

## **Initial Motivations of Doctoral Education Students**

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### **Abstract**

Examination of doctoral education has gained interest in recent years as all aspects of higher education have been questioned and scrutinized by the popular media. One particular area needing additional clarity is an exploration of the motivating factors for students attempting to complete these degrees. While a handful of research across a few disciplines has explored this issue, doctoral pursuits in education programs has received little interest. This pilot study surveyed two cohorts of doctoral students and utilized a survey with additional open-ended responses to explore the key motivational factors that have led them to their current status in their doctoral programs. This study highlights some novel findings regarding the primary motivations and aspirations in their pursuit of a doctoral degree.

**Keywords: Doctoral Study, Higher Education, Motivation, Values**

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### **Introduction**

Doctoral education has been an area of study which has gained increased attention over the past few decades as the value of advanced degrees has been questioned. One facet of the interest has been focused on efforts to improve the training that occurs in programs, as many of programs are only under light regulation by any external agency (Eisenhart & DeHann, 2005). This can and often does lead to wide variations in quality which creates terminal degrees which are not equal nor are attained by the same degree of rigor. One important consideration when exploring doctoral study is that the unique nature of each discipline may necessitate different types of programmatic requirements and this leads to variations in curriculum to meet the needs of each discipline. The examination of who is pursuing these degrees and what types of career aspirations they have offers insight into the value of these programs, especially for those degrees that directly lead to career advancement. It is recognized that many students are being prepared for future careers in research-based careers at R1 universities or in industry settings, however other students are focused on careers in teaching or non-research-based positions. Clearly the final goals of these groups of students can have significant differences. Those who engage in doctoral programs in fields such as education may have the greatest range of potential applications of their degree. Some graduates will participate in higher education research-based academic careers; however, most of these graduates will be engaged in work within the K-12 schools as well as in leadership positions in local schools or districts. This variety of needs of an education doctoral program necessitates that these programs offer a comprehensive curriculum to train students for a wide range of future uses. In fact, many doctoral granting universities offer the PhD more commonly designed for future researchers and the practitioner EdD to serve the needs of current teachers and school administrators.

Recent studies suggest that demand to attain doctoral degrees has amplified considerably

in the past decade in most disciplines as increased access to higher education allows a greater flexibility in program delivery (Walker, Golde, Jones, Bueschel, & Hutchings, 2009). In 2017, the United States awarded 54,664 doctoral degrees which was a 14% increase since 2007, thus highlighting a significant increase in degree attainment. In education fields, 4,823 doctoral degrees were conferred in 2017, but in comparison, in 2007, 6,448 degrees were conferred, a 34% decrease (National Science Foundation, 2018). The recent decrease in doctoral degrees in education disciplines may be influenced by the increased cost of higher education or in other factors which are not completely understood. As noted, many of those seeking doctoral degrees in education are often current teachers, a segment of the population which is notoriously undercompensated. This financial factor may be more of a concern for those in education-based careers where degree advancement may not directly lead to any increase in compensation. Another important factor may be the current climate that exists in public education in the United States. As high stakes testing and the accountability movement continues, and as public education has been under increased scrutiny and regulation by federal legislation, some educators are abandoning the profession altogether; a trend which is seen in the current teacher shortage (Argon, 2016). Clearly with fewer qualified teachers in the profession, there would be a decrease in those seeking advanced degrees. Other factors may be that fewer teachers are entering teacher preparation programs, and lower teacher satisfaction, both of these factors have led to problematic retention rates, especially in lower socioeconomic status and in underperforming schools (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). Many of the larger metropolitan areas in the United States fall within these types of school communities and as the need for qualified teachers increases, this likelihood of an increase in doctoral degree pursuit may be diminished. While the recent trends on doctoral degree attainment show a decline, research has failed to act in examining these factors, nor have they found compelling solutions. If, in fact, these factors are the key concerns, then studies which explore the motivational factors for education-based doctoral degrees is warranted.

Research has illustrated that one segment of the teaching population pursues a doctoral degree because they perceive it will lead to the increased ability to impact their profession, this is something that is commonly described by those in service-based professions such as teaching, and these individuals tend to remain in their current positions (Jablonski, 2001). Other segments of this population are likely seeking to explore new opportunities such as working at a college or university or even engaging in a research-based career as their ultimate goal. Unfortunately, these hypotheses are not well-defined as there is little research that explores the motivations or long-term goals of those who enter education-based doctoral degree programs. Guerin, Jayatilaka and Ranasingh (2015) explain that “Despite the increasing numbers of candidates embarking on higher degrees by research (e.g., PhD, Professional Doctorate, practice-based doctorate), we still have limited knowledge about why they are choosing this path” (p. 89). An increased understanding for why students enter these programs and what goals they have for their future are key important areas of focus which would contribute to the design of more effective doctoral programs for the education profession and a result could be improved learning outcomes in K-12 schooling.

## **Literature Review**

### **Profile of Doctoral Students**

The profile of the typical doctoral student has changed considerably over time as access to

programs and value or necessity of the degree has changed. In fact, with the clear differences in the requirements and goals for different degrees, the ability to define a “typical” doctoral student is becoming increasingly challenging. As access to online programs is becoming more common, the ability to attain these types of degrees has increased to anyone with the aptitude, financial means and a computer/Internet access. The Survey of Earned Doctorates (SED) is an annual survey of new graduating doctoral students in colleges and universities across the United States managed by the National Science Foundation (NSF). Data has been collected on students dating back since 1920 to examine the trends in enrollment patterns as well as to provide a way to attempt to create profiles of current and former students. The most recent release of data in 2018 provides a great deal of information regarding what the current doctoral student looks like. In 2016, 54% of doctoral graduates were men and 46% women, a trend that has continued to move toward greater equity in degree attainment for women attaining doctorate degrees (NSF, 2018). What is interesting is that the data in education programs is significantly different with 30.1% males and 69.9% females. While this may seem unusual, one only has to look at the current demographics of those teaching in the United States public schools. This gender difference is a reflection of the typical gender ratio which exists in the teaching profession in the United States. The gender variance is an important consideration when examining motivation factors for degree attainment as gender roles in society are still traditional and are likely also related to a potential difference in reasons one might look for doctoral degree attainment.

The mean age of doctoral recipients is an additional factor that has been collected in the SED survey. The median age of a doctoral recipient in 2016 was 31.6 years for all students pursuing a doctoral degree. However, the median age for those attaining doctoral degrees in education disciplines was 38.6 years old, highlighting a significant difference in age (NSF, 2018). In fact, education had the oldest average age of recipient as the second oldest age was for “Other” field of study which was a combination of many smaller disciplines. In addition, 26.3% of the education recipients were over 45-year-old, as compared to the 7.8% overall doctorate average. Clearly, these data illustrate that those attaining doctoral degrees in education are significantly older than those in other fields of study. The major reason for the age gap can be attributed to the path that typically occurs for one entering a doctoral program in education. Typically, those attaining an education doctorate have already worked a significant number of years in the education profession and have decided to advance their education. In fact, most graduate programs require that students have completed at least several years of teaching prior to entering a program so that they have enough context in the field. In most other fields, students may enter a doctoral program right after baccalaureate or master’s degree work, with little work experience necessary. It is the normal path in education for one to gain the undergraduate degree, followed by a master’s degree and later a doctoral degree, as skipping the master’s step is uncommon in education fields. Obviously in education, this pushes the age of degree completion up considerably as the blend of time working in educational settings is intertwined with degree attainment.

A final demographic consideration is an examination of the financial details and requirements for doctoral students. Doctoral study is a costly endeavor and financial support varies considerably across disciplines. The SED provides data regarding the different types of resources students have to complete degrees including assistantships, grants and fellowships. On average, doctoral students rated research assistantships as the primary source of support at 30.8%, followed by fellowships or grants at 27.7% (NSF, 2018). Both of these sources often provide support which is not paid back by the student, thus relieving at least a portion of the cost

and making the pursuit of a degree less influenced by one's ability to pay for it. For education students, the data illustrated that they received research assistantships at 15.7% and fellowships and grants at 12.4%, both at substantially lower rates in comparison to their peers in other disciplines. Perhaps more importantly, forty-six percent of education students reported that they used their own resources to fund their education, this is in comparison to 15.1% from the overall group of students. SED also reports the education-related debt that doctoral students incur as a result of their overall schooling and doctoral schooling. On average, the student debt was reported at \$23,838 in total cumulative debt. By comparison, education doctoral students average a debt of \$40,827, almost twice the average debt burden. These data demonstrate the additional financial hardship for those pursuing a doctoral degree in education and illustrate that not only do these students need to come up with a significantly higher initial cost of schooling, but long term also end up spending much more for their degree (in out of pocket costs) when compared to their peers.

The student profile provided by the SED survey depicts the clear fact that doctoral students in education fields are unique in many different ways. Some facets of their profile are a direct result of their professional experience which led them to this point as virtually all would have been previously employed as teachers or in similar positions in schools. The education profession is largely made up of women teachers, and the ability to begin a doctoral program often requires significant years of experience in the field. Combined, these factors make the demographic of graduates to be older and more female dominated, when compared to other disciplines. Of course, as one ages, motivations and responsibilities change, and this may be a greater factor for education students, although extensive research on these issues has not been conducted. In addition, the financial burden on those seeking doctoral education-based degrees is considerable. This is compounded by the fact that in the United States, teachers have historically been underpaid and are in a profession where career and thus financial advancement is more limited. Collectively, these factors provide context when examining motivational factors for education doctoral students and provide a wealth of potential areas which warrant additional research.

### **Motivation for Doctoral Study**

Research exploring the reasons that students give for pursuing doctoral study is limited but some studies exist which offer a starting point to achieve some understanding of the issue. One of the largest and most recent studies was directed by Guerin, Jayatilaka and Ranasingh (2015) who conducted an exploratory factor analysis on a group of 405 students at an Australian university. The authors designed a survey which asked students about their general motivations for their pursuit of doctoral degrees. Their question prompts included the importance of specific individuals or family members who encouraged them. They also highlighted academic sources of motivation and support such as professors. Other questions focused on the actual qualities of their intended discipline, such as needs for career advancement or enjoyment in their current profession. The population included in the study was broad and included students from engineering, health sciences, humanities, and several different sciences. The results suggested five key factors which motivated students to pursue a doctoral degree. These included the importance of family, friends and current and former teachers as supports for their pursuit. They found that intrinsic motivation played an important role for these students. In addition, research experience and career motivation served as very practical applications for the value that a doctoral degree could provide for these participants. The study did not specifically explore themes related to individual disciplines, but their work contributes to the literature as a recent

relevant dataset that does shed light on some of the more salient reasons and motivators for doctoral pursuit.

In a study by Ann Jablonski (2001), she explored motivation for the pursuit of a doctoral degree in an interdisciplinary instructional leadership degree program. She conducted short in person-interviews of 17 students and found that motivation for beginning doctoral studies included the desire to integrate professional experiences, attain career aspirations, and to realize personal goals. For educators, many viewed the attainment of a doctoral degree similar to the type of experience gained from professional development. Limitations of this study include a lack of data shared in the study, as well as the brevity of the interviews. The examination of students entering engineering doctoral study in Malaysia was completed by Mokhtor (2012). In this qualitative study, 20 females were interviewed to explore the reasons for exploring an engineering doctoral degree. The main encouraging factors to pursue the degree were social relationships, external expectations, social welfare, personal advancement, escape/stimulation and cognitive. In a similar study, Brailsford (2010) explored the reasons for doctoral pursuit given by history doctoral recipients. In this qualitative study, 11 students from an Australian university were interviewed. Findings included the value of personal development, better career opportunities and intrinsic interest in the discipline as the key motivating factors. Gregory Stiber (2000) explored the pursuit of a doctoral degree in business disciplines in a study which aimed at examining the enrollment of students into this institution as a way to increase their applicant pool. A quantitative questionnaire was sent to recent prior graduates and a total of 51 former doctoral students replied with completed surveys for review. The two most common motivational reasons for degree pursuit were personal satisfaction and to prepare for a profession in teaching. One limitation of this study is the discipline specific nature as well as the data potentially being dated given the lack of recent participant data.

Leonard, Becker and Coate (2005) conducted one of the largest studies on doctoral education. They received questionnaires from 89 individuals who completed their doctorate in some education-related discipline from a range of different universities in the United Kingdom, the European Union, East Asia, South America and Africa. Participants included those who graduated two, seven and twelve years ago, from the time of the study. The researchers found that motivations for personal development and general interest in the discipline were the most cited areas by the students. Additional motivations found were the attainment of professional development as well as the acquisition (and interest) in building one's research skills. While one of the larger studies of educational doctoral studies, this study has some limitations in that the United States was not included which may limit some applicability to the data. In addition, while the included a wide variety of doctoral degrees there was not a great deal of specificity to any particular discipline. The data was also a little dated as some of the participants had completed degrees as far back as 1990, thus the context may have changed significantly during the current timeframe.

One important study specific to education was a qualitative doctoral thesis written by Laurel Clark (2007). In this work, Clark examined the factors that motivated a cohort of doctoral students at Victorian university. A group of 17 current doctoral students were interviewed using an open interview protocol with a focus on the program as a type of professional development. The findings highlight the importance of doctoral study on an individual's personal advancement of skills and the value of the degree as a form of professional development. No one factor emerged as key, but the interest in learning was the most cited reason for doctoral pursuit. This study may be limited in not being published as a peer-reviewed article, as well as the possibility

that this article was less rigorous in design with regards to the open interview protocol without a description of exactly what was being asked. In a similar work, Wellington and Sikes (2006) examined the reasons why education students pursued an EdD or a PhD. They interviewed 29 current students and found that a focus on skills directly relevant to their jobs was one of the main reasons they chose the professional doctorate (EdD) over a PhD. For example, many cited that they were frustrated with the teaching profession and a doctorate was a means to better understand and influence the profession. However, unfortunately little is revealed for the overall motivation to pursue doctorate education in general, as the focus was mainly on the choice of type of degree.

The previous studies demonstrate that while there have been some studies which have examined the motivation to pursue doctoral study, the data is limited in both scope and in depth, especially in consideration of education-related degrees. Additionally, many of these studies include locations outside of the United States and given the differences in the education in the United States, some of the findings may not be applicable or transferable. There have been studies which explored several different disciplines, but there is a lack of a substantial number of studies that support any one specific discipline, as there is largely a scattering of studies in a wide variety of disciplines. There appears to be a lack of specific studies on education, and only a handful of peer-reviewed, high-quality studies even exist. The studies do support some common motivational factors, such as need for professional development and the potential to contribute to one's field of study, however additional targeted research is needed to better support current claims, especially in the area of education.

### **Theoretical Frameworks**

There are several useful theories which would help support the examination of motivational factors for those pursuing doctoral degrees in education. One strong and time tested theory is self-determination theory (SDT) which has its foundation in work by Ryan and Deci (2000) and has been well studied for almost two decades. SDT examines the reasons and motivations that individuals use to support an improvement in their own personal situations. This theory uses both cultural and societal factors to support their work and is consistent with research on how and why individuals meet their personal needs. SDT can be viewed as a wide continuum of determination where one end is a person who is non-self-determined to the other extreme where one is fully self-determined. One important aspect of this theory is an exploration of the locus of motivation. This also has a continuum, in a similar fashion to above, and ranges from an amotivated individual to extrinsically motivation and finally to the far extreme of complete intrinsic motivation.

Ryan and Deci (2000) suggest that there are three innate psychological needs that must be met when exploring an individual's behavior and personal well-being. These three needs are competence, autonomy and relatedness and when optimized, they collectively can support positive growth in an individual. Competence, with respect to doctoral studies, is the achievement of the highest or terminal degree than an individual can earn and thus it is one of the clearest ways to demonstrate competence within a discipline. Autonomy needs are met when an individual believes that they have the ability and power to make choices; their own choices that can support their personal well-being. While doctoral work does not exist in isolation, the dissertation process can be one of the most independent activities in academia as well as in any professional endeavor. Successful doctoral students must be able to independently design and conduct a research study and this clearly indicates significant levels of autonomy. Relatedness has strong ties to autonomy given the nature of attainment of a doctoral degree. Students must

create and work collegially with a thesis committee who will support and offer guidance on their work. The faculty become professionally and often times personally involved with the student, and this supports strong relatedness.

A second useful theory which is applicable in this context is social cognitive career theory (SCCT) which was initially championed by Lent, Brown and Hackett (1994). SCCT is an application of Albert Bandura's (1989) work on social cognitive theory. Social cognitive theory highlights the importance of the social environment which exists in any type of personal interaction. In Bandura's view, social interactions influence and ultimately can support an individual's behaviors. SCCT builds on Bandura's work as it applies to how individuals exhibit personal agency in their career choice. Lent, Brown and Hackett (1994) explain that a child's exposure to potential careers can reinforce (if they have a positive experience) or deter (if the experience is negative). These reinforcers continue to build and accumulate as an individual explores the careers and engages in its related activities, which in turn supports the building of a strong self-efficacy. This theory helps shed light on how academic and career interests are originated, how they are constructed by educational choices, and how they are sustained and in turn then lead to career choice (Lent, Brown, & Hackett, 2000). For a doctoral student, while their childhood experiences may not be the leading factors, these early experiences likely contribute into discipline specific interests which originate at a young age. As the interests are explored and reinforced by parents, schooling or by peers, they serve as the foundation for early career choices. For the education-related disciplines, teaching motivations are formed, maintained and strengthened over time. The attainment of a terminal degree is perhaps the clearest demonstration of one's devotion to a discipline and individuals may utilize its potential to support career advancement.

### **Methodology**

This pilot study aimed to answer the research question of "What are the strongest motivational factors for pursuit of a doctoral degree in education?" The study took place at a mid-sized doctoral granting university in the southeastern United States. This university had recently added a doctoral degree in education (PhD in curriculum and instruction) as a new edition to their graduate programs and maintained a healthy enrollment during the year of this study. The location of this university attracted a wide range of students in terms of age, experience in education, types of educational positions (e.g. teacher, department chair, principal) and socioeconomic status. Thus, the diverse participation pool provided a varied group of educational professionals which strengthened its transferability and application to other universities.

A 22-question quantitative survey with three qualitative open-response questions was developed and piloted prior to its use in this study. The questions were adaptations of the Survey on Doctoral Education by Golde and Dore (2001) with the primary aim to explore motivational factors for pursuit of a doctoral degree. The survey was simplified to be shorter and modified to primarily deal with questions related to motivation and interest in doctoral work in fields related to education. The questions were presented on a Likert scale with labels ranging from "not important at all" to "extremely important." Following the quantitative portion of the survey, three open-ended qualitative questions were offered to add additional depth. The main focus on these questions related to capturing motivation and commitment factors as well as detractors on their pursuit of the doctoral degree. Prior to its use in this study, the qualitative questions were pilot tested for clarity and comprehension with a small cohort of a different group of doctoral students, and thus we made some modifications using the feedback and guidance from the pilot

experiences.

The survey was given to two different cohorts of education doctoral students who were in their first and second years of doctoral study. The survey was provided online using the program surveymonkey and was sent by email from one faculty member to the entire group of 38 students. They were asked to complete the survey and were given two weeks to complete it. In total, 32 students completed all the parts of the survey and this served as the data. Demographic questions were also asked on the survey to sort the data, but it was otherwise anonymous. The data was downloaded and organized in an excel file to begin analysis. Descriptive statistics were calculated in excel where appropriate. Since most values were ordinal, counts of the different categories of scores were compared. The qualitative data were examined, and common themes were categorized.

### Findings

The first set of questions offered participants the question of “why do I want a doctoral degree” and there were 11 different questions related to this. The number of participants that scored the prompt as “very important” and “extremely important” were summed and percentages calculated. The highest scored prompt was the “desire to help craft policy” with 63% of the participants scoring it “very important” or an “extremely important” reason. The next highest reason was a tie at 56 % scoring the prompt as “very important” and “extremely important” for “to advise undergraduate students” and “engage in opportunities for public service.” The two lowest scored prompts were “to teach graduate level college courses” and “conduct research” with 6% scoring the prompt as “very important” and “extremely important.”

The second set of questions provided students with prompts for reasons why they wanted to attain a doctoral degree. The two highest answer prompts were “to be a more informed educator” and “a doctoral degree will open more opportunities for employment” with scores of 94% of the participants scoring the prompts as “very important” or “extremely important.” The next highest scored reason was that they were “motivated to teach in higher education” with a score of 81% scoring the prompt as “very important” or “extremely important.” The lowest scored were “I am motivated by the achievement gap issue” as 63% scoring the prompt as “very important” or “extremely important” and “a doctoral degree provides me with credibility” with 65% scoring the prompt as “very important” or “extremely important.”

In the qualitative portion, the first prompt asked students “what factors have influenced your desire to attain a doctorate degree?” In these responses, there were 20 individuals who provided a narrative. The most commonly noted idea which was mentioned by six participants was the topic of improving education for others. Two representative comments were as follows:

*I want to acquire additional knowledge and skills to impact curriculum and instruction to better support my students. Having a doctoral degree will help me gain new skills to make that happen in my current school.*

*my desire is to make a difference in the children that I serve. I teach in a school with many students who we are just not serving their needs and having the degree will hopefully give me more tools to help.*

The next most frequently noted factor was provided by four students who explained that this was “a life-long goal” or “a personal dream I have always had.” Three participants explained that felt that their degree would give them a pay raise. One noted:

*Teachers are paid so little in our country and I need to make the most of opportunities to increase my pay. Getting the PhD will give me a nice raise and that will reduce some of my stress of making ends meet.*

Three other students explained that they had the desire “to move to other opportunities that the doctoral degree will offer me.”

The second question prompt asked individuals “what positive or contributory factors have supported their pursuit of a doctoral degree?” Twenty-one students provided a narrative response to the prompt. The most frequently mentioned comment given by five individuals was that individuals had family that encouraged them to pursue or continue the degree program.

Representative comments were:

*I want them and other family members to recognize the importance of committing to life-long learning and they have in turn supported me.*

*My wife has supported me from the start. She talks me up when things are tough and encourages me along the way. I want to finish this for myself but also to follow through on something that my wife has supported.*

Four individuals made some mention to peer and faculty as supportive in their journey. One student noted that “(student x) provided me with motivation to pursue this before I got here and now in the cohort with me... she pushes me to be my best.” Another mentioned “the faculty are so motivating and supportive in the program, this helps motivate me.” The final highly noted area was mentioned by three students who explained that they had completed one year of study and “this survival shows me that I can make it through the hard research part.”

The third question was the opposite of question two, here I asked “what factors have negatively impacted your ability or weakened your motivation to continue?” Eighteen individuals left a response to this prompt. The most frequent response was mentioned by ten participants was something related to the amount of time they needed to devote to the program. Many mentioned that this conflicted with family time and leisure time:

*I have had to make some sacrifices that have affected my family (For instance, I will miss nearly all of my son's first season on his football team).*

*There have been times that the balance of work and coursework has been very challenging.*

*it is already hard enough to balance work (grading papers and planning) and family. Adding the workload of this program just compounds that. I feel I am always working on something and have little time for rest or time off.*

The next frequent theme related to the cost of the program. Five individuals expressed stress and concern that the cost of the degree was a major issue. Many noted that they were relying on some type of financial aid, but that this program was putting a major strain on their resources. It is important to note that this university was a private one and thus the cost was significantly higher than other public doctoral programs in the state.

Four individuals noted that they intrinsically lacked self-confidence to get this done. One explained “I am not sure my background has me prepared to finish... I am not confident in my ability.” Another noted that “I am really worried when it comes time to write the dissertation. I am not a good writer and am not sure how I will get through that part of the program.” The others who mentioned lack of self-confidence also specifically noted the ability to conduct research, collect data and write up the dissertation was a concern and linked to a lack of confidence.

The qualitative questions positively triangulated with the quantitative survey. In addition, this data added clarity and context to supplement the survey data. The depth and care that students placed in their open-ended responses demonstrated that they had strong feelings and these prompts provided a means to collect this important information.

### **Conclusions**

The quantitative portion of this study provides important information as to what some of the key motivating factors were to this group of students as they pursued their doctoral degree in education. The desire to help craft policy and to provide a service to the community were noted as two of the most compelling reasons that they decided to work toward their degree. This was an interesting finding as it is not an extrinsically motivated factor and was not necessarily anticipated based on both self-determination theory and social cognitive career theory when only examining the value to the student. However, this finding is consistent with the literature regarding motivations that individuals give for wanting to be a teacher. Teaching is a service profession that typically finds that many students enter it based on intrinsic motivation factors (Ashiedu & Scott-Ladd, 2012). Self-determination theory would suggest that factors related to competence, relatedness and autonomy would be important. The service component relates to the social element and is consistent with relatedness, however, value related to the other themes is not readily apparent.

The motivations for attaining the degree appeared to focus on the value and opportunities that the degree provides as well as the advancing of personal knowledge. These findings are consistent with some of the literature on motivation for doctoral work, but more importantly provides content for the specific discipline of education. The personal knowledge value suggests that there is an inherent value in gaining knowledge. Of course, as teachers, these individuals promote ideas such as this on a daily basis and thus it is not surprising to hear them praise the importance of knowledge. In terms of self-determination theory, we again are concerned with intrinsic motivations. Autonomy and competence are relevant to the intrinsic and personal nature for advancing one’s education as well as the practical growth in employment opportunities. Competence is harder to align as gaining the degree demonstrates competence, but the students were not necessarily highlighting the specific value of an external audience.

Social cognitive career theory is well supported in these findings. These teachers would have been around the profession for a long time and research confirms that many teachers have family members that have also been in the profession. Growing up in a household with a parent as a teacher would certainly have the potential to rub off on them. Not only would this provide great exposure but also possible enculturate one to the teaching (Skilbeck & Connell, 2004). The early experiences may contribute to their career choice and the study participants “now internal” desire for learning may support their continued work in their professions.

The qualitative portion of this study helps support the findings from the survey but also added to the context and provided much deeper explanations than were otherwise provided. One common theme in the study participants qualitative responses was a connection to the nature of

the discipline being one that provides opportunities to serve others. The service component was clear as students articulated the importance of learning as a value to their current and future students. Participants did provide some clear extrinsic reasons for the degree such as increased opportunities or even pay, but intrinsic values such as the quest for knowledge and fulfillment of a dream offer support to the self-determination theory. Social cognitive career theory is also reinforced as participants positive and supportive experiences with students, peers and even family all contributed to one's affinity in the profession. Some of the key detractors of motivation highlight important differences in the education degree. As noted, the financial burden in education is higher than other disciplines and this was consistent with this group of students. Proving opportunities for education scholars to have increased access to fellowships and grants which do not have to be paid back might go along way with supporting their pursuit for advanced degrees.

Evidence supports the perspective that those pursuing doctoral degrees in education encounter some barriers which make this pursuit to be more of a challenge. However, the careful examination of the motivations as well as those factors that deter students, is important as one avenue to support them. This could lead to the construction of programs which are better catered for their interest and motivation. In this study, the motivating factors such as advancing educational opportunities and being a servant to those needing educational support could lead to the development of doctoral programs which focus on service or other similar areas of inquiry. More importantly, this study adds to the little research on what leads one to pursue these programs.

### References

- Aragon, S. (2016). *Teacher Shortages: What We Know*. Teacher Shortage Series. Denver, CO: Education Commission of the States.
- Ashiedu, J. A., & Scott-Ladd, B. D. (2012). Understanding teacher attraction and retention drivers: Addressing teacher shortages. *Australian Journal of Teacher Education*, 37(11), 17-35.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175-1184.
- Brailsford, I. (2010). Motives and aspirations for doctoral study: Career, personal, and interpersonal factors in the decision to embark on a history PhD. *International Journal of Doctoral Studies*, 5(1), 16-27.
- Clark, L. (2007). *Motivating Factors for the Professional Development of a Cohort of Professional Doctorate Students in Education* (Doctoral dissertation, Victoria University).
- Eisenhart, M., & DeHaan, R. L. (2005). Doctoral preparation of scientifically based education researchers. *Educational researcher*, 34(4), 3-13.
- Golde, C. M., & Dore, T. M. (2001). At cross purposes: What the experiences of today's doctoral students reveal about doctoral education. Philadelphia: Pew Charitable Trusts.
- Guerin, C., Jayatilaka, A., & Ranasinghe, D. (2015). Why start a higher degree by research? An exploratory factor analysis of motivations to undertake doctoral studies. *Higher Education Research & Development*, 34(1), 89-104.
- Jablonski, A. M. (2001). Doctoral studies as professional development of educators in the United States. *European Journal of Teacher Education*, 24(2), 215-221.
- Leonard, D., Becker, R., & Coate, K. (2005). To prove myself at the highest level: The benefits of doctoral study. *Higher Education Research & Development*, 24(2), 135-

- 149.
- Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of Counseling Psychology*, 47, 36-19.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45(1), 79-122.
- Mokhtar, M. (2012). Intentions and expectations of female PhD students in engineering at one university in Malaysia. *Procedia-Social and Behavioral Sciences*, 56, 204-212.
- National Science Foundation, National Center for Science and Engineering Statistics. (2018). *Doctorate Recipients from U.S. Universities: 2017*. Special Report NSF 19-301. Alexandria, VA. Available at <https://nces.nsf.gov/pubs/nsf19301/>.
- National Science Foundation, National Center for Science and Engineering Statistics. (2018). *Doctorate Recipients from U.S. Universities: 2016*. Special Report NSF 18-300. Arlington, VA.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Skilbeck, M., & Connell, H. (2004). *Teachers for the Future: The Changing Nature of Society and Related Issues for the Teaching Workforce*. A report to the Teacher Quality and Educational Leadership Taskforce of MCEETYA. Retrieved from [http://www.mceecdy.edu.au/verve/\\_resources/teachersforthefuture\\_file.pdf](http://www.mceecdy.edu.au/verve/_resources/teachersforthefuture_file.pdf)
- Stiber, G. F. (2000). Characterizing the decision process leading to enrollment in doctoral programs: Theory, application, and practice. *Journal of Marketing for Higher Education*, 10(1), 13-26.
- Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). A coming crisis in teaching? Teacher supply, demand, and shortages in the US. *Learning Policy Institute*.
- Wellington, J., & Sikes, P. (2006). 'A doctorate in a tight compartment': why do students choose a professional doctorate and what impact does it have on their personal and professional lives?. *Studies in Higher Education*, 31(6), 723-734.