their peers on academic and non-academic projects.

I asked graduate faculty members about the degree to which PhD students are able to practice their autonomy during their doctoral experience. I inquired about the degree to which faculty members have guided their students in course selection, research, as well as additional academic and non-academic projects. I also asked faculty members about their perspectives on how students can become more autonomous during their doctoral experience. Please see Appendix B for the interview questions for the graduate faculty members.

Student Affairs Professionals: Interviews

Similar to the interviews that I conducted with graduate faculty members from both the Graduate School of Education and the College of Education, when I interviewed student affairs professionals, I asked them about their perspective on students' ability to feel competence, relatedness, and autonomy during their doctoral experience. In terms of helping their students to feel relatedness, I asked these participants about the types of social support that are available for students as well as any type of support that they directly provide to the students. I also inquired about their perspective on how to increase the social support for students.

With regards to the degree to which students can feel competence during their PhD journeys, I asked student affairs professionals about the means by which students could develop their academic skills. I inquired about the different ways students could mature in their overall professional development. I also asked these participants their perspectives on how students could better collaborate with their peers on academic and non-academic projects.

I asked student affairs professionals about the degree to which PhD students are able to practice their autonomy during their doctoral experience. I also asked these participants their perspectives on ways students can gain more autonomy during their doctoral experience. Please see Appendix C for the interview questions for the student affairs professionals.

Event Observations

Another means of collecting data for this study included observing events that were sponsored by the Graduate School of Education and the College of Education. These events included end-of-the quarter celebrations, holiday celebrations, as well as brown bag lunches. During these events, I sought to learn more about the culture and structure of the GSE and the CoE. I also used these events to talk with current graduate students, staff, and faculty.

I found these events to be an excellent way of learning more about the department and as a means to learn about the experience of current students. As a result, I sought to engage in as many conversations with faculty, staff, and students as possible. Often through conversations with students, staff, and faculty members at these events, I obtained very rich information that was useful for this study, and I obtained a “snapshot” of the GSE and the CoE respective communities.

I was also very attentive to the degree to which these events allowed current students to talk with each other and with other faculty members, staff, and administrators. I paid particular attention to the degree to which these events appeared to have fostered a sense of connection and relatedness for the current students. I observed the degree to which

students interacted with other students, staff, and faculty. I also paid attention to the degree to which faculty and staff made contact with students.

Immediately after attending these events, I spent time taking notes on the experience. I took notes on the (a) context of the event, (b) conversations that I had with students, staff, and faculty, (c) approximate number of people in attendance, (d) degree to which students appeared to interact with each other, (e) degree to which faculty and staff made contact with students, as well as (f) anything else that I thought would be useful for this study. Overall, these events were an additional means of obtaining rich information of the GSE and the CoE. Please see Appendix D for the event observation guide that I used while attending these events.

Emerging Themes and The Coding Process

As has been previously mentioned, I collected data from student affairs professionals, faculty, and former PhD students from the Graduate School of Education and the College of Education. I broke down this raw data by emerging themes. The student affairs professionals and faculty members provided a sort of birds-eye view to help shed light on the experiences of PhD students.

I interviewed eight former PhD students from the GSE and nine former PhD students from the CoE ($n = 17$), and I coded this interview data. According to Saldaña (2009), a code is generally a word or short phrase that is “symbolic of a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (p. 3). Coding also involves “aggregating the text or visual data into small categories of information, seeking evidence for the code from different databases being used in a study,

and then assigning a label to the code” (Creswell, 1998, p. 184). Coding is also considered an exploratory problem-solving technique without exact formulas that the researcher is required to follow. In fact, coding is really the initial step in developing a more “rigorous and evocative analysis and interpretation for a report” (Saldaña, p. 8).

In this study, I am using *a priori codes* as part of the coding process. A priori codes typically stem from the conceptual framework and research questions (Creswell, 1998). Since I am examining PhD attrition and completion using the self-determination theory as a lens, I have selected three codes, which include:

- Competence
- Relatedness
- Autonomy

Using *a priori codes* limits the analysis to the use of these predetermined codes as opposed to opening up the codes to reflect the perspectives of the participants in a more traditional qualitative process (Creswell, 1998). To help offset this limitation, Creswell recommends that researchers be open to using additional codes that surface during the analysis.

The Codebook

Competence. This can be defined as having requisite or adequate ability or qualities (Merriam-Webster, 2003). This can include:

- Demonstration of the skill-sets needed to excel in the PhD program.
- Strong familiarity with the culture, namely norms, values, and expectations within the program.

- Sufficient understanding of the structure and processes of their program, such as knowing all of the requirements and expectations necessary to earn the degree, as well as having the skill-sets and overall knowledge base to successfully complete these requirements.
- Awareness of the available academic and non-academic resources to help the student excel and develop the necessary skill-sets and knowledge base to successfully earn their degree.

Relatedness. This can be defined as connected by reason of an established or discoverable (Merriam-Webster, 2003).

- Sense of connection to the PhD program and of the participants' prior respective department and postsecondary institution, writ large.
- Having relationships with several members of their respective department, such as faculty, staff, and other students in the program.
- Spending time with their classmates, peers, and colleagues outside of their program and postsecondary institution.
- Having several mentors, advisors, as well as other colleagues who helped guide the participant, in both his professional and personal life.

Autonomy. This can be defined as the quality or state of being self-governing (Merriam-Webster, 2003).

- Strong sense of agency to take ownership over participants' PhD experience. Awareness over the requirements and expectations to successfully earn the PhD and then tailoring their own experience to make it their own.

- Choosing, academic and non-academic activities to become involved with during their time as students.
- Demonstrating the confidence to successfully progress and complete their degree

CHAPTER 5

FINDINGS

THE COLLEGE OF EDUCATION

This chapter will present the findings from the College of Education at the University of Washington. This chapter will incorporate the perspectives from student affairs professionals, faculty, and certainly, the former PhD students from the College of Education. The findings from the student affairs professionals and faculty members will be presented first because they have provided rich context and foreground information to situate the responses of the former PhD students. The data from the student affairs professionals and from the faculty members has been broken down by emerging themes. The findings from the former PhD students will then follow. The data from the former PhD students has been broken down by *a priori codes*, which include competence, autonomy, and relatedness.

A Student Affairs Perspective on the PhD Experience

On Feeling Competence

Through talking with the student affairs professionals in the College of Education about how PhD students can feel competence during their doctoral experience, two primary themes began to emerge. These themes include (a) PhD students need opportunities to practice their professional development skills and (b) PhD students can build competence by utilizing available resources.

PhD students need opportunities to practice their professional development skills. To some extent, the student affairs professionals discussed that students can develop competence by taking advantage of opportunities that allow them to practice and develop their skill-sets. For example, to some degree, each student affairs professional indicated that students need opportunities to practice writing, researching, as well as career development opportunities such as cv writing, interviewing, and networking. Ryan discussed that often times, the CoE will recruit current PhD students to deliver professional development content to other students in the college. This can include, topics such as how to craft a resume, CV, as well as how to give an effective and impactful job talk.

These opportunities provide an opportunity for PhD students to practice their mentoring, teaching, and overall presentation skills to an audience of peers. While he further explained that sometimes students do not obtain enough practice developing in their skill sets. Michelle also explained that PhD students need to practice resume writing, job searching, as well as their academic writing, and attend workshops on these topics as much as they possibly can.

Kate mentioned that it is the responsibility of the faculty advisor to provide students with opportunities to practice their skill-sets. She said that it is definitely important for students to attend events that will allow them to develop new skill-sets and expand their professional horizons. However, it is really on the advisor to provide the student with a sufficient amount of opportunity to practice and develop a strong sense of competence.

PhD Students can build competence by utilizing available resources. An additional theme that began to emerge from the student affairs professionals is that students can develop a sense of competence largely from utilizing the resources that are available to

them, such as the writing center, research commons, career center, as well as other resources that the College of Education and the Graduate School provide. However, the student affairs professionals indicated that sometimes students do not take advantage of the resources, and sometimes they do not even know that they exist.

At the College of Education, students also need to take initiative to utilize the resources that are available to them. For example, because there is not a formal cohort model that binds PhD students together; students are often required to seek out their own information from the student services office, their graduate advisor, as well as their peers. For example, Michelle said:

Because the college does not have a prescribed course of study, some of the doctoral students enter, and their first question is, 'What classes do I take?' and our message is, we want you to be kind of in the lead with your faculty advisor about what classes are specific to you and all the courses that will help lead your research.

Ryan further explained that largely because there is not a formal cohort model in place for these students, that they often obtain the majority of their knowledge of the PhD program from their faculty advisor, committee members, and or other mentors in their program.

Ryan also talked about the regular communication efforts of the CoE such as emails, fliers, and listservs, etc. These forms of communication often serve as a valuable means of spreading information about degree requirements, course selections, as well as more career oriented topics such as when events are held to help students write resumes and their cv as well as prepare for job interviews and help them in their overall career exploration. This is largely because many of the PhD students have full-time positions outside of the University of Washington, and many of these students are not on campus to hear about these types of opportunities.

Kate also explained that the events that the College of Education sponsors, can serve as a primary means of informing students about academic and non-academic matters. Kate mentioned:

We greatly value opportunities like Prospective Student Days, Orientation, and the like. We put a lot into these events because we know that students often rely on these events as a means of learning about the program as well as other professional opportunities that are available to them.

Recap. The student affairs professionals have argued that students can expand their competence by taking advantage of opportunities to practice skill-sets such as their writing, researching, and presenting skills, as well as other career focused skills. These participants also argued that students need to utilize the resources that are available to them such as the Office of Student Services, communication efforts from the CoE, as well as their faculty advisors.

On Feeling Relatedness

Through talking with the student affairs professionals, two themes began to emerge on how students can feel relatedness during their PhD experience. These themes included (a) multiple ways for PhD students to feel connected and (b) the structure of the College of Education may prevent students from feeling relatedness to their peers as well as to the department.

Multiple ways for PhD students to feel connected. The College of Education student affairs professionals, to some extent, indicated that students need to feel connected to their peers, department, and to the university writ large. However, each student affairs professional had his or her unique take on how students can develop a sense of feeling connected. For example, Ryan said:

Students get that [sense of relatedness] through sort of groups that they develop or that they feel they belong to based on their relationship with their advisor or their other advisees. In some cases, those kinds of social support develop in a structured kind of way when some advisors will hold sort of cohort seminars that they operate continuously with students. Sometimes they develop a less structured way, perhaps, through a series of classes that they have taken with someone.

Kate discussed the importance of attending the CoE events, such as socials, seminars, and brown bag lunches to feel a sense of connection. Kate said that these events are a very effective way for PhD students to become “involved and build relationships with current students.” Kate further mentioned that it can be very difficult for students to feel connected with each other when they have so many different professional, family, and overall life situations. The student body in the PhD program in the CoE is very diverse and can make it difficult to bring students together.

Michelle explained that students can use the internal resources of the CoE as a means to feel connected to the college. She said:

We have our student office which is set up to provide any level of support whether it is just getting a quick answer, getting them in a forum, getting them connected to a faculty [member], referring them to an office outside the College of Education and linking them to our Graduate School colleagues.

The structure of the CoE may prevent students from feeling relatedness. One finding that began to emerge from talking with the student affairs professionals is that because there is not a formal cohort model in place, students may have a more difficult time feeling connected to their peers as well as to the College of Education. And because these students are often employed at other institutions around the geographic region and may have family and other obligations, it is often difficult to promote student involvement. Kate mentioned, “From my perspective, we want to have a strong community, but it’s kind of like

a push and pull. Students want to feel like they belong here, but because they have so many other things going on, they often can't do anything extra in our department.”

On the other hand, all of the student affairs professionals discussed several of the opportunities to help students hopefully develop a stronger connection to the College of Education. For example, the college offers “Coffee Tuesdays” which is an event open to students, faculty, and staff. There is also the Associated Students of the College of Education. This group provides student activities all around campus. These activities can range from bowling night in the Husky Union Building (HUB) to going out for beverages at a local bar in the University of Washington District.

Recap. To some extent, the student affairs professionals have agreed that students need to feel a strong sense of connection to their peers, department, and university. This can be accomplished in multiple ways, such as attending events like Coffee Tuesdays, Brown Bag Lunches, and other CoE sponsored events. At the same time, these participants have indicated that it might be somewhat difficult to feel connected, largely due to the structure of the college.

On Feeling Autonomy

Through talking with the student affairs professionals in the College of Education, two themes emerged on feeling autonomy during the PhD experience. These themes included (a) autonomy can be influenced by faculty advisors and by PhD students overall life situations and (b) the structure of CoE promotes a high degree of autonomy.

Autonomy can be influenced by faculty advisors and by PhD students overall life situations. To some extent, the student affairs professionals at the College of Education argued that students should feel a sense of autonomy. These participants argued that students need to feel like they are in somewhat control of their PhD experience. However, their faculty advisor as well as their overall life situations may largely dictate this ownership. Faculty advisors can range in the amount of control they exhibit over their students' academic endeavors and overall PhD experience. For example, Kate argued:

There are going to be some faculty members who let their students be very independent and kind of give them a little bit of guidance, and then there are going to be some faculty members who are very much dictating the kind of outline and the structure that the students should be following.

Michelle discussed that students' autonomy will be significantly dictated by their life situations. For example, students who are working a full-time position and are attending school part-time, may not have the type of opportunities that full-time students have. For example, they may not be able to become involved in as many research projects and or other professional development opportunities. They might not be able to attend the socials and or other gatherings that the college sponsors.

The structure of the CoE promotes a high degree of autonomy. All three of the student affairs professionals indicated that there is often a high degree of autonomy in the CoE, largely due to the structure. According to Ryan, "Students, under the direction of their faculty advisor, will select the appropriate courses and research projects that fit their intended outcomes." Also, in many cases, PhD students are entering with an already established background of several years of professional experience. These students may already know "the path they need to take to reach their destination", according to Kate.

The student affairs professionals have all agreed that students need to have autonomy during their PhD experience. However, much of their autonomy may be influenced by the amount of control their faculty advisor exhibits over their PhD experience as well as by their position in life. At the same time, the structure of the CoE allows for students to have a high degree of autonomy.

Conclusion

The student development professionals at the College of Education have all indicated that students need to develop competence. This can be accomplished by providing students opportunities to practice and develop their skill sets. The participants also indicated that students need to take it upon themselves to utilize the available resources that will help guide them throughout their PhD experience.

The student development professionals also reported that students need to feel connected to their peers, department, and to the university. Each student development professional has a unique perspective on ways this can be accomplished. For example, students can develop a connection by attending events such as brown bag lunches. Also, the not having a formal cohort model may lead to a lack of feeling connected in the department. Last, the student development professionals indicated that students need to have autonomy during their PhD experience. However, this autonomy can be largely dictated by the faculty advisor and by their overall life situation.

A Faculty Perspective on the PhD Experience

On Feeling Competence

Through talking with the three faculty members in the College of Education, two primary themes began to emerge about feeling competence during a PhD program. These themes include (a) faculty advisors can influence competence by providing opportunity to develop skills and providing constructive feedback and (b) faculty advisors call for a stronger investment in resources for PhD students to build competence.

Faculty advisors can influence competence by providing opportunity to develop skills and providing constructive feedback. The College of Education faculty generally believed that faculty advisors have a substantial influence on helping students develop competence. Two of the CoE faculty explained that it is largely up to the faculty advisor to provide opportunities for students to develop skill-sets as well and to provide constructive feedback on how to improve their skills. According to Professor Jay:

So our faculty meets with the advisees regularly. Faculty advisors provide them with opportunities for them to publish. We gave them constructive feedback in the classes regarding their skills. And we also give feedback on professional behavior so we give them quite a bit of professional feedback in that regard in the academic content side.

Professor Jay also mentioned that he and his colleagues like to provide feedback on all different aspects of students' professional development. He indicated:

Nothing is outside of our realm of providing our students with constructive feedback. So we will talk about how their presentation looked and how abrasive they might have been, how certain words that they use that can be considered inappropriate and so forth.

Professor Desai talked about the importance of providing constructive feedback, but she specifically indicated that it is important that faculty advisors provide opportunities for

their students to give each other feedback. Professor Desai talked about the opportunities she provides for her students to develop competence in the job-application process. She said, “I know from my experience, I frequently encourage my students to look at each other’s cv’s as well as help give my students opportunities to practice job talks in front of each other.” All three professors indicated that it is also important that the faculty advisor provides guidance in terms of all of the degree requirements, course selection, as well as overall direction in research projects.

Faculty advisors call for a stronger investment in resources for PhD students to build competence. Another theme that began to emerge from talking with all three faculty advisors in the College of Education is that all, to some extent, argued for a much stronger investment in PhD students. Primarily, they advocated for more resources to be allocated to students that will provide them with more preparation to enter a PhD program as well as to provide them with more opportunities once they are PhD students. Professor Jay said:

I think it is tough being a PhD student. One of the things that I would like to put on record is that I think we as a country as well as at the university, need to find ways that we can provide better support for our PhD students, especially, financially. Some institutions are really good at it, and they get top notch students. I think the the College of Education still tends to struggle and loose some of the top notch students because of the financial aid difficulties. And I think it is more a societal issue, because I don’t think we prioritize providing tax dollars to support PhD students or funding for education that we spend our money in other places that are deemed more important. We loose the top notch people to the private institutions. They get fully funded, and when you look at our government bodies, and what they keep doing is taking our money away from higher education. That is a terrible cycle.

Professor Desai also talked about how the lack of funding for PhD students prevents their professional development as scholars, researchers, and practitioners. Professor Desai discussed that the lack of funding prevents PhD students from participating in research

opportunities and other academic endeavors. Professor Roberts also echoed the lack of funding available for PhD students. Professor Roberts stated:

I can't believe the lack of funding for our PhD students. It completely prevents them from participating in tons of professional development opportunities like academic conferences, opportunities to do research, or study abroad. Students often graduate with only partial training.

Recap. The faculty members have indicated that students need to feel competence during their PhD experience. The faculty members argued that a lot of responsibility falls on their shoulders to provide students with opportunities to develop skill sets, to practice skill sets, and then to have opportunities to hear constructive feedback. The faculty members also argued for a stronger investment in resources allocated to PhD students to support their professional development.

On Feeling Relatedness

Through talking with the faculty members in the College of Education, two primary themes began to emerge on feeling relatedness in a PhD program. These themes included (a) the role of faculty advisors in helping PhD students feel relatedness and (b) the lack of PhD student funding might contribute to a weaker sense of community.

The role of faculty advisors in helping PhD students feel relatedness. One theme that emerged from talking with the faculty members in the College of Education is that all three faculty members, to some degree, said that students can develop a connection to others in the CoE through their faculty advisor. Specifically, faculty advisors should provide opportunities for their students to connect with other students; they can provide their students with opportunities to collaborate on research and other projects together. Professor

Jay talked about the importance of providing opportunities for students to collaborate on projects. He said that because there is not a formal cohort model in the CoE and because many students only attend part-time, this can create an environment where students do not feel very connected to each other or to the College of Education writ large.

Professor Desai also discussed the collaborative opportunities that can emerge when faculty advisors receive research grants. Professor Desai stated:

This allows PhD students who are working on those grants great experience with upwards of 4, 5, 6 students while they work on their research projects and they get to know each other socially and they travel together to collect data, all kinds of things. That's a really rich experience when that is available, but it is not available to all the students.

Professor Roberts also explained that faculty advisors can have a significant influence on the degree to which students feel connected to CoE. Professor Roberts explained, “The faculty advisor can often provide ample opportunities for students to get involved in this college.”

Lack of PhD student funding might contribute to a weaker sense of community. Another theme that began to emerge from talking with faculty in the College of Education is that the lack of funding for many PhD students can prevent a strong sense of community. Professor Desai explained that the lack of funding may prevent students from building community simply because the lack of funding prevents students from participating in many activities together such as traveling to conferences. Professor Jay said “I think the community for the PhD students in the College of Education is probably a little disparate; meaning that I think each different area or program has their own PhD student kind of doing there own thing.” Professor Roberts explained that because of the lack of funding, students don't have as many opportunities to spend time together. Specifically, many students must

find employment in places outside of the College of Education and sometimes outside of the University of Washington, “just to have the funding to continue their PhD program.”

Recap. The faculty members have, to some extent, indicated that students’ faculty advisors can play a large role in helping students to feel connected. Specifically, faculty advisors can provide opportunities for students to meet other students and faculty as well as learn from each other. Faculty advisors have also argued that because there is a lack of funding for PhD students in the CoE, this prevents many opportunities for students to collaborate together and spend a lot of time together. For example, students, more often than not, will need to find employment outside of the college and even outside of the university to make ends meet.

On Feeling Autonomy

Through talking with the three faculty members in the College of Education, one theme began to emerge on feeling autonomy during the PhD experience. This theme is that the structure of the College of Education provides ample autonomy for PhD students.

The structure of the CoE provides ample autonomy for PhD students. One theme that began to emerge from talking with faculty members in the College of Education is that the structure of the CoE provides PhD students with ample opportunities for students to demonstrate their autonomy. With the exception of a two-quarter educational inquiry series, PhD students have a significant amount of freedom to take classes of their choosing. Generally speaking, students should work closely with their faculty advisor in selecting a course of study that is specifically tailored to their research and other professional goals.

Students also generally move through the PhD program at variable rates, and therefore complete their degree requirements at various speeds. These requirements include their coursework, research and inquiry papers and presentations, general exams, and, of course, their dissertation. As has been previously mentioned, this variable speed is largely a function of the diversity of students, particularly in terms of their personal and professional positions.

Some students are already seasoned professionals who have decided to take their career to the next level by earning PhDs. Many students are also parents who have other family and or professional responsibilities. Therefore, some students move through the program quickly (3-4 years) while others take significantly longer (6-8 years or even longer). Because of this variability, the faculty members, in this study, have indicated that this can create confusion for students, particularly when it comes to successfully completing their degree requirements.

Professor Desai stated:

We have a much less structured program than other PhD programs from my understanding of other PhD programs in a lot of respect. Our requirements are fairly minimal when it comes to sort of uniform requirements, and so this can create a lot of ambiguity and confusion for students. This is also a huge way for people to really sort of develop their own thing.

Professor Desai further explained that the classes in the CoE are not sequenced in a manner that allows students to “move through them in a logical sequence.”

PhD students in the College of Education are supposed to organize their courses around three cognates. Each cognate represents a specialization of a certain topic area that the student and faculty advisor decide would be most appropriate in helping the student reach his or her professional goals. However, according to all three of the faculty members,

many students do not have a sufficient understanding on cognates and how to structure their coursework in a logical manner. According to Professor Desai, “I do think we need to get more definition about what we mean by cognates. Students need more examples of what cognates can look like.” Professor Roberts also explained that students walk in asking, “What the hell is a cognate?”

Recap. The structure of the College of Education is fairly loose. Students have ample opportunities to select courses, research projects, as well as to some extent, decide when they want to complete the major milestones such as their research and inquiry presentations, comprehensive exams, and their dissertation. However, because the structure is loose many students can become confused; they often do not have a clear sense of direction in navigating their degree requirements and help in navigating coursework.

Conclusion

The faculty advisors from the College of Education at the University of Washington have provided rich context and have added perspective to the overall propositions guiding this study. These individuals discussed the importance of faculty advisors providing opportunities for PhD students to practice and develop skill-sets while given opportunity to receive constructive feedback. Furthermore, the faculty members have called for a stronger investment for PhD students.

The faculty additionally talked about their role in providing opportunities for their students to feel connected to their department. They also discussed that a lack of funding for PhD students can lead to a lack of a strong community for PhD students. Last, the faculty argued that the loose structure of the College of Education can promote a strong sense of

autonomy, but the structure of the CoE can lead to a fair amount of confusion in terms of degree requirements for the students.

The Former PhD Students

Feeling Competence, Relatedness, and Autonomy During Their PhD Experience

From the former PhD students from the College of Education, 88% indicated that they overall felt competence during their PhD experience, 33% reported feeling overall relatedness, and 88% claimed to feel overall autonomy during their doctoral experience.

Overall Competence in the Program

One theme that appeared to emerge from talking with the former PhD students from the College of Education is that they felt competence largely because they had a clear understanding of their professional goals. Broadly speaking, this awareness of their professional goals helped them to see where they needed to invest their time during the PhD experience. Many of the students from the College of Education were non-traditional students; they were middle-aged, they had a significant amount of professional experience behind them, and they were generally seeking out the PhD to help them advance in their career.

For example, Margaret, decided to earn her PhD when she was midway through her professional career. She had been working in higher education for several years prior to earning this degree. She also knew that the PhD was very valuable in a higher education setting and to obtain a mid to upper level administration position, she needed to earn this degree. The PhD would allow her to progress through the professional ranks. Another

student, Johnny, had also been working in higher education for several years prior to earning a PhD. He also aspired to assume more of a middle to upper level administrative type position, and he knew that the PhD would help him to work his way towards such a position. Furthermore, he was well aware that through earning a PhD, he could spend a substantial amount of time and energy devoted to his research interests. According to Johnny:

When I first arrived at the university, everyone would ask me what I was going to do. I would reaffirm that I wanted to study the under representation of black men in athletic leadership positions at the NCAA Division 1 level at predominantly white institutions. My advisor told me what kind of study I would need to do, and so from that point on I said, okay, this is what I want to do. I would like to situate the study in critical theory in social cosmic career theme. And so both my methods professors helped me to focus on the career theory part of it, the social cosmic career theory.

Molly, a former student who ended up withdrawing prior to earning a PhD, felt an overall strong sense of competence in the program. She knew what she needed to do to complete the degree, and she understood what the expectations were as well as the courses she needed to take. She understood the overall nature of the PhD program, but she claimed that she did not have “a real clear sense of what I wanted to do after earning a PhD.” She said that she realized that she didn't need a PhD, and that her master's degree would probably be sufficient for her career.

This clear direction that many of the students shared, helped these students know what classes they needed to take, helped clarify their research agendas, and helped them to know who they needed to surround themselves with and who could be potential mentors for them.

Another theme that began to emerge from talking with the participants from the College of Education is that their competence stemmed from having a community of mentors. In fact, 66% of the former students explained that their mentor(s) had an influence on their overall competence during their PhD experience. For example, Isabella discussed a particular mentor who really guided her in writing, researching, presenting, as well as in her overall professional development. She said "He really took me under his wing and helped me develop professionally as well as academically." She further explained that this mentor was one of the most significant influences on her overall PhD experience. Holly, another PhD student who was fully funded in the College of Education, discussed that her research assistantship provided her access to several mentors. This mentoring community allowed her to "professionally and academically develop in countless ways, including writing, researching, and presenting."

On the other hand, the three students who withdrew prior to completing the degree all indicated that they did not have a strong mentoring community. For example, Celine, discussed that her advisor was the only mentor that she had during her time as a PhD student. When her advisor retired, she didn't have "anyone else to really guide me through." This became one of the main reasons why she eventually "burned out" and left the program prior to earning her degree.

Overall Relatedness in the Program

As was previously stated, only 33% of the students from the College of Education explained that they felt relatedness to their peers and to their department. One of the primary themes that began to emerge is that 66% of the former students were employed at another

university or at another location outside of the university setting during their PhD experience.

This outside employment created a large disconnect from other students, staff, and faculty. These students had indicated that they simply did not have the time to become really involved in attending social and or other additional events that were outside of class. For example, Christine explained, “I was too busy with my current position and my family. I simply could not become involved in extra stuff. And I wasn’t able to develop a strong sense of connection because of those other things in my life.” Margaret further stated, “I was working full-time so I have to say I was not very engaged within the college with other students. Some of the other support came informally from co-workers who knew that I was doing academic work.” A few of these students lived over an hour away from the university, and they only came to the university for class one or two nights per week.

However, Johnny, a former student who lived and had a full-time position a couple hours away from the university, did feel deeply connected to the department. He felt “very connected and supported” by many of his peers. He belonged to a colloquium that was comprised of several students who studied a similar research topic.

Even though Johnny was unable to attend all of the meetings as well as attend other college functions, he felt a strong connection to the college. He particularly felt very supported and connected to the peers in the colloquium. Johnny also felt connected to many of the faculty members in the college. He explained, "I felt like I had a strong faculty support group always encouraging me."

On the other hand, two of the former students who attended their PhD program full-time did not feel connected to their peers or to their college. Both of them indicated that

they did not feel supported or encouraged by faculty or by students. Dave explained that he felt like the college was “very unsupportive” of his research and professional interests. He found his support outside of his college, but was very unhappy with how “close-minded” many of the students and faculty appeared to be.

At the same time, Celine also did not have a strong connection with the college. She stated, "I did not feel valued in my department, and I felt somewhat resented by my peers." Celine further explained that she may have been resented because she was at a different stage in life compared to many of her peers in her particular PhD program. Celine’s lack of connection to the College of Education was another factor in her decision to leave, prior to completing the PhD.

On the other hand, one theme that emerged from the 33% of students who indicated that they did feel a sense of connection during their time at the College of Education, was that each former PhD student had formed a strong friendship with a few people in their own department. Holly and Isabella had both developed friendships within their PhD programs which provided social and emotional support, and they also had research and teaching assistantships within the College of Education. For Isabella, she had developed a relationship with three people, who became a “community of support.”

According to Isabella:

The three of us became this community of support where we’d meet in the dining halls at least every two weeks or so. We would just talk about our experiences or share about our research. Sometimes we would just sit down and then come up with solutions on how to make it through the [PhD] program.

Isabella also explained that the three of them would also spend time talking about topics completely outside of their PhD experiences, such as their personal lives. Holly also

had many friends and colleagues throughout her PhD experience, many of them she had formed through her role as a teaching assistant. Through this position, she was “more embedded within the department.” She explained that this position really “helped provide me with a lot of interaction with students and faculty.” Isabella also explained that her assistantship allowed her to develop a great relationship with a couple of faculty members as well as a few other students in the program.

Overall Autonomy in the Program

As was previously mentioned, 88% of the former PhD students indicated that they felt autonomy during their PhD experience. One interesting finding that emerged is that each participant who indicated that he or she had autonomy, also reported feeling competence. One of the primary themes that somewhat emerged from these participants is that their autonomy developed from having a fairly clear direction in terms of where they aspired to go, professionally.

For example, Steve had explained that because he was clear on his professional goals, he knew which academic opportunities, namely courses and other research opportunities that he should become involved with. He said, “I felt like I had fairly good control and ownership over this experience, because I knew what I was doing.” He also explained, that he generally knew the right people to talk to about academic matters as well as professional matters.

Margaret also explained that she felt she had a very high degree of autonomy. In fact, she claims that she may have had “too much autonomy,” and sometimes she became a little “frustrated” by the lack of articulation in terms of overall expectations. However, she

had a fairly strong idea of where she was headed professionally, and she was fairly aware of how to tailor her PhD experience in a way that would allow her to reach her professional and academic goals. Christine, also echoed this response by explaining that she was provided with complete ownership and control to tailor her experience to allow her to reach her professional goals.

Molly, however, who withdrew from the PhD program prior to completing her degree, indicated that she felt like they did not have a substantial amount of control over her experience. For example, Molly stated:

I would definitely say that I didn't feel much ownership of the [PhD] experience. I didn't feel like there was room for me to develop necessarily on my own terms. I would say that there was not a lot of flexibility in that area.

Molly further explained that because she did not feel like she had much control over this experience, she never felt very passionate about what she was studying. And she explained that she could not envision herself writing a dissertation on a topic in that particular field.

The Structure of The College of Education

From the former PhD students from the College of Education, 55% indicated that the structure of their PhD program helped them to feel competence during their PhD experience, 88% reported feeling autonomy, and 22% claimed that the structure of the program helped them to feel relatedness during their doctoral experience.

The participants, who indicated that the structure of the PhD program helped them to feel competence, largely argued that the specific degree requirements for the PhD, such as the research and inquiry paper and presentation, the general exams, as well as their overall

coursework allowed them to develop in their academic and professional skills. Holly explained that she received “quality feedback” on her writing and presentation skills throughout courses, formal presentations, as well as from faculty inside the college. She further explained that her classes “really helped to develop my academic skills.”

Johnny praised a particular research course that he took that helped him to “turn into a scholar and a researcher.” This course provided him with the opportunity to develop a research proposal as well as a survey that he used to conduct his research. Johnny was then able to present this research at a national conference. He further explained the opportunities he had to develop his academic skill-set during his PhD experience. He stated:

I had many opportunities to design and develop conference proposals. I was able to develop the proposal, and then to try it out and get feedback from the group. So I found those kinds of professional development opportunities very, very meaningful. I had a supportive audience, a supportive community to present my ideas, to present the proposal and get feedback and then not only getting feedback but going and revising and then coming back and presenting it, and getting additional feedback before I present it at a conference.

Another theme that began to emerge is that the majority of the participants (77%), to some extent, indicated that the lack of a formal cohort structure prevented them from having opportunities to collaborate with others on research and other projects. The former students explained that they feel their skill-sets could have been enhanced if they would have had more opportunities to interact with their peers and continually collaborate and receive feedback from each other. Celine explained that because there was not a formal cohort in place, that this “made it very difficult to build relationships and have opportunities to collaborate on projects together.”

With regards to the 22% of former PhD students who indicated that the structure of their PhD program helped them to feel relatedness, this finding is not too surprising in

this case. As has been previously discussed, many PhD students from the College of Education are already seasoned professionals that are employed outside of the CoE. Many of these former PhD students had families of their own while attending the PhD program. In addition, there are not ample funding opportunities within the CoE, increasing the odds of students having to look elsewhere for funding. There is also not a formal cohort that binds PhD students together. These characteristics can contribute to creating a somewhat scattered community, where students have highly variable schedules and responsibilities, preventing them from having opportunities to frequently interact with one another.

For example, Margaret had a full-time position outside of the College of Education that prevented her from having a lot of opportunity to interact with others. She stated, “I always felt like the school piece was a bit of an add-on. I was not fully engaged or kind of immersed in typical student activities or groups.” At the same time, because she did not have a formal cohort of students to interact with, she felt “fairly disconnected” from the CoE.

On the other hand, Steve felt that, in some cases, the structure of his PhD program helped him to feel connected to others. This was largely because there were opportunities to congregate during workshops, social and academic functions, and during research and inquiry presentations. He argued that even though many students, such as himself, often have a difficult time attending these events due to other responsibilities, these opportunities can help students gain a sense of connection during their time as PhD students.

One finding that began to emerge from the 88% of former PhD students who believed that the structure of their PhD program allowed them to feel autonomy, was that this autonomy was fueled by their ability to structure their PhD experience in a manner that

best fit their academic and professional interests. As has been previously discussed, PhD students, under the supervision of their faculty advisor, generally tailor their PhD experience in a manner that will help them to accomplish their academic and professional goals.

The majority of these students indicated that they felt that they had control and ownership to take classes of their choosing as well as work on their own research. Johnny explained that he felt that he had “complete autonomy and support” to tailor his PhD in the way of his choosing. Christine also explained that even though she had many other professional as well as family responsibilities, she felt that the PhD program at the College of Education did a “wonderful job” in providing her with the control and agency that she needed to complete the degree.

On the other hand, there were students like Molly who indicated that she/they did not have much flexibility in terms of coursework and degree requirements. She did not feel like the structure provided her with much autonomy. She also explained that this lack of autonomy became one of the factors in her decision to leave the program, prior to earning her PhD.

The Faculty Advisor and Student Relationship

From the former PhD students from the College of Education, 66% reported that their faculty advisor encouraged them to feel competence, 66% also indicated that their advisor helped them to feel autonomy, and 44% felt that their advisor helped them to feel relatedness in their PhD program.

66% of the former PhD students from the College of Education explained that they had developed a very strong relationship with their advisor. The majority of the participants

praised their faculty advisor for helping them in their overall professional development. They explained that their advisor was the person who guided them through the program, provided constructive feedback on their writing, research, presentation skills, as well as helped them in their overall career development. Steve talked in great detail about his positive experience with his advisor. He said:

I had a really specific, kind of compassion or passion for international work. And my advisor took a genuine interest in that, and fortunately he introduced me to some opportunities where he really tried to give me a chance to explore ways to write grants and to talk to others. He even went with me to meet with our interim dean at the college and talk to him about a way that we could partner to develop a certificate program for an education management certificate program. And I just really, I remember in that session feeling like I can't believe he is taking this on so seriously. It was just something that I was passionate about that he really helped me to, kind of showed me how to have those conversations and helped me to actually integrate or implement something like that at the university.

Johnny also explained that his advisor was incredibly helpful in providing him with “a clear direction” in terms of both his student experience at the university as well as in his professional career. He explained that his advisor was versatile in his ability to advise students. Johnny stated that his advisor, “served as a resource guide, served as a mentor, and sort of a coach and quarterback and just helped me move through the process.” Even though Molly ended up withdrawing from her program, she had developed a good relationship with her advisor, and her advisor had provided her with “very constructive feedback” in terms of her writing, researching, and presentation skills. Her advisor also provided sound career advice and helped her to see many different professional opportunities that were available for her.

One finding that emerged from talking with the former PhD students is that many of the same students who felt competence also felt autonomy from their advisor. For

example, Johnny and Isabella explained that their advisor provided them with a clear roadmap on the steps they needed to take to accomplish their degree. Because they had this guide, they felt like they had somewhat control over their experience. For example, Johnny said:

My advisor gave me a very clear direction in my PhD experience. And because of this direction, I knew what opportunities I needed to take advantage of, and I knew what classes I needed to take to get this degree."

Isabella also mentioned that her advisor informed her that she needed to develop a "tool kit" to successfully navigate her PhD experience. She said:

He [her advisor] told me the first year like you need to develop a tool kit and learn as much as you can and that you could just take from whenever you need a certain skill. So that always stayed with me like I needed to develop a tool kit and that I need to find mentorship from different people like you said don't rely on just one professor.

Yet, Patrick indicated that his advisor "just did not support me, and did not make me feel like I had much choice during my time at the university." Patrick's advisor was one of the factors that led to his decision to withdraw from the program.

As has been previously mentioned, many of these students were working full-time outside of the College of Education, and outside their university writ large. This was one of the main factors why so few (22%) of the students indicated that they felt connected to their peers, department, and to the university writ large. Nonetheless, almost half of the former students (44%) indicated that their advisor connected them to the department and to the university in many ways. This included connecting the students to other students, connecting the students to other faculty members, and introducing and inviting these students to events around campus that may have been of interest to them.

For example, Isabella indicated that her advisor had a large influence on helping her gain more of a connection with others in the program during her PhD experience. She stated:

I was very fortunate that my first year my advisor put me in touch with my roommates my first year. I was coming from [...] so I didn't know anyone. I didn't have any friends or anything, and so my advisor said he had another advisee a master student who was in her second year and he thought it would be a great fit for us to live together. So we moved in together, and she and I really clicked and I think she helped me transition in to the program. She had already been there for a whole year, and she kind of helped me with that. And, that was helpful because in the mean time, I was trying to find I guess that social support amongst my doctoral colleagues, and unfortunately, I didn't have much of a community in the program.

Meanwhile, 66% of the students indicated that their advisor did not really have a role in connecting them to other people. Celine indicated that she wished her advisor would have connected to her to other people to who were working on similar research topics as her. She further indicated that because she did not feel like she had a great support group, this became one of the reasons that led to her departure before completing her degree. At the same time, many of the students agreed that it was really their responsibility to network and meet people and develop a greater sense of connection to their department and to the university. For example, Holly and Margaret explained that it was really up to them to branch out and meet people.

Students' Prior Integration and Exposure to PhD Programs

From the former PhD students from the College of Education, 77% indicated that they had some sort of prior integration and exposure to a PhD program. However, very few (33%) of the participants indicated that this prior exposure helped them to feel competence in the program. Only 22% indicated that this prior integration and exposure helped them to

feel autonomy, and 22% reported that this prior exposure and integration helped them to feel relatedness during their PhD experience.

One theme that began to emerge from talking with the participants is that most of the students had previously earned a master's degree, prior to earning their PhD. During their prior experience in graduate school, several of these students had conversations with faculty members about what it might be like to earn a PhD. For many of the students, they indicated that they also took courses with current PhD students during their prior experience in graduate school. These former students had prior conversations with PhD students that started to somewhat frame what a PhD experience might look like.

For Steve, his uncle had earned a PhD, and while he was earning a master's degree, he had many conversations with his uncle about what the PhD experience might be like. Several years later, Steve decided to pursue a PhD. However, Steve indicated that his conversations with his uncle did not influence his competence in the PhD program. He explained, "It really wasn't any prior exposure that helped me push through the program, I was just extremely motivated, and I had a very supportive wife."

Holly's prior exposure stemmed from a mentor she had during her time as a master's student at another university. Holly said:

I would say that the biggest influence was this one particular mentor I had. I was a master's student, and he was a visiting professor at another institution. He was a visiting professor at my institution where I got my master's degree. And I didn't really see doctoral education because there were no doctoral programs at that school. But I saw the work that he was doing, and I was really interested in his work, and not just the content of his work but also kind of the role of being a faculty member. I found that to be really appealing. I had been in higher education, and I had been in lots of different places in higher education, but I hadn't worked really closely with research faculty. I'd been around all kinds of faculty, but I didn't really get a chance to see kinda behind the curtain until I had worked with him. Um, and so that's where I really, I saw the end. I didn't really see doctoral training. I just saw the end.

Holly further indicated that this mentor did help her to understand and frame her PhD experience. This, in turn, helped to increase her overall competence in the program. On the other hand, Margaret, described that she did not have any prior exposure to a PhD program before she began. Her supervisor had “hugely influenced” her decision to earn a higher degree. Margaret’s supervisor became well aware of her professional goals, and he knew that a higher degree would help Margaret to reach her professional goals.

Patrick, on the other hand, had a significant amount of prior exposure to a PhD program. He had attended PhD courses as a visiting student and had numerous conversations with faculty, PhD students, and staff about the nature of earning a PhD. He indicated that this prior exposure definitely helped him to set expectations and to “begin to understand what it means to be a PhD student.” However, when he arrived to his program, he began to realize that he was in a program that was not a strong fit for his professional interests, and he began to quickly “burnout.” He said, “This program was the exact opposite of what I thought, and so I decided to leave because it was certainly taking a toll on me.”

Very few of the participants (22%) indicated that their prior exposure helped them to feel autonomy in the program. The majority of the participants indicated that even though they may have had some extent of prior integration and exposure into a PhD program, that it was not enough to make a significant difference in helping them feel more autonomy. For example, Christine had explained that she still relied heavily on her advisor for guidance, even though she had become aware of what earning a PhD “might be like” through her prior experience working in higher education. However, Johnny indicated that his prior exposure through working in higher education as well as through his conversations with his aunt (who

had earned a PhD) had helped him to know what decisions he would need to make along the way as well as how to effectively tailor his PhD experience to “make it my own.”

Along similar lines, only a few of the participants (22%) reported that their prior exposure and integration to their PhD program helped them to feel relatedness to their peers, department, and to the university. Because many of these participants were working full-time as well as had other responsibilities such as family and other obligations, very few of them reported that they had attended their orientation as well as other events held during the beginning of the academic year. Similar to what has already been reported, their professional, family, and other responsibilities were a huge preventive factor in helping these former students feel connected to their department.

However, not every former student felt that their prior exposure prevented them from feeling relatedness in their program. For example, Molly had developed several close friends in her program. She did not have “a great deal of prior experience in a PhD program”, but she had developed a support group of peers that really helped each other to “navigate through the program.” Even though Molly withdrew prior to finishing, she felt that her group of friends that she had made in the beginning of her PhD experience helped to “make my experience a lot better.”

Conclusion

The former PhD students from the College of Education have helped to inform the research questions guiding this study. 88% indicated that they felt overall competence during their PhD experience, 33% reported feeling overall relatedness, and 88% claimed to feel overall autonomy during their doctoral experience. Furthermore, From the former PhD

students from the College of Education, 55% indicated that the structure of their PhD program helped them to feel competence during their PhD experience, 88% reported feeling autonomy, and 22% claimed that the structure of the program helped them to feel relatedness during their doctoral experience.

From the former PhD students at the College of Education, 66% reported that their faculty advisor encouraged them to feel competence, 66% also indicated that their advisor helped them to feel autonomy, and 44% felt that their advisor helped them to feel relatedness in their PhD program. Additionally, 77% indicated that they had some sort of prior integration and exposure to a PhD program. However, very few (33%) of the participants indicated that this prior exposure helped them to feel competence in the program. Only 22% indicated that this prior integration and exposure helped them to feel autonomy, and 22% reported that this prior exposure and integration helped them to feel relatedness during their PhD experience.

CHAPTER 6

FINDINGS

THE GRADUATE SCHOOL OF EDUCATION

This chapter will present the findings from the Graduate School of Education. The findings from the student affairs professionals and faculty members will be presented first because they have provided rich context and foreground information to situate the responses of the former PhD students. The data from the student affairs professionals and faculty members has been broken down by emerging themes. The findings from the former PhD students will then follow. The data from the former PhD students has been broken down by *a priori codes*, which include competence, autonomy, and relatedness.

A Student Affairs Perspective on the PhD Student Experience

On Feeling Competence

After talking with the student affairs professionals at the Graduate School of Education, two themes began to emerge regarding how students can develop competence in their PhD program at Stanford University. These themes included (a) students' competence can be enhanced by taking initiative to participate in professional development events and (b) the cohort structure may help students become more competence.

Students' competence can be enhanced by taking initiative to participate in professional development events. Through talking with the student affairs professionals, it became apparent that there are many opportunities for students to learn new skill-sets and expand their professional development. All of the student affairs professionals, to some extent, argued that the way students can develop competence and excel in the PhD program

by making the extra effort to attend extra-curricular events such as workshops, seminars, and retreats. Specifically, the student affairs professionals described that the students who make the effort to participate in professional development events from the GSE, are often the students who do the best in the program. These “competence building activities” allow students to develop a particular skill set and or an overall knowledge base of a particular area.

These opportunities generally include workshops and seminars on topics areas such as giving job talks, networking, writing, researching, public speaking, presenting, as well as topic areas related to degree requirements and progressing towards the PhD. In fact, students will be given funding to practice and develop particular skill sets. Brian explained that often funding from the GSE is available for students who want to bring scholars out to dinner and use that opportunity as a way to learn from them. Chris discussed several opportunities that are available to help students become better presenters. He particularly emphasized one of the opportunities:

There is a regular opportunity here to have a half-day conferencing session in which the student presents part of the dissertation and the other students listen and then discuss afterwards. That is, in many ways, preparing them for a future world of presenting papers at conferences and papers out of the dissertation. Chris also discussed that there are several opportunities for PhD students to practice job talks and other career development tasks in front of faculty, staff, and their peers.

The cohort structure may help students feel more competent. Another theme that began to emerge regarding how students can develop a sense of competence was through the cohort model. This is an integral part of the structure and culture of the Graduate School of Education. This cohort model allows students to be in continuous contact with their peers. In this model, students take the same classes, may work on similar research projects together,

and really develop a sense of community as they spend a substantial amount of time together, both inside of the GSE as well as outside of their school; students develop friendships with one another that extend far beyond the classroom.

From the student affairs professionals' perspective, students learn from each other and have each other as a resource for guidance, direction, and clarity as they navigate their PhD experience. According to Chris, "We are talking about a very small cohort, we are talking about 30 some doctorate students. We have about 50 faculty members. These cohorts can become the primary means for students to learn from each other." Brian further mentioned:

The very cohort structure of our programs, small scale, full time study really creates an environment where it is easy for the students to make friendly connections and to build a network of helpful support who understand what they are going through and provide each other with the kind of support that makes for success.

Chris also talked about the seminar that all first year PhD students are required to take. This "cohort building feature brings together the doctorate students, and allows them to learn more about each other's research and professional interests." Brian also talked about the opportunities that students have to cooperate with their peers on writing, researching, and publishing. Brian said:

We have critical milestones that all students must succeed at the end of the second year, where they are required to complete a qualifying paper. A qualifying paper has to be at least good enough to be eligible for publication in a referee venue. Students collaborate and really mentor each other with these opportunities.

Recap. From the student affairs professionals' perspective, students can develop competence by taking advantage of opportunities to learn new skill-sets and expand their professional development. Even though this requires an extra investment of time and energy

for the students, these opportunities have shown to be “exceptionally beneficial.” At the same time, the structure of the GSE provides several opportunities for PhD students to collaborate and to learn from each other.

On Feeling Relatedness

After talking with the student affairs professionals at the Graduate School of Education, two themes began to emerge regarding how PhD students can feel relatedness to their peers, to the Graduate School of Education, and to Stanford University, writ large. These themes included (a) multiple ways of helping students feel connected to the GSE and Stanford, and (b) the cohort structure can help students build relationships with other students in the program as well as with faculty.

Multiple ways of helping students feel connected to the GSE and Stanford. To some extent, each student affairs professional agreed that students need to feel connected to their peers, department, and to the university writ large in order to be successful. However, each participant had their own perspective on how to help students feel relatedness. According to Chris, “feeling connected can really help these students not feel isolated, especially when they are often isolated writing research papers, and especially when writing their dissertation.” He further mentioned, “There was a student guild that was established a few years ago and they often initiate socials for students. These events seem to do a lot of good for relationship building.” Rachel also mentioned the importance of finding as many ways as possible to bring faculty to the students as a way of helping students feel connected. She said:

For orientation and many other events, we try to get faculty to be involved. This will hopefully help students be able to relate to and ask them questions. I think it's

a great thing. I remember when I went for orientation as a first year graduate student, we didn't have faculty there to kind of address the needs, concerns or worries of students.

Brian mentioned that students can develop a connection to this department by their research assistantship. He said that frequently students often work very collaboratively with their peers doing research and other academic work. Brian stated, "Students will have multiple opportunities to work as part of the research team on a particular project led by a faculty member."

Two of the student affairs professionals explained that the faculty advisor and student relationship can help students to feel connected to the department. These participants indicated that the faculty advisor can help introduce students to other members of the GSE as well as to people outside of the GSE. According to Chris, faculty advisors can be a primary resource of connecting the student to other individuals. However, this also depends on how connected the faculty advisor is to other professionals in the field. Rachel explained that faculty advisors seem to have a large impact on helping students to feel connected to the department and said that sometimes the faculty advisor can help the student "feel at home."

The cohort structure can help students build relationships. To some extent, the student affairs staff indicated that the cohort model can help foster a sense of community for PhD students in the Graduate School of Education. Again, this is largely because students are in continuous contact with one another, and they are also in frequent contact with professors and staff. The student affairs professionals explained that professors also spend quite a lot of time collaborating together amongst themselves as well as with the staff to help ensure the cohort model is "operating smoothly and effectively."

Rachel provided an illustration of the strong GSE community by stating,

One of our PhD students was in a band, and sent an email inviting the community to go and see them perform on campus. And, I think, most of our PhD students went to go see them perform.

Rachel further discussed that there are large turnouts for the GSE sponsored socials and other kinds of celebrations, including several faculty, staff, and especially students. She indicated that she thought one of the primary reasons for this large attendance is because every PhD student “seems to have many friends in their program, and people just end up going together.” Brian articulated that students end up spending so much time together that they end up becoming “like a family.” In addition, students often develop strong professional relationships with other faculty and staff in the program.

Recap. From the student affairs professionals’ perspective, students need to feel connected to their peers, department, and the university. Students can develop a sense of relatedness through having a good relationship with their faculty advisor, peers, as well as with other faculty and staff. At the same time, the cohort structure appears to really foster a sense of community. Students are in continuous contact with their peers as well as with professors and staff members.

On Feeling Autonomy

After talking with the student affairs professionals from the Graduate School of Education, three themes began to emerge on students’ autonomy during their PhD experience at the GSE. These themes included (a) the importance of having autonomy in a PhD program, (b) GSE’s structure might prohibit some autonomy for PhD students, and (c) faculty advisors can influence students’ autonomy.

The importance of having autonomy in a PhD program. To some extent, the student affairs professionals all discussed the importance of having autonomy in a PhD program, and argued that without it, the PhD experience will be a very negative experience. This autonomy can help students feel valued and connected to their department. According to Chris:

I always emphasize that you must feel that you own your PhD experience because if not, it can feel very alienating. If you keep saying, oh I don't want to do this for my dissertation, but I have to, is just terrible. The dissertation writing process is so lonely and so stressful, in part, because you don't have the kinds of deadlines you had prior to that, aligning them with courses and so forth. If you don't feel that this PhD experience is yours, and that you are invested in it, it will be a miserable experience.

Brian explained that if students do not feel like they have much ownership and control over their PhD experience that, "They will not succeed here." He further stated that students must take control over their education. Brian explained, "By the time the student has completed the doctorate, the student should function as an independent scholar."

GSE's structure might prohibit some autonomy for PhD students. The three student affairs professionals also indicated that the structure of the GSE might somewhat prohibit some autonomy. Because of the cohort model, students are required to take many of the same classes together, and consequently, they do not have as much freedom and ability to select their own courses and often their own research compared to other PhD programs that do not follow a cohort model. According to Chris:

There is quite a bit of structuring in terms of requirements and then some requirements that are specific areas. For example, there is a one year long sequence that has both quantitative and qualitative methods courses. Some students may not like the fact that there is so much structure in our program, but we feel that it really helps to build a sense of community here.

Even more, because students are fully funded in the GSE, often times, their research assistantship forces them to take on a particular research project; sometimes, they simply don't have enough time to work on additional research projects of their choosing and or become involved in other activities. However, students certainly have opportunities to work on their own research projects as part of the requirements to earn the PhD (e.g., qualifying paper and dissertation). For example, Brian discussed the qualifying paper that every PhD student is required to complete. According to Brian, this paper must be eligible for publication in a "referee venue, and therefore, the student must feel complete ownership over this paper."

Faculty advisors can influence students' autonomy. All three of the student affairs professionals agreed, to some extent, that the faculty advisor can help students feel autonomy over their PhD experience. Chris and Rachel explained that faculty advisors can help students realize a lot of professional opportunities that are available to them. Chris explained:

Sometimes students enter a PhD program without knowing of the numerous professional opportunities that are available. It just takes the faculty advisor to introduce these students to the professional opportunities that are available to them. It is then up to the student to decide how to dictate their experience.

Jim also explained that the faculty advisor can certainly help the student gain more autonomy, but it is really a function of the faculty advisor's style of advising. According to Jim:

Some faculty advisors lend their students a lot of freedom to choose their own research and chart their own path. While some faculty advisors are more rigid, and seem to only want their students working on specific projects that are within the advisor's domain.

Recap. Overall, it appears that the student affairs professionals recognize the importance of having autonomy in a PhD program. However, largely due to the structure of the GSE, there is a fine line between giving students enough freedom to make the PhD experience their own, while ensuring that students are successfully completing the requirements to earn the PhD.

Conclusion

The student affairs professionals in the Graduate School of Education at Stanford University have provided some excellent foreground information into the GSE. They have indicated that PhD students can gain competence through their involvement in attending the GSE sponsored events such as professional development workshops. At the same time, the cohort structure fosters competence as students are in continuous contact with each other; students have the ability to use each other as a resource and learn from one another. These participants also have argued that the cohort structure builds community amongst the PhD students, and there is a plethora of ways for students to gain a sense of connection within the GSE.

The student affairs professionals also have explained that students need to have a significant amount of autonomy during their PhD experience. However, because the GSE's structure is fairly tight, especially with the formal cohort model, students' autonomy may be diminished to some extent. The participants also argued that faculty advisors can play a substantial role in providing students with the opportunity to take complete ownership over their PhD experience.

A Faculty Perspective on the PhD Experience

On Feeling Competence

Two primary themes began to emerge centering on how PhD students can develop competence while earning their PhD through the Graduate School of Education from talking with the three faculty members from the GSE. These themes included (a) professional development workshops can help PhD students to develop competence and (b) faculty advisors may play a large role in building students' competence.

Professional development workshops can help PhD students to develop competence. Similar to the student affairs professionals, one emergent theme from the faculty is that students can develop a strong sense of competence by attending several of the professional development workshops that are available to them. The Graduate School of Education sponsors the majority of these workshops. The faculty members discussed that because their school is very wealthy, students have a plethora of opportunities to engage in all kinds of professional development opportunities. These workshops range from academically focused such as presenting at conferences to more career focused such as networking and resume writing. According to Professor Smith:

There are quite a few workshops that are all about professional development. These workshops support the training of students. And by the workshops, I mean, places where weekly meetings with one or two faculty with ten or twelve students or twenty students that are working on their research collaborate. During these times, graduate students speak directly to faculty members and get immediate feedback on things like their presentations, papers, and things like that.

Professor Smith and Professor James also talked about the different types of courses that are designed to promote professional development. For example, there is a course that

teaches students how to write a research proposal. Professional development is also woven into the curriculum of many PhD courses. Professor Smith talked about examples where instructors have integrated resume writing, CV writing, job talks, as well as interviewing strategies as part of the lesson plans. Professor Amy said:

The university has the main center that works on writing and oral communication, and I think some other issues around communication. Some of the faculty bring representatives into the classrooms and talk about how to be an effective oral communicator.

Professor Smith also discussed that sometimes students will attend extra-curricular opportunities, however they often bring a “refuse to learn” attitude. Therefore, these workshops, seminars, and other opportunities, do not seem to help them expand their competence.

Faculty advisors may play a large role in building students’ competence. To some degree, the three faculty members agreed that the faculty advisor shares a large part of the responsibility to help students gain competence during their PhD experience. This is largely because the faculty advisor should act as a mentor for the student in his or her professional development. All three faculty members agreed that faculty advisors have a responsibility to help their students learn and understand all of requirements to earn the PhD as well as help students develop skills and a solid knowledge base of their particular area(s) of interest.

Professor James indicated, “It is largely up to the faculty advisor to help students in their professional development. This is because your advisor should know more than anyone else about how to guide you in your particular path.” Professor James further mentioned that students need to do their job of seeking out their advisor and other mentors for help. He said, “It’s not just our responsibility, it’s also largely up to them [the students].”

Professor Smith explained that faculty members need to do a better job of mentoring their students, and sometimes seem to neglect their students. Professor Amy said, “Students need a lot of guidance to effectively navigate this [PhD] experience, and faculty advisors should have a big part of that. But at the same time, students need to do their part.”

Recap. These faculty members have shared a somewhat similar approach to what the student affairs professionals indicated. First and foremost, students need to take responsibility and participate in extra opportunities such as workshops and seminars to develop competence and to progress in their overall professional development. At the same time, these faculty members have argued that faculty advisors share a large responsibility to guide and mentor students.

On Feeling Relatedness

Through talking with the faculty members at Stanford University, two primary themes emerged on how PhD students can feel relatedness during their doctoral experience. These themes included (a) students have ample resources to help them feel relatedness and (b) the Graduate School of Education’s structure might help create “micro-communities.”

Students have ample resources to help them feel relatedness. One recurring argument from talking with the graduate faculty advisors is that the GSE is a wealthy department. Because Stanford has tremendous resources to allocate to students, there are many opportunities for students to collaborate on research projects and there are several social events that are directed towards building community in the GSE. According to Professor Smith:

This is a wealthy environment and because of that there are many financial incentives to support graduate students collaboration of the faculty with each other and attend the disciplinary beyond the school and even within the school. So it is remarkable the number of resources in terms of collaboration and research.

Professor Smith further explained:

Students have all kinds of social outings and part of the budget supports a lot of these outings and build camaraderie. For example, there is a Christmas party coming up. There is also a student guild that is kind of like a group that supports student interest in the school.

Professor Amy talked about the strong sense of community that is a part of the Graduate School of Education. Professor Amy believed that the strong community stems from the plethora of resources available that allow students to continually collaborate on projects.

Professor James explained that the Graduate Life Office on campus has played an integral role in building community on the campus. The Graduate Life Office is designed to provide support for graduate students, ranging from social, emotional, academic, etc. This office organizes several social functions throughout the year that “really helps to build community because it helps to connect PhD students to other students within the GSE as well as with other students across the campus”, according to Professor James. At the same time, Professor James indicated that sometimes students neglect the resources that are available to them, and may end up becoming more independent minded while at Stanford.

GSE’s structure might help create micro-communities. Another theme that emerged from talking with the faculty is that the GSE is composed of several micro-communities, primarily because of the cohort structure. Within each cohort, students will generally group together based on their research and other professional interests. According

to Professor Smith, “There seem to be a bunch of cliques in the school. Students group together based on similar interests.” Professor James indicated, “I think it is better to think of the GSE as a multitude of overlapping micro communities.” He further stated:

I don't think we have a particularly strong sense of community, and that is partly a function of the fact that the faculty, we are a medium size faculty - about 60 plus people. We really cover the water front in terms of the ranges, programs, and academic endeavors that we undertake.

Two of the faculty members argued that students form a very close knit community with people in their cohort, but they often don't reach out to other PhD students in other disciplines and or other cohorts. According to Professor James, “These cohorts build cohesion among these students. Students find their own social support within these micro-communities.” Professor James also explained that the research-assistantships that students have often require students to collaborate with each other on a regular basis. Students might form “their own micro communities through these positions.”

Recap. From talking with the faculty, it became clear that the students have several resources available to them, such as the Graduate Life Office, to help them gain a sense of connection to their peers, department, and to the university. These resources play an integral role in building community for the students. Also, the structure of the GSE fosters a sense of micro-communities, also termed as *cliques*. From the faculty perspective, the downside of these small communities is that students may not have ample opportunity to interact with peers from other disciplines, and may even somewhat close themselves off from interacting with peers from other fields.

On Feeling Autonomy

Through talking with the three faculty members from the Graduate School of Education, one primary theme began to emerge on feeling autonomy during students' PhD experience: faculty advisors can influence PhD students' autonomy, yet students still need strong supervision.

Faculty advisors can influence PhD students' autonomy, yet students still need strong supervision. An emergent theme from talking with the three faculty members in the Graduate School of Education is that students deserve to have autonomy in choosing research as well as dictating their overall PhD experience. However, many students often enter a PhD program with little research training, and thus need to have a fair amount of guidance in their overall experience as a PhD student. According to Professor Smith:

Faculty here really try to collaborate with students on research projects. So many times, students enter and don't really know what they are doing. Faculty take opportunities to collaborate with students on projects to mentor and teach them what they need to be doing. Otherwise, we get research produced that really isn't any good.

Professor Smith indicated that it looks very promising when students produce excellent research on their own. This can help students "land a faculty and or other type of research position in their future." Professor James believed that students "really need to take the stage and make their PhD experience their own." However, he also indicated that students need a substantial amount of mentoring and guidance throughout the process.

Professor Amy explained that one of the most effective ways to help students gain a sense of autonomy is to present them with several available research options. Professor Amy said, "Let the student choose which project he or she wants to work on, and then help that student throughout the process." Professor Amy further explained that the students who

don't seek out additional help on research projects and or refuse to get help often have a more difficult time progressing towards their PhD.

Conclusion

The faculty members from the Graduate School of Education have provided some helpful information into the PhD experience. These faculty members have highlighted that students can gain a sense of competence in their PhD program by attending workshops as well as other activities that bolster their professional development. The faculty members have also argued that faculty advisors can influence students' competence levels in a PhD program. The faculty members have also indicated that the ample resources the GSE has allows for an increased level of collaboration amongst PhD students, and the overall structure of the GSE helps to build many micro-communities throughout the student body. Last, faculty members have indicated that students certainly need autonomy, yet because many students enter a PhD program with little exposure and research training, they need a strong level of guidance in dictating their PhD experience.

The Former PhD Students

From the former PhD students from the Graduate School of Education, 75% indicated that they overall felt competence during their PhD experience, 75% reported feeling overall relatedness, and 63% claimed to feel overall autonomy during their doctoral experience.

Overall Competence in the Program

As was previously mentioned, 75% of the former PhD students reported that they overall felt competence during their PhD experience. One primary theme that emerged from the participants is that they developed competence in their program through their research and or other type of assistantship. As has been previously mentioned, every PhD student at the Graduate School of Education is fully funded, and that funding generally comes from a research, teaching, or additional type of assistantship. According to many of the participants, these assistantships provided them with research and teaching opportunities, as well as overall professional development opportunities.

Scott, a former PhD student, indicated that a tremendous amount of his competence came from the opportunity to work on research projects, both as part of his research assistantship as well as through collaborating with faculty on their research. In addition, Peter, another former PhD student, argued that he felt like he strongly developed as an academic and learned about the research process through his research assistantship.

Peter stated:

I worked on that same project throughout my doctoral experience. That experience was very helpful in terms of understanding some of the processes doing research that you don't learn in classes such as how to connect with people when you are trying to gather research participants and how to negotiate the hire process and how to organize data files and things like that.

Peter further explained that he gained a significant amount of research and other academic skills through his assistantship as well as working with other faculty members in the Graduate School of Education. Laurie, a former PhD student, explained that her assistantship was “One of the most beneficial experiences for my professional

development.” She indicated that she learned how to become a stronger writer, researcher, as well as gained interpersonal skills through her experience.

However, not every PhD student indicated that their assistantship provided them with the opportunities to develop in their overall competence. For example, Meghan, a former PhD student who withdrew prior to earning her degree, explained that her assistantship was not contributing at all to her professional development. She explained that the position was not a solid fit, and she “became bored” with the position.

Another primary theme that began to emerge from talking with the participants is that their competence also seemed to come from many of the resources they had available to them both in the Graduate School of Education as well as from Stanford University. These resources included personnel in the program such as faculty, staff, and of course, their classmates.

They also had several departmental resources such as the library, student services office, writing center, as well as had several other resources such as a graduate student office as well as several other student life functions on campus. In addition, students at the Graduate School of Education would frequently attend professional and academic conferences that they received full funding from their department.

For example, Laurie explained that she frequently attended professional and academic development workshops that ranged from how to write a conference proposal to giving a job talk. Laurie also elaborated on how she became involved with student life opportunities that were available on campus. The Graduate School of Education is known for having a substantial focus on graduate student life opportunities. In addition, Scott, explained that much of his competence came from “collaborating with faculty on writing

papers” as well as from his friends in the program. He explained that he and his friends would “frequently work on projects and really learn from each other.”

Mike, a former PhD student, who ended up withdrawing prior to earning his degree, indicated that he utilized many of the student life resources that were available outside of the Graduate School of Education. He explained that he became involved with a few professional development opportunities such as community service projects that helped him to clarify what he aspired to do professionally. These opportunities helped him to realize that he did not need a PhD for what he wanted to be.

However, not every student agreed that their competence stemmed from the resources that were available to them. For example, Sarah, a former PhD student, explained that the majority of her competence stemmed from her courses. Sarah stated:

I always used courses whenever possible to develop my research skills around my own topics. So, in class, you are given an opportunity to write a paper. And it usually was kind of suggested that you do a research paper. And often it was required, but I would always use that opportunity to do an interview. I also used those opportunities to go to the local elementary school and help kids. Through class and my projects, I was usually developing several academic and professional skills.

Overall Relatedness in the Program

As was previously mentioned, 75% of the former students reported feeling overall relatedness during their PhD experience. One of the major findings that began to emerge from talking with the former students is that this sense of relatedness stemmed from their peers within the program. As has been previously discussed, there is a formal cohort structure that binds PhD students together. Consequently, these students spend a substantial

amount of time together; creating an environment that is conducive to developing personal and professional relationships.

Bruce explained that he and his friends would frequently attend events within the Graduate School of Education together, they would “go out to Happy Hour after class”, as well as live together in the graduate student housing complex. He further talked about how one of his best friends in the program was in his wedding. Laurie also explained, “I made a lot of great friends at the Graduate School of Education, and we would be doing stuff all of the time.”

At the same time, first year PhD students at the Graduate School of Education are generally paired with at least one or two advanced doctoral students in the department. These individuals are supposed to serve as mentors for these first year students; at the same time, many of them become great friends. Four of the former PhD students explained that they ended up becoming good friends with their mentors in the program.

Scott explained that he built relationships with many of his peers in his cohort. He explained:

I developed incredible relationships with other students in my cohort. My cohort was very small, there was only about five students. With these students, I was able to develop both personal and professional relationships with them. I was also able to use these students as professional references, as we would frequently work on research projects together. They were an integral part of helping me feel connected to the department.

Furthermore, Sarah explained that her friends from the program became like a family, and they frequently would spend time together outside of their program. Sarah stated:

We would go hiking together, go to happy hours, go out to dinner, or have parties at each others houses. I had a great house to share with a bunch of adults. So it was a great house for having people over and having parties all of the time and we were all connected and we knew each others friends, we knew each others spouses,

we knew each others kids because all of the stuff was happening. We were getting married, we were having kids and people were dying like all of those things were happening. We were really interconnected.

However, not every former student reported that they felt relatedness due to their peers. For example, Meghan indicated that one of the factors that led to her decision to leave the program prior to completing her degree was that she did not feel connected to her peers. Specifically, she explained that “my cohort were so competitive with each other, and I didn’t like that. I came from a very collaborative environment, and so the competition was just not a good environment for me to be a part of.” She explained that she did not “have a whole lot in common with her peers,” and therefore, she did not spend much time with her peers.

Overall Autonomy in the Program

As was previously mentioned, 63% of the former PhD students claimed to feel overall autonomy during their doctoral experience. One primary theme that began to emerge is that the majority of the participants reported, to some extent, that their autonomy stemmed from the numerous opportunities in their PhD program that were available to them. The majority of students indicated that they had possibilities to take a wide range of courses, participate in extracurricular activities, become involved with the student guild, attend conferences of their choosing, and really take advantage of the Stanford University experience.

Peter explained that he felt like he had complete autonomy “over every major component of my PhD experience.” He explained that he had complete control over the classes he took, the research projects he was involved with, and the extracurricular

opportunities that were available to him. In addition, Laurie explained that she felt she had “total ownership” over her PhD experience, and that the department had the resources for her to attend conferences and participate in additional professional development opportunities.

However, not every student felt like they had autonomy during their entire experience at the Graduate School of Education. For example, when Sarah first arrived, she realized that her advisor was “extremely restrictive” in terms of allowing her to take the courses that she wanted as well as participate in research projects of her choosing. Sarah stated, “My advisor put so many restrictions on me. It was really strange. He wouldn’t let me take the courses that I wanted. When I got rid of him and found a new advisor, I got my freedom back.”

Mike also felt like he did not have as much autonomy as he thought he should have had. He indicated that his advisor did not allow him to take advantage of a couple different research opportunities that were available and prevented him from taking one academic course that was available. He further stated, “I wish that I could have had a bit more autonomy here. I’m sure if I would have had it, my experience could have been quite a bit better.” He also explained that either way, he would have left the program as his professional goals changed, as he did not need to earn the PhD.

The Structure of the Graduate School of Education

From the former PhD students from the Graduate School of Education, 75% indicated that the structure of their PhD program helped them to feel competence during

their PhD experience, 50% reported feeling autonomy, and 88% claimed that the structure of the program helped them to feel relatedness during their doctoral experience.

Through talking with the former PhD students at the Graduate School of Education, the majority of them explained that the formal cohort model was the primary structural component that encouraged the former PhD students' competence. As has been previously explained, this model allows for students to be bound together. Students will take classes together, work on projects together, and often become involved in the same extra curricular projects together. Furthermore, the cohorts at the Graduate School of Education are small, typically thirty to thirty five students per entering cohort. And from there, the cohorts break down into smaller subsections depending on the specific field in education; sometimes the cohorts will only be five students.

The majority of the former PhD students reported that their competence stemmed from having close access to both their peers as well as with professors. Bruce explained that he constantly had access to faculty members or to other PhD students to receive clarity on a particular matter or to receive guidance and mentorship. At the same time, Scott explained that his peers were some of the most valuable resources that he had, and they were a huge help in helping him navigate both the academic and non-academic terrains. Peter shared a similar response by explaining that some of his peers in his research lab that were part of his cohort were "definitely helpful in terms of helping me learn more about the research process and understanding research design and really in producing research."

Another factor that appeared to contribute to students' competence was the first-year seminar that all PhD students are required to take. This seminar is intended to acquaint students with (a) the Graduate School of Education, (b) research areas within the field of

education as well as the overall research process, and (c) help students build a sense of community. From the seven participants who indicated that the structure helped them develop a sense of competence, five of them explained that this course was very helpful in teaching them more about their PhD program as well as their overall research agenda.

For example, Scott talked about the value that he gained from that seminar in that, “It really helped me to clarify what I wanted to do while I was there.” However, not every student agreed that the seminar was helpful. Bruce explained that the seminar was, “The biggest waste of time, and it just was not helpful at all.”

50% of the participants indicated that the structure of the College of Education encouraged them to feel autonomy. While four participants indicated that they felt like the structure of the PhD program allowed them to have complete control and ownership over their PhD experience, the other four of the participants all indicated that they felt like the requirements and cohort structure, to some extent, restricted their ability to take advantage of all of the different academic and non-academic possibilities. For example, Meghan explained:

Sometimes I felt very restricted in terms of what I wanted to do. I just felt like there were these rigid requirements that were not at all tailored to what I aspired to do professionally. I didn't like some of the courses that I was taking, and I didn't like the assistantship that I was involved with.

On the other hand, Bruce felt like he had “complete control over my experience,” regardless of the structure of the Graduate School of Education. For example, he explained that one of his goals was to become the best researcher that he could. Therefore, he took it upon himself to take many research courses. He stated:

I just took it as a mission to not be a bad methodological researcher. So I took the hardest econometrics classes. And then, I took the hardest statistics classes in the

science department. Even though these were so hard, I appreciated these courses, because sometimes because you don't realize at the time that like if you never learn major algebra you can miss out on having a grasp of like how do you integrate a probability distribution question, and then you are stuck, if you don't have this prior understanding.

The majority of the participants (88%) explained that the structure of their PhD program, to some extent, helped them feel more relatedness during their doctoral journeys. One major theme that began to emerge was that each of these participants explained that the cohort structure was the primary structural component that fueled their sense of connection to the department. For example, Sarah explained:

I would say that the most important thing was our cohort. So our cohorts are usually about 32 people. In our cohort, we had a newsletter that would serve as a means of keeping people informed. In our cohort, we were very tight and we were very supportive of each other. We were all very good friends. So that made a huge difference; I think a lot of people can feel kind of alone in the PhD process. However, almost everyone in our cohort seemed to participate in all kinds of social events that we had. I would say there were maybe 4 or 5 people who didn't really participate in all of that social activity starting from really early on and carrying us through.

However, the one former PhD student who did not feel like the cohort helped her to feel connected was Meghan. This was primarily because her cohort "was very competitive and always trying to one-up each other." She further explained that she did not like seeing the same people every single day.

The Faculty Advisor and Student Relationship

From the former PhD students from the Graduate School of Education, 63% reported that their faculty advisor encouraged them to feel competence, 63% also indicated that their advisor helped them to feel autonomy, and 38% felt that their advisor helped them to feel relatedness in their PhD program.

63% of the former PhD students felt that their advisor helped them to feel competence during the PhD experience. One of the primary findings that emerged from the participants is that their advisors had an open-door policy, and these former students generally felt like they had complete access to their advisor. Consequently, their advisor provided them with support and guidance throughout the program.

Peter explained that because he and his advisor worked very closely on research projects together. His advisor was a “great source of wisdom and guidance.” Peter further elaborated that his advisor helped him to develop a stronger professional identity as well.

However, not every single PhD student felt that their advisor was someone who helped them feel competence. For example, Bruce explained that his initial advisor “didn’t give a rat’s ass about me.” He talked about how his advisor basically “ignored” him and did not provide him any direction or guidance. Because his advisor did not take a particular interest in him, Bruce said that he felt a fair amount of confusion in terms of what his advisor’s expectations were of him as well as how to successfully navigate the program. Bruce eventually “broke up” with his advisor, and found a new person who was “extremely supportive and helpful” to him throughout the remaining part of his doctoral experience.

63% of the former PhD students also felt that their advisor helped them to feel an overall strong sense of autonomy during their PhD experience. For example, Laurie explained that her advisor was “very supportive” yet also “hands-off” and let her decide many of the courses that she wanted to take as well as how she wanted to frame her overall experience at the Graduate School of Education. Laurie explained:

My advisor was very hands off and he didn’t take much of a role in selecting courses or research projects for me. On the other hand, my advisor had big grants and these grants were joined grants with other large institutions. He was very well funded, and he would basically take his doctoral students with him wherever he went.

At the same time, Scott felt that his advisor frequently provided him with several different options for research as well as other projects. He explained that he had full autonomy to choose which projects he wanted to work on, especially for independent research. Scott explained:

My advisor was also very supportive of me doing independent projects. He allowed me to take research in my own direction and so forth. I did my thesis as an independent study outside of anything that he ordered the research group doing. It was great, and he even offered to help me write grants to get my own research projects funded. He took a particular interest in the work that I was interested in doing.

On the other hand, not every faculty advisor appeared to allow their students to have complete autonomy during their PhD experience. For example, Sarah, studied a unique topic in education, and her initial advisor, “would not allow me to take any [...] education courses.” She further explained, “It just seemed so odd that I couldn’t take any courses in my field.” This became one of the factors that led to her deciding to find a new advisor in the program. Dave, for example, explained that his advisor “completely ignored me and offered me absolutely no guidance.” He further explained that his advisor largely “crippled” his experience in the Graduate School of Education.

Only 38% of the former PhD students explained that their advisor helped them to feel relatedness during their experience. The majority of the participants explained that it was really their [the students] responsibility to meet people and develop professional relationships. As has been previously explained, the cohort structure significantly contributed to students’ ability to make personal and professional relationships in the program.

At the same time, the majority of these participants explained that they did not heavily rely on their advisor to connect them with people. Bruce explained that because of the formal cohort structure, it was very simple to meet other people. He stated, “I had already made lots of good friends, and wasn’t depending on my advisor or anyone else to go out of their way to connect me with other people.” On the other hand, Meghan explained that she wished her advisor had taken more of a role in connecting her to other people, especially other students outside of the Graduate School of Education.

Students’ Prior Integration and Exposure to PhD Programs

From the former PhD students from the Graduate School of Education, 63% indicated that they had some sort of prior integration and exposure to a PhD program. 63% of participants, to some extent, indicated that this prior exposure helped them to feel competence in the program. 63% of participants indicated that this prior integration and exposure helped them to feel autonomy. 63% of participants also indicated that the prior integration and exposure they had helped them to feel relatedness during their PhD experience.

As was previously mentioned, 63% of the participants explained that they had some sort of prior exposure and integration to a PhD program, and, to some extent, this previous helped them feel competence, relatedness, and autonomy during their PhD experience. The majority of these participants had already earned a master’s degree in education or another social science field. One theme that began to emerge from talking with the participants is that many of them had prior conversations with professors and current PhD students while they were earning their master’s degree.

Sarah, for example, had already earned a master's degree prior to attending Stanford University for her PhD. However, she could not recall having any prior conversations with professors or current students about earning a PhD. She explained that she did not fully understand the nature of what it meant to earn a PhD. Sarah stated:

I had a very little sense of what it meant to earn a PhD when I came here. I had very little exposure, very little sense. I kind of got it that you do research projects and you develop these research projects and you have to do a lot of writing. I got a taste of that during my master's thesis, but in terms of talking to people about a PhD, really I had very little [conversation about this degree].

Even further, Peter had actually spent two years in a previous PhD program prior to attending the Graduate School of Education. He left his prior program because it wasn't the best fit for his professional goals. However, after he left his program, he gained a fresh perspective on what he wanted out of a PhD program and ensuring that the program was a strong fit. He explained that he felt "significantly more ownership and control" over his experience since he now knew what he wanted from a PhD program. Peter explained:

So I actually had quite a bit of exposure. I also had a pretty clear sense of how important it was for me to really have a good match both between what I was interested in studying and what the research I would be doing. I also realized how important it was to have a good working relationship with my advisor before committing to working with him or her. So in those ways, probably what makes me an outlier among most PhD students or people going into their PhDs that I had so much exposure to even experience with what a PhD program has to offer. And how important it is to understand what the research process entails and the degree to which the match between interests and research and between advisee and advisor was really integral towards having a successful doctoral experience.

Dave explained that while he was a master's student in the Graduate School of Education, he applied for the PhD. He had taken a couple of research courses that were primarily PhD level courses that had helped to prepare him to enter a PhD program. He felt that, not only did the classes help him to excel in his coursework, but those classes also

helped him to meet other PhD students and to help him learn more about their experience as doctoral students at the Graduate School of Education.

In terms of feeling relatedness, many of the former PhD students talked, to some extent, about how their prior exposure helped them to feel comfortable with the structure of the PhD program, and helped them to understand the nature of building relationships with faculty members, their faculty advisor, as well as with other students in the program. Sarah explained:

I think it helps to be comfortable with the structure coming in so that you can kind of focus on other aspects like developing the social friends and other relationships with faculty. It's also nice to connect with other students. You come in knowing that we are all trying to earn a PhD. Everyone comes in with a different experience, but everyone also by the time you get to a PhD program, you are pretty much all career students; you have a sort of bonding over that kind of thing.

However, not every student felt like the prior exposure helped them to feel relatedness to their peers, the program, or to the university, writ large. For example, Meghan explained that she had “lots of conversations with professors and other PhD students” during her time as an undergraduate about what it might be like to attend graduate school. Based on what she had been told from her prior conversations, she thought that she would be able to develop friendships with her peers in the program. However, largely because the majority of the people in her PhD program were “really competitive”, it was difficult for her to develop friendships with the majority of her peers

Conclusion

The former PhD students from the Graduate School of Education have helped to inform the research questions guiding this study. From the former PhD students from the

Graduate School of Education, 75% indicated that they overall felt competence during their PhD experience, 75% reported feeling overall relatedness, and 63% claimed to feel overall autonomy during their doctoral experience. In addition, from the former PhD students from the College of Education, 75% indicated that the structure of their PhD program helped them to feel competence during their PhD experience, 50% reported feeling autonomy, and 88% claimed that the structure of the program helped them to feel relatedness during their doctoral experience.

From the former PhD students from the Graduate School of Education, 63% reported that their faculty advisor encouraged them to feel competence, 63% also indicated that their advisor helped them to feel autonomy, and 38% felt that their advisor helped them to feel relatedness in their PhD program.

Furthermore, from the former PhD students from the Graduate School of Education, 63% indicated that they had some sort of prior integration and exposure to a PhD program. To some extent, each of these participants indicated that this prior exposure helped them to feel competence in the program. In addition, 63% of participants indicated that this prior integration and exposure helped them to feel autonomy and relatedness during their PhD experience.

CHAPTER 7

MOVING FORWARD

This final chapter will provide a summary of the findings that stem from the research questions proposed in Chapter 3. Following the summary of findings, I will end this chapter by presenting recommendations directed towards helping PhD students feel an overall stronger sense of competence, relatedness, and autonomy during their PhD experience. Many of these recommendations will be most applicable for PhD programs similar to the College of Education at the University of Washington that often have a student population that is unable to take full advantage of the many opportunities available because of personal, professional, and family responsibilities. In the last section of this chapter, I will I outline key areas for future research and inquiry.

Summary of Key Findings

I attempted to answer the research questions by interviewing former PhD students from both Stanford University's Graduate School of Education and the University of Washington's College of Education. These participants may help to shed light onto how and why their experience as doctoral students has helped to motivate and or discourage them from completing their degree.

Specifically, utilizing Ryan & Deci (2001) as a lens, this study investigates how and why PhD students' experience has or has not helped students to feel competence, relatedness, and autonomy during their experience as doctoral students. To help add richness, depth, and perspective to this case study, it was important to include faculty members as well as student affairs professionals from both Stanford University and the

University of Washington. These participants brought additional insight and added rich context that helped to develop a more comprehensive multiple case study.

This section will summarize the findings from interviewing faculty, student affairs professionals, as well as from the former PhD students from both the Graduate School of Education at Stanford University and the College of Education at the University of Washington.

Research Question 1

Do former PhD students report feeling: (a) a requisite and or adequate ability to excel in their respective PhD program (i.e., referred to as *competence* in this study), (b) connected by reason in their PhD program (i.e., referred to as *relatedness* in this study), and (c) ownership and control over their PhD experience (i.e., referred to as *autonomy* in this study) and why or why not?

The College of Education. From the former PhD students from the College of Education, 88% indicated that they overall felt competence during their PhD experience, 33% reported feeling overall relatedness, and 88% claimed to feel overall autonomy during their doctoral experience.

One primary theme that appeared to emerge from talking with the former PhD students from the College of Education is that they felt competence largely because they had a clear understanding of their professional goals. Broadly speaking, this awareness of their professional goals helped them to see where they needed to invest their time during the PhD experience. Many of the students from the College of Education were non-traditional

students; they were middle-aged, had a significant amount of professional experience behind them, and were generally seeking out the PhD to help them advance in their career.

Another theme that began to emerge from talking with the participants from the College of Education is that their competence stemmed from having a community of mentors. In fact, 66% of the former students explained that their mentor(s) had an influence on their overall competence during their PhD experience.

Only 33% of the students from the College of Education explained that they felt relatedness to their peers and to their department. One of the primary themes that began to emerge is that 66% of the former students were employed at another university or at another location outside of the university setting during their PhD experience. This outside employment created a large disconnect from other students, staff, and faculty. These students had indicated that they simply did not have the time to become really involved in attending social and or other additional events that were outside of class.

88% of the former PhD students indicated that they felt autonomy during their PhD experience. One interesting finding that emerged is that each participant who indicated that he or she had autonomy also reported feeling competence. One of the primary themes that somewhat emerged from these participants is that their autonomy developed from having a fairly clear direction in terms of where they aspired to go, professionally.

The Graduate School of Education. From the former PhD students from the Graduate School of Education, 75% indicated that they overall felt competence during their PhD experience, 75% reported feeling overall relatedness, and 63% claimed to feel overall autonomy during their doctoral experience.

One primary theme that emerged from the participants is that they developed competence in their program through their research and or other type of assistantship. As has been previously mentioned, every PhD student at the Graduate School of Education is fully funded, and that funding generally comes from a research, teaching, or additional type of assistantship. According to many of the participants, these assistantships provided them with research and teaching opportunities, as well as overall professional development opportunities.

Another primary theme that began to emerge from talking with the participants is that their competence also seemed to come from many of the resources they had available to them both in the Graduate School of Education as well as from Stanford University. These resources included personnel in the program such as faculty, staff, and of course, their classmates.

They also had several departmental resources such as the library, student services office, writing center, as well as had several other resources such as a graduate student office as well as several other student life functions on campus. In addition, students at the Graduate School of Education would frequently attend professional and academic conferences that they received full funding from their department.

75% of the former students reported feeling overall relatedness during their PhD experience. One of the major findings that began to emerge from talking with the former students is that this sense of relatedness stemmed from their peers within the program. As has been previously discussed, there is a formal cohort structure that binds PhD students together. Consequently, these students spend a substantial amount of time together, creating an environment that is conducive to developing personal and professional relationships.

63% of the former PhD students claimed to feel overall autonomy during their doctoral experience. One primary theme that began to emerge is that the majority of the participants reported, to some extent, that their autonomy stemmed from the numerous opportunities in their PhD program that were available to them. The majority of students indicated that they had possibilities to take a wide range of courses, participate in extracurricular activities, become involved with the student guild, attend conferences of their choosing, and really take advantage of the Stanford University experience.

Research Question 1A

Did the structure of PhD programs influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

The College of Education. From the former PhD students from the College of Education, 55% indicated that the structure of their PhD program helped them to feel competence during their PhD experience, 88% reported feeling autonomy, and 22% claimed that the structure of the program helped them to feel relatedness during their doctoral experience.

The participants who indicated that the structure of the PhD program helped them to feel competence, largely argued that the specific degree requirements for the PhD, such as the research and inquiry paper and presentation, the general exams, as well as their overall coursework allowed them to develop in their academic and professional skills.

Another finding that began to emerge is that the majority of the participants (77%), to some extent, indicated that the lack of a formal cohort structure prevented them from having opportunities to collaborate with others on research and other projects. The former students explained that they feel their skill-sets could have been enhanced if they would

have had more opportunities to interact with their peers and continually collaborate and receive feedback from each other.

Furthermore, the 88% of former PhD students who believed that the structure of their PhD program allowed them to feel autonomy, was that this autonomy was fueled by their ability to structure their PhD experience in a manner that best fit their academic and professional interests. As has been previously discussed, PhD students, under the supervision of their faculty advisor, generally tailor their PhD experience in a manner that will help them to accomplish their academic and professional goals.

The Graduate School of Education. From the former PhD students from the Graduate School of Education, 75% indicated that the structure of their PhD program helped them to feel competence during their PhD experience, 50% reported feeling autonomy, and 88% claimed that the structure of the program helped them to feel relatedness during their doctoral experience.

One of the primary structural factors that encouraged the former PhD students' competence was the cohort model. As has been previously explained, this model allows for students to be bound together. Students will take classes together, work on projects together, and often become involved in the same extra curricular projects together. Furthermore, the cohorts at the Graduate School of Education are small, typically thirty to thirty five students per entering cohort. And from there, the cohorts break down into smaller subsections depending on the specific field in education; sometimes the cohorts will only be five students.

Another factor that appeared to contribute to students' competence was the first-year seminar that all PhD students are required to take. This seminar is intended to acquaint

students with (a) the Graduate School of Education, (b) research areas within the field of education as well as the overall research process, and (c) help students build a sense of community. From the seven participants who indicated that the structure helped them develop a sense of competence, five of them explained that this course was very helpful in teaching them more about their PhD program as well as their overall research agenda.

The majority of the participants (88%) explained that the structure of their PhD program, to some extent, helped them feel more relatedness during their doctoral journeys. One major theme that began to emerge was that each of these participants explained that the cohort structure was the primary structural component that fueled their sense of connection to the department.

Research Question 1b

Did faculty advisors influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

The College of Education. From the former PhD students from the College of Education, 66% reported that their faculty advisor encouraged them to feel competence, 66% also indicated that their advisor helped them to feel autonomy, and 44% felt that their advisor helped them to feel relatedness in their PhD program.

66% of the former PhD students from the College of Education explained that they had developed a very strong relationship with their advisor. The majority of the participants praised their faculty advisor for helping them in their overall professional development. They explained that their advisor was the person who guided them through the program, provided constructive feedback on their writing, research, presentation skills, as well as helped them in their overall career development.

One finding that emerged from talking with the former PhD students is that many of the same students who felt competence also felt autonomy from their advisor. For example, Johnny and Isabella explained that their advisor provided them with a clear roadmap on the steps they needed to take to accomplish their degree. Because they had this guide, they felt like they had somewhat control over their experience.

Furthermore, many of the former PhD students were working full-time outside of the College of Education, and outside their university writ large. This was one of the main factors why so few (22%) of the students indicated that they felt connected to their peers, department, and to the university writ large. Nonetheless, almost half of the former students (44%) indicated that their advisor connected them to the department and to the university in many ways. This included connecting the students to other students, connecting the students to other faculty members, and introducing and inviting these students to events around campus that may have been of interest to them.

The Graduate School of Education. From the former PhD students from the Graduate School of Education, 63% reported that their faculty advisor encouraged them to feel competence, 63% also indicated that their advisor helped them to feel autonomy, and 38% felt that their advisor helped them to feel relatedness in their PhD program.

63% of the former PhD students felt that their advisor helped them to feel competence during the PhD experience. One of the primary findings that emerged from the participants is that their advisors had an open-door policy, and these former students generally felt like they had complete access to their advisor. Consequently, their advisor provided them with support and guidance throughout the program.

Research Question 1c

Did prior exposure and integration into a PhD program influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

The University of Washington. From the former PhD students from the College of Education, 77% indicated that they had some sort of prior integration and exposure to a PhD program. However, very few (33%) of the participants indicated that this prior exposure helped them to feel competence in the program. Only 22% indicated that this prior integration and exposure helped them to feel autonomy, and 22% reported that this prior exposure and integration helped them to feel relatedness during their PhD experience.

One theme that began to emerge from talking with the participants is that most of the students had previously earned a master's degree, prior to earning their PhD. During their prior experience in graduate school, several of these students had conversations with faculty members about what it might be like to earn a PhD. For many of the students also took courses with current PhD students during their prior experience in graduate school. These former students had prior conversations with PhD students that started to somewhat frame what a PhD experience might look like.

22% of the participants indicated that their prior exposure helped them to feel autonomy in the program. The majority of the participants indicated that even though they may have had some extent prior integration and exposure into a PhD program, that it was not enough to make a significant difference in helping them feel more autonomy.

22% of the participants also reported that their prior exposure and integration to their PhD program helped them to feel relatedness to their peers, department, and to the university. Because many of these participants were working full-time as well as had other

responsibilities such as family and other obligations, very few of them reported that they had attended their orientation as well as other events held during the beginning of the academic year. Similar to what has already been reported, their professional, family, and other responsibilities were a huge preventive factor in helping these former students feel connected to their department.

Stanford University. From the former PhD students from the Graduate School of Education, 63% indicated that they had some sort of prior integration and exposure to a PhD program. To some extent, each of these participants (63%) indicated that this prior exposure helped them to feel competence in the program. In addition, the same percentage (63%) of participants indicated that this prior integration and exposure helped them to feel autonomy and relatedness during their PhD experience.

As was previously mentioned, 63% of the participants explained that they had some sort of prior exposure and integration to a PhD program, and, to some extent, this previous helped them feel competence, relatedness, and autonomy during their PhD experience. The majority of these participants had already earned a master's degree in education or another social science field. One theme that began to emerge from talking with the participants is that many of them had prior conversations with professors and current PhD students while they were earning their master's degree.

In terms of feeling relatedness, many of the former PhD students talked, to some extent, about how their prior exposure helped them to feel comfortable with the structure of the PhD program, and helped them to understand the nature of building relationships with faculty members, their faculty advisor, as well as with other students in the program.

Recommendations to Improve The PhD Student Experience

The following five recommendations are directed towards helping students develop a greater sense of competence, relatedness, and autonomy, with the ultimate goal of enriching the PhD experience for students who are earning the PhD. As was previously mentioned, some of these recommendations will likely be most applicable for PhD programs that are characteristic of the College of Education. The following recommendations include (a) adequately prepare students prior to entering a PhD program, (b) Integrating Professional Development Into The Curriculum, (c) Creating a Stronger Sense of Community Through Integrating Online Technology, (d) Ensuring Students Have Autonomy, Especially in Tightly Structured Programs, and (e) Creating Opportunities for Faculty Advisors to Become More Effective Advisors. Each of these recommendations will be further explained.

Adequately Preparing Students Prior to Entering a PhD Program

One potential way to improve PhD students' competence, autonomy, and relatedness in a PhD program is to build up their cognitive maps prior to entering a PhD program. Through increasing student preparedness to enter a PhD program, this can provide them with a much stronger cognitive map that will serve as a compass during their PhD experience. As has been previously extensively explained in the literature, many PhD students enter into a program without knowing much of the culture, structure, expectations, as well as the career options that are available to them upon graduating.

I recommend that aspiring PhD students be required to complete "Introduction to Earning a PhD." The format of this program could follow a course format or workshop

series format and would be sponsored by every PhD granting institution of higher education in the United States. This course/workshop series would cover all of the fundamental aspects of what it means to be a PhD student, including, but certainly not limited to, working with a faculty advisor, building your doctoral committee, developing a research agenda, building a supportive group of peers, as well as figuring out the career options that are available to students upon graduating.

To further help students buy into this idea, students could receive official credit towards their PhD to take this course and or workshop series. In fact, colleges and universities could offer this program in an online format, allowing students more flexibility and accessibility in terms of when and where to take this course. The idea behind this program is to help students start to frame their PhD experience and to clarify whether a PhD program is the right path to take for them. This course and/or workshop series could also help filter out those students who may realize that a PhD, is in fact, not for them.

Integrating Professional Development Into The Curriculum

One potential way to help students develop their competence during their PhD experience is to integrate professional development into the overall curriculum. For example, not unlike the PhD students at the College of Education, a substantial amount of PhD students across the country have full time positions while earning their PhD, and many of these students also have families and/or additional responsibilities.

For these countless students, it is incredibly difficult for them to take advantage of extra professional development activities workshops that are available during the day on campus. It becomes particularly burdensome and difficult to try to become involved in extra

academic and non-academic activities such as workshops, seminars, conferences, as well as many other types of professional development opportunities.

It is important to systemically integrate professional development into the curriculum. For example, students could be required to take a professional development series of courses and/or workshops that they would receive credit for towards their PhD. These courses and or workshops could cover topics academically focused such as, developing your writing, researching, and presentation skills to more career relatedness topics such as, giving job talks, presenting at conferences, networking and building relationships, as well as writing cover letters and statement of purposes.

Students could be required to take a number of courses and workshops during each academic year. In fact, these courses/workshops could also be online providing a lot of flexibility for those students who are particularly working in a full-time position as well as have additional responsibilities.

Creating a Stronger Sense of Community Through Integrating Online Technology

One way to potentially decrease the social isolation that many PhD students often face is to create opportunities for PhD students to congregate and collaborate on research and other projects, virtually. Given that countless PhD students often have significant professional, family, and financial obligations, these factors can make it very difficult for PhD students to become physically involved in their program, creating a disconnect from other students, their department, and from their institution writ large.

Virtual spaces could be created and integrated into the curriculum using technology like Second Life that allows individuals to congregate virtually, regardless of their

geographic location. This kind of technology could be most applicable for programs like the College of Education, where students have incredibly complex backgrounds making it difficult to spend a considerable amount of time within their program and with other students.

PhD programs could use these virtual spaces for opportunities for students to connect with each other as well as work on academic projects together. In fact, this type of technology could be used for much larger professional development opportunities such as executive weekends and or academic conferences. Overall, one of the primary benefits to using this kind of technology is that it could help students have more access and flexibility to meeting other people in their program as well as have opportunities to collaborate on research together.

Ensuring Students Have Autonomy, Especially in Tightly Structured Programs

One important aspect of the PhD experience is to ensure students feel like they have control and ownership over their doctoral journey. Students deserve the right to have the autonomy to structure their time as students in a manner that is most appropriate and effective for them. Often in programs that have tightly structured curriculums, many students may feel like they do not have much ability to make their own choices and may lose a sense of ownership over their experience.

In programs like the Graduate School of Education, that have a cohort model with a somewhat tight structure in comparison to the College of Education it would be beneficial to ensure that students receive ample freedom to take courses of their choosing, become involved in research and other academic projects of their choice, have flexibility in terms of

when they complete their formal degree requirements (e.g., mini-studies, general exams, etc.), and foremost be able to structure their PhD experience in a manner that is most conducive for them.

Especially for programs that have tighter structures, it may be worthwhile to have an annual review and assess the degree to which PhD students have autonomy over their experience. It is important to investigate and modify departmental policies to ensure that they are not seriously hampering students' abilities to make their own decisions. It may also be beneficial to conduct research with students to see if, and to what extent, students feel a sufficient amount of autonomy over their experience.

Creating Opportunities for Faculty Advisors to Become More Effective Advisors

As is consistent with the literature as well as with findings from this study, faculty advisors can play a tremendous role in PhD students overall experience in a PhD program. Faculty advisors also need a lot of mentoring and coaching on becoming more effective advisors for their students. Many faculty advisors have not had the proper training. In fact, often there is a perpetual cycle that occurs when faculty advisors had poor advising when they were PhD students, and then they end up following that same path when they become faculty advisors.

It would be beneficial to develop faculty advisor professional development material that would be focused on helping advisors become more effective advisors. Specifically, this material could be framed around student development theory, and it could help to inform advisors on how to become more student-centered in their advising and mentoring approach. It may also be worthwhile to integrate mentoring programs for faculty

advisors to help them learn how to provide their students with more ownership and control over their PhD experience.

These sessions could be tailored on how to put the student first in the advising experience. They could help faculty learn how to more effectively identify the needs of each student and to help each student develop a stronger sense of competence, autonomy, and relatedness in their PhD program. This material could also be presented in various formats such as in academic conferences, online webinars, as well as general workshops at their home institution. Ultimately, these professional development initiatives for faculty advisors could help both the PhD students and advisors have a much richer educational experience.

Areas for Future Research

Given this study's findings, there are many potential avenues for future research. To some degree, the findings in this study do not fully support the self-determination theory.

As has been extensively discussed, the self-determination theory proposes that individuals need to feel a sufficient degree of competence, relatedness, and autonomy to have self-motivation (Ryan & Deci, 2000). This theory is built on the assumption that individuals are inherently active organisms with a natural desire to set and accomplish goals; individuals seek out challenges, but they need the motivation to reach their goals (Self-Determination Theory, 2013).

However, several of the former students, particularly from the College of Education indicated that they did not feel an adequate level of relatedness to their peers, department, or to the university; only 33% reported feeling relatedness. And, the majority of these former students who reported that they did not feel a sufficient sense of relatedness, successfully

graduated from the CoE with their PhD. Furthermore, Lovitts (2001) and others have indicated that social isolation is one of the main factors that leads to doctoral student attrition.

It may be worthy to further study the experiences of PhD students who are characteristic of many of the students from the College of Education, such as being currently employed outside of their department and institution as well as have other family and overall life obligations that makes it difficult for them to develop a sense of connection with their peers, department, and university writ large. It could be worthwhile to study how their current life situations are influencing their motivation and self-determination to complete a PhD.

Many of the PhD students from the College of Education indicated that they had social support outside of their department from family, friends, and other professional colleagues. It might be advantageous to study if, and the extent to which, outside social support, meaning outside of the PhD program (e.g., family, friends, professional colleagues) influences the degree to which PhD students successfully cross the finish line and graduate with the degree.

It could be theorized that people do not need to feel competence, autonomy, and relatedness from a specific environment to be self-motivated, but they need to feel the three factors in their overall life to become self-motivated. Not every student who graduated from the College of Education or the Graduate School of Education reported feeling competence, autonomy, and relatedness during their PhD experience.

These cases also do not support the self-determination theory. Therefore, it may be worthwhile to study the extent to which people's overall life situations are contributing or

detracting from their competence, autonomy, and relatedness that they feel in their lives. And, if and to what extent, these overall outside factors are helping them to feel self-motivation to complete their PhD and or whatever difficult challenges and goals that they are attempting to accomplish.

The data from this study has somewhat suggested that many of the students who attended the College of Education were earning a PhD to advance in their career, whereas many of the students from the Graduate School of Education were earning a PhD to start their career. It may be worthwhile to study how students that are more characteristic of students from the College of Education (e.g., generally seasoned professionals who are going back to school to further their career, who may also have a plethora of outside responsibilities) could adapt to the cohort model of PhD programs similar to that of the Graduate School of Education.

Even though a much a higher percentage of students who attended the Graduate School of Education indicated that they felt relatedness to their peers compared to those students who attended the College of Education, a cohort model may or may not be the most effective way to help students feel more connected to their peers, department, and university writ large.

Again, many of the students who were attending the Graduate School of Education appeared to be earning a PhD to start their career. They were also typically younger compared to their counterparts at the College of Education, and they appeared to have less outside responsibilities compared to those at the College of Education. These situations make it somewhat easier to attend a PhD program full-time and to become really immersed into a PhD program. Would students who are already well advanced in their careers

characteristic of those from the College of Education be willing to immerse themselves into a PhD program full-time, especially if they have other family and outside responsibilities? This is just one of several questions that could be further investigated when looking at the cohort model.

In addition to the self-determination theory, this study also, to some degree, utilized the cognitive map theory that Lovitts (2001) utilized in her study, *Leaving the Ivory Tower*. It appeared that students who had more developed cognitive maps (e.g., those students who did have prior exposure and integration into a PhD program), generally had a stronger understanding of how they wanted to frame their overall doctoral experience.

Future research could also be directed at learning where students learn about doctoral programs and what specific factors are contributing to their decision to earn a PhD. After all, many aspiring PhD graduates want to earn a PhD because they want to assume a tenure track faculty position. Yet, there are way too few faculty positions available to match the number of graduates. Future research could look at if and why students decide to withdraw after potentially realizing the extreme competition to be offered a tenure track faculty position at an institution of higher education.

In addition to the factors that this study investigated (e.g., the faculty advisor student relationship, the structure of PhD programs, as well as students' prior exposure and integration into a PhD program), it may also be worthwhile to study other factors that might motivate and or prevent students from finishing their PhD. For example, future research could look at personal and family characteristics that might influence students' persistence in a doctoral program. It might also be worthwhile to investigate students' overall career

aspirations, prior to entering their doctoral program and then continue to follow-up after every academic year or so until they graduate or withdraw.

It may also be worthwhile to take a much deeper examination into the specific experiences of students who withdrew from their PhD program compared to those students who successfully graduated from their program. This kind of investigation could specifically address what experiences specifically contributed to the students' departure from their respective program.

Conclusion

The purpose of this study was to take a close examination of the PhD experience through a self-determination theory lens, focusing on former PhD students from two equally reputable education departments. Specifically, this study examined how and why the characteristics of the PhD experience such as the structure of PhD programs (e.g., coursework requirements, degree requirements, faculty advisor selection process, etc.) and may have helped or did not help students to feel competence, autonomy, and relatedness while they were students.

This study also examined the degree to which graduate faculty advisors may have or did not help PhD students to feel competence, autonomy, and relatedness during their experience. This study also investigated if former students indicated having any prior exposure to PhD programs before entering their respective graduate program (e.g., prior interactions with graduate faculty members, students, or staff, orientation to the culture and structure of programs, having attended any prior academic conferences, taken any graduate level courses, etc.). This study investigated the extent to which this prior exposure may have

helped students to feel competence, autonomy, and relatedness during their PhD experience. Overall, this study took a deeper investigation into the experience of being a PhD student, and specifically examines how specific elements of the experience might motivate and or discourage students from successfully completing their degree.

PostScript

The Collaborative Researchers for Educational Sciences Training (CREST) is a relatively new PhD program at the University of Washington that trains doctoral students to be fully equipped for interdisciplinary research and evaluation of K-20 policy. Students are trained on how to conduct mixed-methods research and are expected to integrate this kind of research. CREST is entirely funded through an Institute of Education Sciences grant.

In many respects, CREST has similar attributes of the Graduate School of Education at Stanford University. For example, students are grouped into formal cohorts. As of this writing, there are approximately twenty-five PhD students. All of the students are fully funded through the Institute of Education Sciences grant. The students all share the same requirements. However, these students have a range of options in terms of selecting courses and research projects. Students receive strong mentoring, advising, and overall guidance from faculty. These students also have a wealth of professional development opportunities such as presenting at national conferences, journal reviewing, engaging in national scholarly conversations, and have many other opportunities. According to a program administrator, very few of students in this program have withdrawn.

Appendix A: Former PhD Student Interview Protocol

1. Looking back on your PhD experience, tell me about any kind of social support you had during your time as a PhD student.
 - 1a. Tell me about any kind of social support that your department provided?
 - 1b. To what extent did you feel a part of your department? How about the institution writ large?
 - 1c. To what extent did you feel valued in your department? Could you please expand on...
2. Looking back on your PhD experience, to what extent, were you provided with opportunities to interact with your peers within your academic domain?
 - 2a. To what extent did your department provide you with opportunities to work on academic projects with your peers and colleagues. Could you please expand on...
 - 2b. To what extent did your department provide you with opportunities to collaborate on non-academic projects with your peers and colleagues. Could you please expand on...
3. Looking back on your PhD experience, to what extent, were you provided opportunities to interact with your peers outside of your academics?
4. Looking back on your PhD experience, tell me about any experiences you were given to develop your academic skills?
 - 4a. Tell me about any experiences you were given to develop other professional and non-academic skills.
 - 4b. To what extent did you feel like you were progressing in your academic development during your PhD experience?
 - 4c. To what extent did you feel like you were progressing in your overall professional development during your PhD experience?
5. Looking back on your PhD experience, tell me about any experiences you were given to practice your academic skills and expertise as a PhD student.
6. Looking back on your PhD experience, tell me about any experiences you had in which you were able to apply your other professional and or non-academic skills as a PhD student?

7. Looking back on your PhD experience, tell me about the degree to which you felt ownership over your PhD experience?

7a. To what degree were you able to select your own courses and research projects? Could you please expand on....

7b. To what degree did your faculty advisor guide you in selecting courses and research projects? Could you please expand on...

7c. To what degree did your faculty advisor provide you with opportunities to expand your academic development? Could you please expand on...

7d. To what degree did your faculty advisor provide you with opportunities to expand in your overall professional development? Could you please expand on...

7e. To what degree were you provided opportunities to participate in extracurricular activities of your choosing? Could you please expand on...

8. Overall, to what degree did you feel that you had control over your PhD experience?

9. Looking back to before you were a PhD student, tell me about any prior exposure you had towards a PhD program. Could you please expand on...

9a. Did you have any conversations with professors, PhD students, and or other members of a PhD program prior to entering your program? Could you please expand on...

9b. Had you ever attended any social and or academic events with PhD students and or graduate faculty members prior to entering your program? Could you please expand on...

9c. Had you ever attended a PhD level academic course or workshop prior to entering your program? Could you please expand on...

9d. Did you have any sort of awareness of what it might be like to work with a faculty advisor as a PhD student? Could you please expand on...

10. To what extent were you acquainted with the culture, namely norms, values, and overall expectations of your PhD program, prior to entering? Could you please expand on...

11. To what extent were you acquainted with the structure, namely coursework requirements, degree requirements, and the faculty advisor selection process of your PhD program, prior to entering? Could you please expand on...

12. To what extent do you feel this prior exposure may have helped you excel in your PhD program? Could you please expand on...

12a. To what extent do you feel this prior exposure helped you to feel competence (e.g., having the adequate qualities and required ability to excel) in your PhD program? Could you please expand on...

12b. To what extent do you feel this prior exposure helped you to feel relatedness (e.g., connected by reason) to your PhD program? Could you please expand on...

12c. To what extent do you feel this prior exposure helped you to feel autonomy (e.g., state of being self-governing) in your PhD program? Could you please expand on...

Appendix B: Faculty Interview Protocol

1. In your department, tell me about the kinds of social support that are available for PhD students. Could you please expand on...
2. Tell me about the community in your department. For example, is there a strong sense of community, a weak sense of community, in-between? Could you please expand on...
 - 2b. Do you have any role in helping to build a community for your students? If so, how and in what ways?
3. Tell me about any opportunities that PhD students have to collaborate with their peers and colleagues on research and or other academic endeavors. Could you please expand on...
4. Tell me about any opportunities that PhD students have to collaborate with their peers on non-academic projects. Could you please expand on...
5. From your perspective, tell me about any opportunities that PhD students have to develop their academic skills. Could you please expand on...
 - 5a. How about their non-academic and or other professional skills? Could you please expand on...
6. From your perspective, tell me about the opportunities that PhD students have to take ownership over their PhD experience. Could you please expand on...
 - 6a. To what degree can PhD students select their own courses and research projects? Could you please expand on...
 - 6b. To what extent do you guide your students in selecting courses and research projects? Could you please expand on...
 - 6c. To what extent do you guide your students in their professional development? Could you please expand on...

Appendix C: Student Affairs Interview Protocol

1. In your department, tell me about the kinds of social support that are available for PhD students. Could you please expand on...
2. Tell me about the community in your department. For example, is there a strong sense of community, a weak sense of community, in-between? Could you please expand on...
 - 2a. Do you have any active role in helping to build a community for the PhD students? If so, how and in what ways? Could you please expand on...
3. Tell me about any opportunities that PhD students have to collaborate with their peers and colleagues on research and or other academic endeavors. Could you please expand on...
4. Tell me about any opportunities that PhD students have to collaborate with their peers on non-academic projects. Could you please expand on...
5. From your perspective, tell me about any opportunities that PhD students have to develop their academic skills. Could you please expand on...
 - 5a. How about their non-academic and or other professional skills? Could you please expand on...
6. From your perspective, tell me about the opportunities that PhD students have to take ownership over their PhD experience. Could you please expand on...
 - 6a. To what degree can PhD students select their own courses and research projects? Could you please expand on...
 - 6b. To what extent do you guide your students in selecting courses and research projects? Could you please expand on...
 - 6c. To what extent do you guide your students in their professional development? Could you please expand on...

Appendix D: Observation Guide

1. Describe the nature of the event.
2. What is the overall tone of the event?
3. How many people are in attendance?
4. To what degree are participants interacting with each other?
5. To what degree are participants listening to each other?
6. To what degree are participants engaging in academic discussions?
7. To what degree are participants engaging in non-academic discussions?
8. Final thoughts/observations

Appendix E: Case Study Protocol

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 - 1a. Did the structure of PhD programs influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?
 - 1b. Did faculty advisors influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

1c. Did prior exposure and integration into a PhD program influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience?

Why or why not?

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Overview of the Case Study

Opening Remarks

What has been regarded as a “scandal” and one of the most devastating and “critical issues in graduate education today (Smallwood, 2004, p. A11) is the approximate 50 percent attrition rate cutting across PhD programs throughout the United States. It is unarguable that the experience of being a doctoral student can be exceptionally stressful and difficult (e.g., Lovitts, 2001).

The most significant reasons why PhD students withdraw from their programs are directly linked to the feelings of stress and social isolation (e.g., Lovitts, 2001). Generally speaking, PhD students are not being provided with a sufficient level of social support throughout their doctoral experience (Lovitts). PhD students can also encounter a substantial amount of stress during their time as doctoral students (Lovitts). This stress can stem from an array of factors such as academic demands such as coursework expectations, fear of failure, as well as non-academic demands such as their funding as well as family obligations (Lovitts). Often times, social support can significantly alleviate stress (Berkman, 1995).

However for PhD students, many of them are not being provided with enough social support throughout their PhD program, preventing them from having a substantial lifeline while undergoing the significant stressors of being a PhD student.

The PhD attrition rate is extremely costly to the student. The emotional impact of leaving a doctoral program can be devastating; research has shown that PhD non-completers can become severely depressed, violent, as well as suicidal (Golde, 1996; Hinchey & Kimmel, 2000; Lovitts, 2001; Sternberg, 1981). It is especially tough on the non-completer who must explain, throughout his or her life, why he or she did not finish his or her PhD (Sternberg, 1981).

Purpose of the Study

There has been a fair amount of research looking at PhD attrition. After all, attrition happens across all institutions and across all fields. This study will look at PhD completion and attrition in the field of education. The field of education is a notable field to study PhD completion and attrition for several reasons. For example, historically, more PhDs were awarded in education compared to all other fields (Survey of Earned Doctorates, 2011). For example, in 1981, 7, 497 PhDs were awarded in education, comprising 23.9 percent of all PhD's awarded (Survey of Earned Doctorates). However, in more recent times, the Survey of Earned Doctorates shows that the fewest number of PhDs are awarded relative to all other disciplines. For example, in 2011, 4,691 PhDs were awarded, comprising 9.6 percent of all PhDs awarded (Survey of Earned Doctorates). Another noteworthy trend in the field of education is that 40% of all African Americans who earn a doctoral degree, earn a PhD in education (Barbett & Korb, 1997; NCES, 1990). Overall, this data presents some interesting trends that make the field of education a notable field to study PhD attrition and completion.

The field of education is also a relatively large and complex discipline that encompasses several fields. For example, education departments can consist of programs that prepare students to enter elementary, secondary education, and higher education, as well as train students to become policy makers at the local to national level. Education programs can prepare students to become scholars, researchers, and professors. Even further, education graduates can seek employment in the non-profit or for-profit industry, among several other possibilities. In general, the career options for graduates are more expansive compared to other fields and disciplines. Overall, the complexity of education departments can make them an attractive field to study PhD completion and attrition.

As has been previously discussed, a good portion of PhD attrition research has examined (a) how the culture and structure of PhD programs might lead to attrition, (b) the perceptions of graduate faculty, and how these perceptions might lead to attrition, as well as (c) how the lack of opportunities to integrate into a PhD program might lead to attrition. However, what is lacking in the body of this research are insights into how can PhD students become motivated to successfully complete their PhD.

The purpose of this qualitative study is to take a close examination of the PhD experience through a self-determination theory lens, focusing on former PhD students from the field of education. Specifically, through utilizing the self-determination theory as a lens, this study will examine how and why the characteristics of the PhD experience might be influencing the PhD attrition rate. For example, this study will examine if the *structure* of PhD programs (e.g., coursework requirements, degree requirements, faculty advisor selection process, loosely coupled versus tightly coupled, etc.) and *culture* of PhD programs (e.g., norms, values, expectations, collective versus individualistic environment, etc.) helped

PhD students to feel *competence, relatedness, and autonomy* (these terms are defined in the following section) during their PhD experience and why or why not?

This study will also examine if *faculty advisors* helped PhD students to feel competence, relatedness, and autonomy during their PhD experience, and why or why not? For example, did faculty advisors give their students opportunities to shape their own PhD experience, opportunities to meet other students, opportunities to build their own academic and professional skill-sets and utilize these skill-sets? Did these opportunities help students to feel autonomy, relatedness, and autonomy, respectively?

This study will also look at if participants had any *prior exposure* to PhD programs before entering (e.g., prior interactions with graduate faculty members, students, or staff, orientation to the culture and structure of PhD programs, attended any prior academic conferences, taken any graduate level courses, etc), and did this prior exposure help PhD students to feel competence, relatedness, and autonomy during their PhD experience and why or why not? Overall, the primary outcome of this study is to present possible answer(s) into why there is such a high PhD attrition rate as well as bring insight into how to motivate and encourage students to complete their doctorates, utilizing the self-determination theory as a framework.

Defining the Terms: Competence, Relatedness, and Autonomy

Competence. This term can be defined as having requisite or adequate ability or qualities (Merriam-Webster, 2003). Therefore, feeling competence in a PhD program can include having a sufficient understanding and demonstrating the skill-sets needed to excel in a PhD program. This can include a strong familiarity with the culture, namely norms,

values, and expectations within the program. This may also include having a sufficient understanding of the structure and processes of their PhD program, such as knowing all of the requirements and expectations necessary to earn a PhD, as well as having the skill-sets and overall knowledge base to successfully complete these requirements. Last, feeling competence in a PhD program may also include knowing the available academic and non-academic resources to help the student excel and develop the necessary skill-sets and knowledge base to successfully earn their PhD.

Relatedness. This term can be defined as connected by reason of an established or discoverable (Merriam-Webster, 2003). Therefore, relatedness, as it relates to PhD students in a PhD program, can include feeling connected and a member of the PhD program and of their respective department and postsecondary institution, writ large. This can include knowing and having relationships with several members of their respective department, such as faculty, staff, and other students in the program. This might also include spending time with members of their PhD program outside of the program and postsecondary institution. Also, feeling relatedness can also encompass having mentors, advisors, as well as other colleagues who can help guide the student, in both his professional and personal life.

Autonomy. This term can be defined as the quality or state of being self-governing (Merriam-Webster, 2003). Therefore, autonomy, as it relates to PhD students in a PhD program, can include feeling a strong sense of agency to take ownership over his or her PhD experience. Again, this can include knowing the overall requirements and expectations to successfully earn the PhD and then tailoring their own PhD experience to make it their own. Along similar lines, autonomy can also include having a strong awareness of, and choosing, academic and non-academic activities to become involved with during their time as PhD

students. Also, autonomy can also include having the confidence to successfully progress and complete their PhD.

In looking at these factors, this study will take a retrospective approach and examine former PhD students who graduated from their respective PhD programs and students who withdrew from their programs. This study is directed towards developing a more sufficient theoretical lens to help explain and describe PhD attrition from a self-determination theory perspective

Research Questions

The research questions that will guide this study include the following:

1. Do former PhD students report feeling: (a) a requisite and or adequate ability to excel in their respective PhD program (i.e., referred to as *competence* in this study), (b) connected by reason in their PhD program (i.e., referred to as *relatedness* in this study), and (c) ownership and control over their PhD experience (i.e., referred to as *autonomy* in this study) and why or why not?

1a. Did the structure of PhD programs influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

1b. Did faculty advisors influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

1c. Did prior exposure and integration into a PhD program influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

Data Collection Procedures

Study Design

This case study will employ a multiple-case design. Multiple-case designs have definite advantages over single-case designs. For example, the data from multiple-case designs can be considered more compelling, allowing the study to be considered more robust (Herriott & Firestone, 1983). Each case will be carefully selected, allowing the researcher to predict a similar result (a literal replication) or a contrasting result, based on anticipatable reasons (a theoretical replication) (Yin, 2014). Foremost, a multiple case study can provide compelling support for the initial propositions (Yin).

Given the extremely high complexity and variation of culture, structures, and processes of PhD programs across the United States, this study will select participants from just one department that is equally reputable at two universities. Specifically, participants will be selected from the education department at the University of Washington and Stanford University. The rationale for including these universities is several.

First, as was previously mentioned, both universities have equally reputable education departments. Both the Graduate School of Education at Stanford and the College of Education at the University of Washington have been widely acclaimed for their academic offerings, contain nationally and internationally acclaimed scholars and researchers, have been nationally recognized as pre-eminent departments from listings such as U.S. News and World Report, and contain several graduate degree offerings as well as funding options for their students.

Second, both universities are widely known for their academic prestige as well as for their undergraduate, graduate, and professional education opportunities. They are members

of the American Association of Universities (AAU). Stanford University is a very prestigious private institution. And the University of Washington is a very prestigious large public institution. Both universities contain large endowments that range in the billions, allowing undergraduate, graduate, and professional students to have access to a wealth of resources, including graduate student housing, extremely comprehensive libraries, graduate student funding, as well as several graduate student functions throughout the academic year.

Third, Stanford University has significantly more resources compared to the University of Washington. For example, because Stanford has a substantially higher endowment compared to the University of Washington, this allows for more resources to be spent towards graduate students and graduate education writ large at the university.

For example, at Stanford there are more funding options for graduate students, numerous support structures for graduate students such as a Graduate Life Office, centered on supporting and improving the lives of graduate students, increased opportunities for collaboration and socialization for graduate students, as well as several options for graduate housing and exclusive graduate communities. In fact, at Stanford, every doctoral student in the Graduate School of Education is guaranteed four full years of complete funding; however, the student will generally need to work 20 hours per week.

By including these two unique universities, I can gather more compelling evidence to support the research questions guiding this study. Given that I am largely focusing on why there is such a high attrition rate as well as if, and the degree to which, students feel competence, relatedness, and autonomy during their PhD experience, it will be worthwhile to note both the similarities and differences across both institutions. Even though both the University of Washington and Stanford have some of the most talented students as well as

offer some of the best academic programs in the world and contain equally reputable education departments, the universities are not created equal.

Last, the location of both universities is extremely convenient. Given that I am located on the West Coast, each university is relatively close, providing ease of geographic accessibility.

Overall, by including the two different universities, I can gather more compelling evidence to support the theoretical propositions guiding this study; I can compare and contrast the experiences of participants from both institutions. It will also be beneficial to examine the participants in terms of (a) the degree to which they felt an overall sense of motivation to complete their PhD, (b) the degree to which they felt competence, relatedness, and autonomous during their PhD experience, (c) the development of their self-determined cognitive maps towards their PhD program, and (d) if and how graduate faculty and advisors help the graduate students to feel competence, autonomous, and relatedness during their PhD experience.

Sample Selection

For this study, snowball techniques will be utilized; names of potential participants will derive from personal networking (e.g., friends, colleagues, peers, mentors, etc.) or from the participants themselves. Participants will be asked to refer me to others who have similar characteristics and who may be willing to participate in this study. Essentially, participants will be recruited into the study through a letter of invitation via email.

Participants: The Graduate School of Education

Former Students. I interviewed eight former PhD students from the Graduate School of Education. Three of the participants are female and five are male. Out of these eight participants, all were fully funded during their PhD experience, mostly through research assistantships as well as other grant funding. All of these participants attended their PhD program full-time. Out of these eight participants, two withdrew from the Graduate School of Education.

Graduate Faculty Members. I interviewed three graduate faculty members who have advised several students during their career as faculty members. The first faculty member is a full professor at the Graduate School of Education. The second faculty member is an associate professor, and the third faculty member is an assistant professor. All three faculty members are male.

Student Affairs Professionals. I interviewed three full-time student affairs professionals who primarily assist students with their non-academic endeavors. The first staff member also holds an administrative role within the GSE, which is a largely student affairs oriented appointment. The second student affairs member also holds an administrative appointment in the GSE. The third student development professional has worked for the GSE for only a brief time. Two of the participants are males and one is female.

Participants: The College of Education

Former PhD students. I interviewed nine former PhD students from the College of Education. Five of the former PhD students are female and four are male. Three of the former PhD students are considered minorities. Out of these nine students, four had full-

time positions outside of the University of Washington during their time as PhD students and attended their PhD program part-time, while only two of the students had Graduate Staff Assistantships and attended the PhD program full-time. Three of the students attended the program full-time without any employment. Out of these nine participants, three formally withdrew from the College of Education prior to earning their PhD.

Graduate faculty members. I interviewed three graduate faculty members who have advised several students during their career as faculty members. The first faculty member is a full professor within the College of Education. The second faculty member is an associate professor. The third faculty member is an assistant professor. One of the faculty members is male and the other two are female.

Student affairs professionals. I interviewed three full-time student affairs professionals who primarily assist students with their non-academic endeavors. The first student affairs professional has worked for the CoE for several years. This participant also holds an administrative role within the CoE. The second student affairs professional has worked for the CoE for just a few years. The third student affairs professional has worked for the CoE for only one year.

Data Sources

In this study, the primary source of evidence will derive from conducting several in-depth semi-structured interviews with the participants both at their respective institutions as well as via telephone. Through conducting interviews, I hope to gather rich insight, explanations, as well as personal viewpoints into how and why the participants' PhD experience has motivated and or prohibited the student from successfully completing their

degree. I will ask questions that center on the degree to which students felt a sense of relatedness, competence, and autonomy in their PhD program.

I will also ask questions that center on if, and to what extent, the participants felt competence, relatedness, and autonomous during their PhD experience. I will also ask students' familiarity with the structure, culture, and processes of their PhD program as well as the degree to which they feel they have acquired the resources, skill-sets, and overall knowledge to successfully complete their degree. I will also ask questions that center on the opportunities and challenges of being a PhD student. I will ask them to what degree these opportunities and challenges have propelled and or prohibited these students from successfully earning their degree.

I will also conduct several in-depth semi-structured interviews with graduate faculty members as well as professional staff in the participants' departments. This will help to add perspective and richness to the overall case study. It will be beneficial to hear these participants' perspectives towards if they believe students are provided with opportunities to feel competence, relatedness, and autonomous during their PhD experience.

I will ask the participants about what they feel are some of the primary opportunities and challenges are for PhD students, and how these opportunities and challenges can propel and or prohibit students from successfully earning their degree. I will also ask graduate faculty and faculty advisors about the expectations they have for their students, and how these expectations might motivate and or prohibit their students from successfully completing their degree.

With obtaining the interviewees' consent, I will digitally record the interview. Upon recording the interviews, the interviews will be transcribed. Each participant will be given a

pseudonym to ensure confidentiality. All audio recordings will be destroyed upon being transcribed.

Study Sequence and Timing

Once the approval from the Institutional Review Board was received, the recruitment emails were sent out. After the participants indicated their interest in participating in the study, I scheduled the interviews based upon the participants' availability and preference. I also scheduled direct observations based upon availability and preference. The approximate time frame for this study took place from November 2013 through April 2014.

Data Collection Questions

1. Do former PhD students report feeling: (a) a requisite and or adequate ability to excel in their respective PhD program (i.e., referred to as *competence* in this study), (b) connected by reason in their PhD program (i.e., referred to as *relatedness* in this study), and (c) ownership and control over their PhD experience (i.e., referred to as *autonomy* in this study) and why or why not?

- Operationalize what it means to feel competence, relatedness, and autonomous.
- Collect data through conducting semi-structured interviews with former PhD students.
- Inquire about what helped propel/prohibit the participants from graduating from their program as it relates to the self-determination theory. For example:
 - What types of social support were available for the participants?
(Relatedness Factor)

- Did participants have a sense of community during their PhD experience?
(Relatedness Factor)
- What opportunities were available for participants to develop their academic and non-academic skills and expertise? (Competence Factor)
- What opportunities were available for participants to apply their academic and non-academic skills and expertise? (Competence Factor)
- Did participants feel autonomy during their PhD experience, and if so, to what degree? (Autonomy Factor)
- Did participants have opportunities to practice their agency throughout their agency? If so, in what ways? (Autonomy Factor)

1a. Did the structure of PhD programs influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

- Collect data through conducting semi-structured interviews with former PhD students.
- Collect data through direct observations at both the University of Washington and at Stanford.
- Inquire about the culture and structure of the education departments at both the University of Washington and at Stanford. For example:
 - Describe the culture of the Graduate School of Education at Stanford and the College of Education at the University of Washington.

- Describe the structure of the Graduate School of Education at Stanford and the College of Education at the University of Washington.
- Does the culture of the education departments at both the University of Washington and the Stanford allow for PhD students to develop a sense of community? If so, in what ways? (Relatedness Factor)
- Does the structure of the education departments at both Stanford and the University of Washington allow for PhD students to develop a sense of community? If so, in what ways? (Relatedness Factor)
- Does the culture of the education departments at both Stanford and the University of Washington allow for PhD students to practice their autonomy? If so, in what ways? (Autonomy Factor)
- Does the structure of the education departments at both Stanford and the University of Washington allow for PhD students to practice their autonomy? If so, in what ways? (Autonomy Factor)
- Does the culture of the education departments at both Stanford and the University of Washington allow for PhD students to develop their skills and expertise? If so, in what ways? (Competence Factor)
- Does the structure of the education departments at both Stanford and the University of Washington allow for PhD students to develop their skills and expertise? If so, in what ways? (Competence Factor)

1b. Did faculty advisors influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

- Collect data through conducting semi-structured interviews with graduate faculty members and former students from the education departments at Stanford and the University of Washington.
 - Do graduate faculty advisors provide agency for their students? If so, how and in what ways? (Autonomy Factor)
 - Do graduate faculty advisors provide a sense of community for their students? If so, how and in what ways? (Relatedness Factor)
 - Do graduate faculty advisors help their students feel competence during their PhD experience? If so, how and in what ways? (Competence Factor)

1c. Did prior exposure and integration into a PhD program influence whether former PhD students felt competence, relatedness, and autonomy during their PhD experience? Why or why not?

- Collect data through interviewing former PhD students
 - What types of exposure and integration to a PhD program did former PhD students have?
 - Do former PhD students believe that their exposure and integration into a PhD program provided them with a sense of autonomy?
 - Do former PhD students believe that their exposure and integration into a PhD program provide them with a sense of feeling relatedness in their program?

- Do former PhD students believe that their exposure and integration into a PhD program provided them with a sense of competence?

Guide for the Case Study Report

Audience

The intended audience for this case study includes everyone who is associated with graduate and professional education across the United States, (students, staff, faculty) as well as the higher education community, writ large. Even further, findings from this study may help to inform and revamp undergraduate education.

Outline

This case study will be constructed in standard dissertation format. The following seven chapters will comprise the case study:

- Chapter 1: Statement of the Problem
- Chapter 2: Theoretical Framework
- Chapter 3: Methodology
- Chapter 4: Data Analysis
- Chapter 5: Findings – The University of Washington
- Chapter 6: Findings – Stanford University
- Chapter 7: Discussion and Conclusion

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