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# Understanding Doctoral Success Factors in Online Education Programs

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COLLEGE OF EDUCATION

This is to certify that the doctoral study by

Carissa Johnson

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2015

Abstract

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MA, University of Phoenix, 2006

BS, Loyola University Chicago, 2004

Doctoral Study Submitted in Partial Fulfillment

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Abstract

The doctoral student completion rate in the United States is approximately 57% across all disciplines. The purpose of this mixed-methods study was to investigate doctoral students' perceptions of program completion across multiple online doctoral programs at a single university. The quantitative component examined differences in 4 doctoral program completion-related factors between students in 2 capstone completion stages and 6 academic programs. The qualitative component included an analysis of student perceptions of program completion. Attribution theory was used as a framework to understand the ways that personal attributions influence the success of the participants. The Doctoral Completion and Persistence Scale (DCPS) used in this study measured success scales of individual ability to persist, inter-program relationships, program culture, and dissertation preparation. Four 2-way analysis of variances were used to test for mean differences in these scale scores between preprospectus ($n$ = 10) and postprospectus ($n$ = 18) students enrolled in the doctoral programs. Individual ability to persist scores were significantly higher for preprospectus students and there were no significant differences found between programs. The DCPS' qualitative open-ended prompts were also analyzed for themes in reflections. Open coding and thematic analysis revealed that faculty relationships were an important emergent theme for maintaining persistence for all students. A professional development project was developed to provide strategies to assist doctoral stakeholders in their efforts to increase student persistence. Positive social change results when students persist and complete their doctoral programs with the collective support of stakeholders.

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# Dedication

My study is dedicated to my family for allowing me the time, patience, and understanding to work diligently toward this challenging educational goal. Special thanks to my wife, Brynn, for supporting and encouraging me through this challenging, but enriching experience.

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I would like to thank my family and faculty chair, Dr. Rick Hammett. You have been instrumental in helping me reach this pivotal milestone in my academic career.

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## Introduction

The PhD Completion Project, a study that examined private and public institutions across the United States, found that the overall completion rate for doctoral students was only 56.6% ten years after they began their doctoral programs (Sowell, Zhang, Redd, & King, 2008). The purpose of this comparative mixed-methods study was to identify student persistence factors related to high and low completion rates in online programs in order to recommend assistance and support structures to improve completion rates across those programs. Student persistence measures a student's advancement from the first year of registration in an academic program of study in a postsecondary institution until the completion of that same academic program of study, without a continued break in enrollment (Barnett, 2011; Stieha, 2010). This study investigated and identified student persistence factors in order to develop research-derived assistance and support strategies to improve completion rates within online doctoral degree programs across the university studied.

This study analyzed demographic data retrieved directly from the website of a single collegiate institution's website. This website is the only location where this information is available because the institution, hereafter referred to as Flagship University (pseudonym), is a private, online university and is not required to provide any public data to other databases outside of minimal graduate degree and demographic information. To retain Flagship University's anonymity, demographic data presented in

this study sometimes lacks citations that would compromise this anonymity. Flagship University is described in detail in this section to provide the reader with additional information to allow for more clarity when discussing the definition of the problem while also aligning with the anonymity needed to not compromise the institution research site. This section also identifies the local problem that prompted this study, shows the rationale for choosing the problem, and presents evidence that the problem exists at the local level by reviewing literature related to the significance of the problem.

## Definition of the Problem

Higher education institutions are in the business of providing quality education wherein graduates are able to advance their learning and knowledge. To better address this focus, it is important to pursue research that improves doctoral student persistence and completion rates. Doctoral students throughout the United States are not finishing their programs at high rates (Sowell, Zhang, Redd, & King, 2008). Students face many challenges that lead to difficulty persisting in their programs from year to year and completing them. Some of these real-life challenges include rising tuition, economic downturn causing higher unemployment rates, textbook costs, and living expenses (Wilkinson, 2005). Specifically in the US, attrition rates for doctoral students have measured between 40% and 60% throughout all program areas (Bair & Haworth, 2005; Council of Graduate Schools, 2008; Di Pierro, 2007; Litalien & Guay, 2015; Neale-McFall & Ward, 2015; Walker et al., 2008). Researchers have placed considerable focus on PhD student persistence and retention in recent years due to a large number of

doctoral students withdrawing before completion (Attiyeh, 1999; Berman & Ames, 2015). In addition, institutional retention efforts have focused on encouraging effective fundamentals of persistence in both the success of the students and effectiveness of the doctoral programs (Attiyeh, 1999; Jairam & Kahl, 2012; Litalien & Guay, 2015; Offerman, 2011; Walker et al., 2008).

An opportunity exists to extend preceding exploration on factors that lead to doctoral student persistence in order to inform higher education regarding possibilities for improving doctoral student success and program performance. Patterson and McFadden (2009) recommended that in order to define the effectiveness and quality of a program, it is necessary to measure program completion rates. Although there are many reasons for obtaining a doctoral degree, it is important that institutions focus on what they can do to help their students succeed and finish their doctoral programs. Additionally, there is pressure from governments to fund colleges based on completion rates (Obama, 2013). The accuracy with which universities predict and develop student persistence is in critical need, especially, for distance education students (Parker, 2003).

According to Barnett (2011), student persistence in higher education is influenced by many factors, including a student's capability to operate in an educational and cocurricular postsecondary environment, capacity to afford tuition and fees, aptitude to learn, acquirement of information and knowledge, completing courses through using skills to create and articulate ideas, and ability to succeed academically. Aligning with this concept, the PhD Completion Project found that nationally, both public and private

institutions had low completion rates (56.6%) ten years after students began (Sowell, Zhang, Redd, & King, 2008). This global phenomenon (Cuthbert & Molla, 2015) of a range in completion rates is mirrored at Flagship University as well. While some programs ranged slightly higher, Flagship University reported a similar completion rate for the majority of its doctoral students.

This study was designed to address a problem of low doctoral student completion rates at Flagship University. Doctoral completion rates for Flagship University ranged from 35.7–100% between July 1, 2011 and June 30, 2012, with only three of its 11 programs having rates above the national average. Completion rates at Flagship University are calculated by using the amount of students who completed the program within the anticipated amount of time to complete the program set forth by the institution; however, these percentages do not necessarily describe accurate overall persistence and attrition rates because they do not take into account students who continue and complete the program after the specified time frame. Based on this method of calculation, Flagship University's actual completion rates will vary from what is published. According to Wang (2009), students do not have a primary expectation of stopping before completing a degree or certificate for any reason when they attend any university. Therefore, it is important that further investigation is conducted to identify potential persistence factors that might be addressed programmatically to increase the completion rate of doctoral academic programs, and identify more specifically why students may stop before completion of their program.

At the time of this study, Flagship University's overall student population was made up of more than 41,500 students from all 50 states in the United States and 140 countries. Almost 85% of these students worked full-time or were self-employed. In 2012, the graduate student population of doctoral and master's degree students, was reported as being 77% female, approximately 48% white, and had the highest average of students ranging in the 30-39 age group at the Flagship University (U.S. Department of Education, 2013). The university offers a variety of doctoral programs, including PhD programs in Counselor Education and Supervision, Education, Health Services, Human Services, Management, Psychology, Public Health, and Public Policy and Administration. The school also offers Doctor of Business Administration (DBA), Doctor of Education (EdD), and Doctor of Nursing Practice (DNP) degrees. Completion rates remain less than the national average of 50% for the majority of the doctoral programs offered by Flagship University, where six out of the 11 programs fall between 35.7%-49.3% completion rates (see Table 1). Two of the doctoral programs, PhD in Counselor Education and Supervision, and the Doctor of Nursing Practice (DNP) degrees, did not have sufficient data available at the time of the study to determine completion rates; thus, they do not have any reported completion rates. Two other programs, the PhD in Public Health and the PhD in Psychology, report a range of completion rates; however, there is no additional information referencing why these programs are reported in this way. The variation in program completion rates provides a

chance to study the influence of student persistence as a possible contributing factor to doctoral student completion across programs.

Table 1

*Institution Doctoral Completion Rates*

| Program | Completion % |
|---|---|
| PhD in Health Services | 35.7 |
| PhD in Education | 37.0 |
| Doctor of Education (EdD) | 45.8 |
| PhD in Public Health | 48.1–59.6 |
| PhD in Management | 49.3 |
| PhD in Psychology | 49.3–72.9 |
| PhD in Public Policy | 81.8 |
| Doctor of Business Administration (DBA) | 97.1 |
| PhD in Human Services | 100 |
| PhD in Counselor Education and Supervision | Not Reported |
| Doctor of Nursing Practice (DNP) | Not Reported |

*Note.* The program completion rate is the percentage of students who concluded between July 1, 2011, and June 30, 2012, and who finished their program within the expected time for that program.

The graduate student population at Flagship University was 77.5% female and 22.5% male in the Spring 2012 semester. Forty-eight percent of the graduate student population's ethnicity was White, 40.7% Black, 3.4% Hispanic, 3.3% Asian/Pacific Islander, 0.7% American Indian or Alaskan, and 1.7% Multiracial. The age ranges of the

graduate student population in Spring 2012 were: 15.8% between the 24-29 years of age, 32.5% (age 32-39), 29.5% (age 40-49), and 4.5% classified as Other (23 and under, and 60+). The total number of students who provided gender, ethnicity, and age information to Flagship University during the spring 2012 semester was 39,497, 34,020, and 40,567, respectively.

The overall cost of a doctoral degree at Flagship University varies by program. To determine the overall cost of a doctoral program, tuition, specialization, structure, and time to completion must all be considered. For many students, time to completion is a large determining factor in the overall cost of their program, regardless of the tuition structure. During the 2011-2012 academic year, the average costs for attending a doctoral program at Flagship University varied from approximately $36,000 to $107,000, depending on the program and time to completion. The tuition structure at Flagship University also varies, as some programs bill tuition as a flat fee per term while others bill per credit hour. Books, residencies, and other additional expenses also increase the overall cost of programs.

## Rationale

Timely completion of a doctoral program is an important outcome for the student, the host university, and the local economy where the student resides; however, completion of these programs within the required timeframe is dependent on many interacting factors (Pitchforth et al., 2012). Flagship University provides distance education and has a student population of mostly nontraditional students. A

nontraditional student can be characterized to include financial independence, delayed enrollment, responsibility for dependents other than spouse, over the age of 25, married, single parent, or employed on a full-time basis (National Center for Educational Statistics [NCES], 2008; Metzner & Bean, 1987). As Wendler et al. (2010) explained:

> The number of 'nontraditional' students is growing. They are older, engage in work, family, and school activities at the same time, and may view graduate education not as a means of preparing for a first career but rather as a means of altering or refining their employability. (p.2)

Nontraditional students bring unique challenges for institutions of higher learning (Allen & Seaman, 2008, 2010; Howell et al., 2003; Offerman, 2011). The number of challenges brought by the combination of a student population of nontraditional students, distance learning programs, the high rate of noncompletion in doctoral programs, and a scarcity of institutional research on the topic suggests a need for new research to explore, inform, and address the problem of low doctoral student completion rates at Flagship University and beyond.

The population of students at this institution is comprised of adult students who are working in their field of study. Based on this demographic characteristic, many students have chosen to attend the institution for the flexibility that distance learning programs provide in comparison with traditional campus-based programs. Many students who hold an undergraduate degree are capable of completing a graduate program; however, many of those that do enroll in a graduate degree end up leaving without a

degree (Wendler et al., 2010). Education students tend to be more mature, working adults while achieving doctoral studies, as compared to their counterparts in the other disciplines (Graves & Biedsoe, 2015; Harker & Lin, 2015; Rapoport, 1998). Therefore, the convenience of online courses is a particularly important criterion for selecting programs of study for students who are working, adult learners.

Doctoral students at this and other institutions typically attend programs with a variety of additional life stressors, stressors not frequently experienced by undergraduate students, and these additional stressors play an essential part in doctoral persistence and degree completion. Some of these stressors are inadequate financial aid, struggles with work-life balance, incompatibility with their field of study or program, inadequate preparation for research, and instability in the job market (Austin et al., 2009; Jairam & Kahl, 2012; Martinez et al., 2013). Attrition rates are generally high in doctoral programs regardless of the discipline (Muurlink & Poyatos, 2011). Attiyeh (1999) also found that a central issue with doctoral persistence concerns the extent to which persistence was influenced by the existence and levels of financial support. According to Attiyeh, students with better financial support have higher rates of success towards completion of their degree (1999).

Although there have been multiple studies utilizing doctoral students who left their programs of study in other universities, there are minimal studies of doctoral programs in online universities in general (Chipere, 2015). Most extant studies on doctoral persistence and completion studies have focused on cohort programs at

universities that are primarily campus-based. There is an absence of literature relating to large online higher education institutions and doctoral student persistence and completion. Some studies have revealed online instruction is comparable to what would be found in the traditional classroom environment in terms of effectiveness (Bergstrand & Savage, 2013; Means et al., 2013; Moore, 2013; Russell, 2001; Sanchez, 2013). However, other studies have found that retention rates for courses and programs online are often much lower than for those taken at a local campus (Bos & Shami, 2006; Diaz & Cartnal, 2006; Rovai, 2003; Willging & Johnson, 2004). Nontraditional, adult learners have inferior retention than learners in more traditional programs when attending campus-based classes, a phenomenon that has implications for distance education programs since graduate-level adult students primarily enroll in them (Litalien & Guay, 2015; Nealw-McFall & Ward, 2015; Rovai, 2003).

Unsuccessful students do not necessarily have to be defined by high dropout rates, if the definition of success is calculated by students' grades rather than the decision not to persist through the program (Diaz, 2002). Although students leave an institution without having earned an academic degree, they still leave the program with an improved level of knowledge and skills. In light of family and work obligations, the best option to drop out of their academic program instead of persisting through and having those obligations interrupt their academic performance (Patterson & McFadden, 2009). Students with certain characteristics such as greater financial support, higher GRE scores in the verbal

or quantitative categories, and also a master's degree have a better chance of persisting at selective institutions (Attiyeh, 1999).

Overall, the literature discusses a variety of hypotheses for high attrition rates that predominately lead to low completion rates in doctoral programs. One theme that stands out is a lack of faculty connectedness that keeps students involved towards the end of doctoral programs (Austin et al., 2009; Creighton, Creighton, & Parks, 2010; Erwee, Malan, & van Rensburg 2013; Mansson & Meyers, 2012; Minor et al., 2013; Pitchforth et al., 2012; Terrell et al., 2009; Tinto, 1988). With some doctoral completion rates at Flagship University falling well below the national average, it is important to identify potential causes for the lack of completion in order to encourage continued high standards of scholarship with completion. Such inquiry can also lead to recommendations of possible institutional policies and procedures that may assist in achieving higher completion rates in the doctoral student population in Flagship University. A variety of factors influencing doctoral student persistence may account for the range in completion rates. With research, such factors may be identified in order to suggest more efficient and effective ways for promoting student persistence and completion within Flagship University.

Finally, research is needed based on the scarcity of local research at Flagship University. Only one study on this topic has been completed focusing on Flagship University. While dated, I found that doctoral students experienced significant stress and identified the greatest stressor amongst students was the time required to complete their

doctoral degree (Stallone, 2003). The narrow focus of this study combined with the long intervening period since the study and scant research for the institution further suggests the need for a follow-up and more current study of doctoral program completion rates in Flagship University.

## Definitions

*Active learning:* An instruction model where students are centrally responsible for their learning (Meyers & Jones, 1993).

*Attrition:* The decrease in volume of learners stemming from reductions in student retention (NCES, 2008).

*Completion rate:* The percentage of students who completed their program within the standard amount of time as set forth from the university. The percentage of students who graduated between July 1, 2011 and June 30, 2012, and completed their program in the normal completion time.

*Mentor:* A trusted guide with more experience or expertise that provides guidance and advice to those with lesser experience (Murray, 2002).

*Non-traditional student:* A student having a variety of characteristics that may include: over the age of 24, married, full-time employment, financially independent, responsible for dependents other than spouse (NCES, 2008).

*Persistence:* The continued effort of learners staying registered in a program of study and working towards degree completion. Persistence can be defined as advancement from the first year of registration until the conclusion of an academic

program in a postsecondary institution without a continued break in enrollment (Barnett, 2011; Stieha, 2010).

*Retention:* The quantity of the population of students who stay registered at the same educational establishment from year to year (Tinto, 1975).

*Stress:* In the context of this study, this term refers to anything that presents a challenge to a student's well-being and potentially poses a threat to the balance of that student's academic career (Mechanic, 1978).

## Significance

Studying the persistence of doctoral students attending online universities is important. Published information about completion rates allows potential students to make knowledgeable assessments regarding where to practice their education. Per the U.S. Department of Education (2011), Flagship University is required to make this detailed information public for the consumer. Thus, the importance of identifying factors that may positively impact completion rates may be important to the viability of the programs studied, as well as the overall institution. Higher Education institutions will now be obligated to reveal certain things such as: overall cost of their program, repayment rates on student loans, debt-to-earnings ratio for graduates, and other information that is critical for consumers to allow for more knowledgeable choices regarding gainful employment on their top programs (U.S. Department of Education, 2011). The proposed research will contribute to an understanding of the local problem by identifying potential persistence issues that may contribute to inconsistent program

completion rates by the doctoral student population at Flagship University. Some program data are available for all of Flagship University's online programs and consists of potential occupation outcomes, program completion rates and overall costs, and the average graduate debt from loans for the chosen program. As a result of the study, I hope to develop and recommend effective guidelines, policies, and strategies for helping doctoral students increase persistence, complete their programs of study on time, and obtain their degrees at higher rates of success. Furthermore, Flagship University provides clarifying information, stating:

> The program completion time may vary depending on transfer of credit and the pace at which a student chooses to complete the program. Because many of the students in this program are working adults and need to balance personal and professional commitments, our academic advisors can help establish an appropriate program of study that enables each student to complete this program in a time frame that works best for him or her. (Flagship University, 2012, para. 11)

Doctoral program completion percentages can be found in Table 1. This data was sourced from Flagship University's current university website, the only location for accessing such data. Based on the scarcity of publically available data, there are no additional statistics to report; which is challenging when attempting to understand the level of persistence within the context of the larger academic community.

## Guiding Research Question

Currently, minimal research exists that focuses on student persistence at the doctoral level, with even less research available for the doctoral demographic at online universities. The purpose of this study will be to evaluate student persistence factors across doctoral programs in order to develop and recommend research-derived support structures to improve completion rates within the doctoral programs across the institution. Stallone (2003) suggested further research is needed on factors for student persistence. A secondary recommendation was to conduct research to update and validate her DSEQ for use in online university settings. The research question that guides this study is: Do student persistence factors vary significantly across doctoral programs in all fields in relation to the variation found within the corresponding program completion rates at Flagship University?

## Review of the Literature

### Introduction to the Literature Review

For review of the literature for this study, articles and texts were sought that explored student persistence factors and relationships with program completion rates amongst higher education institutions. The literature review was developed to include a search of academic research databases such as ProQuest Central, ERIC, Education Research Complete, and EBSCOhost, as well as books, conference papers from various individuals, and even newspapers and applicable websites. Keywords were included in the search on various topics to refine the initial results. Keywords included *student*

*attrition*, *student persistence*, *higher education*, *distance education*, and *doctoral program completion rates.*

The purpose of this study will be to examine and identify if there are any variations within persistence factors of doctoral students that may relate to the variation in program completion rates, in order to develop and recommend effective guidelines, policies, and strategies for helping doctoral students increase persistence, complete their programs of study on time, and obtain their degrees at higher rates of success across the institution. Although persistence cannot account for all the variation in completion rates, student persistence seems to be one important piece for understanding and addressing the factors that contribute to the wide range of completion rates at Flagship University. The review of the literature will be discussing the conceptual framework for this study based on Tinto's (1975) student integration theory as well as Heider's (1958) theory of attribution, which will create a foundation for further understanding and review of this study. The review of the literature will then be divided into a variety of categories that align with topics associated with doctoral student persistence in an online learning environment. These topics include: (a) completion rates, (b) persistence and completion, (c) relationships, (d) academic integration, (e) socialization, (f) underrepresented populations, and (g) persistence in online graduate schools.

Based on a review of the literature, the only research-derived factor that contributes to doctoral student experience in Flagship University is intrapersonal stress (Scrubb, 1997). The limited focus and report by Scrubb (1997) highlights the rationale

for this study based on a gap in the literature. I hope that research-derived implications and recommendations for Flagship University will assist in the creation of retention programs and policies to help increase doctoral student completion rates. To the extent that the theoretical basis of the study is verified, the study findings may help inform similar interventions and efforts across distance learning initiatives.

**Student Integration Theory**

A student integration theory was created by Tinto's (1975) abstract model of persistence that focuses on the interactions of students and their higher education organizations. Tinto determined that a student's background predicts persistence based on certain characteristics that identify the determination of a student's level of social and academic interaction at their institution. My concept model incorporated: (a) background characteristics, (b) initial goal and institutional commitments, (c) academic and social integration, (d) subsequent goal and institutional commitments, and (e) withdrawal decisions (Tinto, 1975). Through the utilization and identification of such variables, other researchers have been able to continue studying the effects that these variables have had on persistence and completion rates within their campus-based institutions (Barbatis, 2010; Gardner, 2009; Golde, 2005; Johnson, 2011; Nicolson, Rourke, & Kanuka, 2010; Stallone, 2003; Tinto, 2012; Varney, 2003; Willis & Carmichael, 2011).

**Attribution Theory**

Attribution theory may also be one helpful way to understand and study faculty and student philosophies about doctoral student persistence and attrition (Gardner, 2009). By gaining additional knowledge about motivation and why students persist in programs, researchers may be able to identify ways to increase completion rates and combat attrition across programs. Fritz Heider (1958) proposed a theory of attribution as a psychologist. The focus of attribution theory is the internal or external factors that people attribute conclusions to as different events come across their lives. The apparent reasons of outcomes from events are attributions, which are automatic mental models individuals create to explain the causes of others actions, as well as their own (Schunk & Zimmerman, 2006). These perceived causes of outcomes lead people to believe that they may or may not be able to achieve certain goals within their lives, such as persisting through and completing a doctoral program.

Success and failure attributions vary from instructional preference to mood to illness (Weiner, 1979). Weiner discussed the theory of motivation in context with attribution theory when specifically looking at self-motivation and attribution in respect to how individuals explain their life's failures and successes by breaking the theory down into the three main fundamentals of controllability, locus, and stability. The element of stability denotes the perception of change over time by the individual, controllability focuses on the ability of whether an individual can control the factor, and the locus can either be internal or external (Weiner, 2000). Lovitts (1996) believed that persistence is

based on factors after students are admitted, rather than reasons why they attend a specific university. Based on this belief, Lovitts developed a social-structural description for persistently elevated attrition, and explained that graduate programs had not developed effective solutions by bringing together attribution theory from social psychology before.

Although Tinto (2012) did not identify attribution theory as important in determining students' actions, his focus aligned with the theoretical framework. He emphasized that some individuals persist and succeed based on a variety of conditions such as utter determination, ability, and persistence, despite circumstances that would seem to influence against the student's individual success. Tinto (1988) also highlighted the relationship between a student's past habits and patterns of behavior and how these influenced the student's decisions to persist or leave their program of study once in a higher education institution. Others have also reported that advisors could be more helpful for students who seek improved program and graduate experiences (Gardner, 2009; Johnson, 2011; Storms, Prada, & Donahue, 2011).

Tinto (1993) theorized a lack of student persistence as a reflection of the level to which students' incorporated their intellectual and social lives within the institution, an explanation that approaches attribution theory. Tinto concluded that student retention was related to students' backgrounds, goals and commitment to education, experiences at the institution related to interactions with academics, faculty, and peers; external commitments while in college; and integration both academically and socially.

In general, the attribution framework focuses on the reactions that doctoral students express toward the performance and relationship of others, such as their faculty mentor, in a social context. Attributions made by students, may allow for further understanding of doctoral student persistence and completion rates. "If people believe they are removed from an attributed set of behaviors or conditions, they then believe that the outcome, attrition, will not happen to them" (Gardner, 2009, p. 101). Based on Gardner's (2009) explanation of attribution theory in action, students should persist better in their programs when they believe that the conditions and supports that their institution provides to them will lead them towards completion of their program. Attribution theory provides a theoretical framework for helping to identify and understand doctoral student persistence and completion.

Much like using attribution theory to identify causes for why students do not persist in the completion of their degrees, Stallone (2003) introduced a model of persistence and attrition founded on the four factors of (a) program culture, (b) faculty-student relationships, (c) cohort factors, and (d) individual factors. Stallone compared students on these scales to determine which of the four factors had the greatest influence on doctoral completion rates. Varney (2003) also discussed academic motivation as a component to facilitate the dissertation process and ultimately doctoral program completion. Varney was concerned that a growing shortage of doctoral leadership might reduce key interactions between doctoral students and important parts of their doctoral programs and the dissertation process. The three factors examined included (a) being in a

cohort, (b) being mentored, and (c) dissertation preparation experiences (Varney). As a result, Varney suggested that doctoral programs that respected and developed these factors would retain and graduate students with greater frequency.

**Completion Rates**

Completion of programs by doctoral students in the U.S. is not clearly computed, and where reported, remain low (Storms, Prada, & Donahue, 2011). Many researchers have consistently reported that national doctoral completion rates remain at or under 50% across the content areas (Bair & Haworth, 2005; Council of Graduate Schools, 2008; de Valero, 2001; Di Pierro, 2007; Walker et al., 2008). According to the National Association of Graduate-Professional Students' (NAGPS) *2000 National Doctoral Program Survey* (NDPS), graduate students, on average, underestimated the amount of time that it would take to finish their degree with students working on a master's degree anticipating an average of 2.26 years for their degree, and students working on doctoral degrees estimating an average of 4.66 years (n.d.). Studies identifying potential risk factors towards predicting completion rates have varied amongst researchers. These studies have found that faculty and student relationships, academic integration, and socialization have all been factors that contributed to less than ideal completion rates (Diaz, 2002; Hermanowicz, 2007). The factors that contribute to inconsistent doctoral completion are also inconsistent; however, some common themes include faculty relationships, dissertation and research preparation, the employment status of faculty, employment standing of the student, age, and enrollment status (Creighton, Creighton, &

Parks, 2010; Gardner, 2009; Lovitts, 2001; Pitchforth et al., 2012; Terrell et al., 2009; Wao & Onwuegbuzie, 2011; Wao, 2010).

One theme that is consistent throughout the literature is the need for additional studies that concentrate on the impact of financial aid on student success (Austin et al., 2009; Chen & DesJardins, 2010; Kim et al., 2010; Martinez et al., 2013; Obama, 2013; Patterson & McFadden, 2009; Pitchforth et al., 2012; Sowell et al., 2008; Stallone, 2003; Wilkinson, 2005). According to Chen & DesJardins (2010), along with personal finances, housing, and tuition, financial aid is one of the greatest significant elements when determining persistence in secondary education. Across all academic disciplines, attrition for doctoral students in the United States has been reported at around 50%, which is high (Nettles & Millett, 2006). Doctoral student attrition affects institutions globally. Pitchforth et al., (2012) identified key factors affecting timely completion of doctoral programs in Mathematical Sciences in an Australian university, and found that the student's research project, research skills and environment, and personal aspects were the most important factors influencing a timely completion of their program. Although reasons for attrition may vary and not always equate to persistence towards program completion, it may provide some insight into a variety of factors to help explain why doctoral students sometimes do not persist and complete their programs (Cicoria et al., 2013; Ward et al., 2013).

Herman (2011) found different interpretations of doctoral program leaders and students in South Africa and as a result suggested an absence in comprehensive

knowledge of the origins at the global level of doctoral student attrition. McAlpine, Jazvac-Martek, and Hopwood (2009) explored the difference in the activities that doctoral students in Education described as attributed to their feeling of inclusiveness in an academic group, along with complications they experienced at their institutions in Canada and the UK. McAlpine and Amundsen (2011) also discussed the experiences of pretenure academics in two Canadian universities with doctoral students. I found that regardless of the country of origin, doctoral completion rates remained low, and the authors determined that day-to-day interactions among students, supervisors, and other academic staff played a large role in completion rates overall. While low completion rates do not necessarily equate to attrition based on the way they are calculated, Flagship University does seem to follow this national trend of low doctoral student completion rates across the majority of its doctoral programs.

Reasons for doctoral student attrition are multi-dimensional and may vary by program and institution, thus leading to a variation in program completion and persistence. Student integration theory (Tinto, 1975) conceptualizes persistence through the aftermath of learners' associations within their academic organizations, and determined that the background characteristics of learners were key forecasters of persistence based on the learner's interaction within the social and academic systems at that organization. Harris (2011) stated that doctoral program attrition has a troublesome influence on educational institutions, and has had unfavorable effects on doctoral students when analyzing the social, psychological, and financial impacts on persistence. To

address these problems from the perspectives of both students and the institution, this study aims to identify reasons for Flagship University doctoral student attrition, specifically, and the development of insights into further implications for policy and practice toward program completion. According to Parker (2003), institutions of higher education that are accepting governmental funding based on enrollment find the matter of low retention and completion rates particularly significant. If completion rates were improved with enhanced appointment of advising of distance education learners, financial resource predictability could be succeeded (Parker, 2003).

Gardner (2009) proposed a variation of cultural contexts and structures that may help establish a foundation for better understanding of doctoral student attrition and persistence. Understanding the elements that affect student persistence in terms of program completion in a time efficient manner is vital, especially when taking into consideration the high cost of graduate education, the industry of depleting assets, and the increased battle for these fiscal resources (de Valero, 2001). According to Wendler et al. (2010):

> Despite the rigorous selection processes used for admissions into U.S. graduate schools and the high achievement level of those pursuing a graduate degree, some studies have indicated that the attrition rate in doctoral education is as high as 40% to 50%. (p.3)

While the doctoral student completion rate at Flagship University is less than that reported by Wendler et al., there may be value in systematically studying reasons for

variance in the program completion rates based on persistence factors reported by students within those programs.

**Persistence and Completion**

This review provides the context and literary rationale for a study of doctoral student persistence and completion rates. Current literature on doctoral student attrition suggests that amongst the variety of factors that play a part in diminishing persistence in doctoral students, human relationships may be important. However, although human relationships have been highlighted in various studies (Beutel et al., 2010; Brockman, Colbert, & Hass, 2011; Karp & Hughes, 2008; Mansson & Myers, 2012; Rapoport, 1998), the literature is lacking regarding the impact of distance learning in regards to the aforementioned human relationships. According to the National Association of Graduate-Professional Students' (NAGPS) *2000 National Doctoral Program Survey* (NDPS), students had lower persistence and completion in their program when they lacked a sense of belonging within their student community and did not receive constructive feedback in a timely manner (2000).

Further review of the literature revealed multiple antecedents for doctoral student persistence (Gardner, 2009; Wao, 2010), a phenomenon best explained by a variety of interacting factors generally defined as associated student and institutional factors (Tinto, 1993; Wao, 2010). Factors that facilitate success allow the student to become integrated within the institution, which is critical to persistence throughout doctoral programs (Tinto, 1993; Ward-Smith et al., 2013).

**Student Relationships**

Other research has emphasized the significance of relationships in the success of doctoral student completion (Beutel et al., 2010; Brockman, Colbert, & Hass, 2011; Mansson & Myers, 2012; Rapoport, 1998; Sweitzer, 2009). In particular, the role that relationships play in doctoral program success has been consistently highlighted and suggested as important for the development of the doctoral student's professional identity. Storms, Prada, and Donahue (2011) discovered that improved graduation rates could be accomplished by learning from successful doctoral graduate advisor experiences. Lovitts (2001) also acknowledged connectedness with faculty and staff in the dissertation process as an important recommendation when concentrating on issues of the creation and expansion of a doctoral student community. Lovitts suggested that universities unexpectedly allowed students to not persist, and inevitably leave their programs, who were merely expressing forms of self-doubt, feeling disconnected, or needing support and advice. It has been suggested that students may persist if they simply received proper guidance, advice, and encouragement (Lieberman & Dorsch, 2011; Terrell, Snyder, & Dringus, 2009; Lovitts, 2001).

Terrell, Snyder, and Dringus (2009) found that students who were currently working on their dissertations had higher attrition based on low connectedness with other students and faculty in their learning atmosphere. Other studies have also identified the need for stronger support structures from coursework through dissertations for doctoral

candidates to persist through their programs (Diaz, 2002; Lieberman & Dorsch, 2011; Nicolson, Rourke, & Kanuka, 2010).

Gardner (2009) utilized attribution theory to outline the variations in understanding of attrition in doctoral students by role and by department, and identified the strongest bond as the peer relationship. However, Gardner also found the faculty-student relationship to be more exact and complete for understanding doctoral program attrition.

**Academic Integration**

Golde (2005) initially suggested that lack of doctoral student persistence may be a consequence of inadequate academic integration. Tinto (2012) stated,

> Students are more likely to succeed in settings that establish clear and high expectations for their success, provide academic and social support, frequently assess and provide feedback about their performance, and actively involve others on campus, especially in the classroom. (p. 8)

Tinto also found that student persistence and completion was being hindered due to the lack of focus on academic success in the classroom from institutions, which he believed was key to lasting progress in student retention and graduation. Other studies have identified a gap in doctoral student persistence in terms of barriers identified through negative student experiences, as well as a change in the student's priority level of completing their doctoral degree (Barbatis, 2010; Willis & Carmichael, 2011). Tinto (1993) also determined that attrition could be defined as a lack of uniformity between

academic institutions and students, and was only one part of a student's story when determining persistence and completion. Similarly, Johnson (2011) examined the impact that university/departmental documents, faculty, peers, and student attributes on student understanding of the doctoral process, and determined that an important dimension of doctoral student persistence was the understanding that faculty provided regarding the doctoral process.

Barbatis (2010) found students who persisted more frequently attributed their success to personal determination, goal orientation, a sense of responsibility, and resourcefulness. These qualities enabled students who persisted to seek support such as financial management, staff who provide assistance with problem solving, academic-support programs, faculty members, peers, or personal needs during a time of crisis. This level of determination to seek assistance when needed also allowed for a greater probability of students to not only persist through their program but also complete their program of study more successfully.

Many nonacademic reasons have been identified in determining why students do not persist through their doctoral programs including personal, financial, professional, and institutional influences (Lovitts, 2001). These factors have been acknowledged as reasons that may relate to degree completion including economic support, peer and family support, faculty and chairperson support, and student motivation (Lovitts, 2001; Pauley, Cunningham, & Toth, 1999). Academic success and the faculty-student relationship have also been found to encourage and support students to persist to

completion and success in their programs (Barnett, 2011; Karp & Hughes, 2008; Pascarella & Terenzini, 1991; Wells, 2008).

Golde (2005) and Zhao, Golde, and McCormick (2007) agreed that poor compatibility between the chair and student is one of the leading causes for the elevated rate of attrition and low completion rates among doctoral students. Sigafus (1998) explored the pursuit of a doctorate and how an increased commitment in professional educator's lives was experienced when adding a doctoral program, identifying four related to doctoral attrition. Sigafus's attrittion themes included (a) structure, (b) pressure, (c) support, and (d) authority. In all of the cases investigated by Sigafus, there was a point in the students' lives where their levels of satisfaction dissipated with the institution, and increased dissatisfaction with the program developed upon completion of their formal coursework.

Harris (2011) identified that increased persistence and completion rates could be shown when pairing doctoral students with librarians, thus improving the student's research skills and solving for students who were unable to handle the dissertation research on their own. Additionally, Church (2009) reported an analysis by the United States of high attrition rates in doctoral education where the focus was limited to practice oral defenses, and found a significant correlation with student retention, persistence, and social integration. Church concluded that practice oral defenses conducted a few times a year equated to an increase in completion rates of more than one third above the national average.

**Socialization**

Less frequent communication and decreased socialization are factors that contribute to increased attrition. According to the National Association of Graduate-Professional Students' (NAGPS) *2000 National Doctoral Program Survey* (NDPS), students who considered leaving the program prior to completing their ultimate degree reported significantly lower levels of communication and sense of belonging (2000). Golde (2005) suggested that the development of doctoral student socialization within the academic environment is linked to the quality of relationship that students have with their chairpersons. Torres and Zahl (2011) also highlighted the importance of the student socialization process, and determined that it is a necessary, developmental process in order for students to persist and complete their programs of study.

Mendoza (2007) found that the cultural knowledge that students acquire through academic collaborations reflect an incorporation of traditional scholastic principles with new viewpoints brought by educational capitalism, and that educational capitalism might include strong predictors of retention opportunity. Additionally, Gopaul (2011) demonstrated how features of scholastic work, which cultivate socialization in doctoral students, also operated as means to generate or uphold imbalances within doctoral education. Finally, Holms, Robinson, and Seay (2010) reported the value of collaboration among cohorts and concluded that active student interdependence was a useful strategy to enhance completion rates in the doctoral dissertation process.

**Underrepresented Populations**

Persistence and completion is a struggle for underrepresented populations across all disciplines as reported by the Council of Graduate Schools (2004). Jiranek (2010) found that in Australian Universities, the most important factors contributing to persistence and completion were the organization of leadership and research assistance for doctoral students. In addition, Humphrey, Marshall, and Leonardo (2012) examined how the United Kingdom transformations impacted certain areas of doctoral education such as the art, social sciences, and humanities over the last decade. I found a positive impact on persistence and completion through increased professionalism in doctoral education. By identifying a leadership team, focusing on completion of projects and plans, and increasing involvement with research, a significant relationship was identified relating to completion of a four-year dissertation submission (Humphrey et al., 2012).

Le and Gardner (2010) identified unique challenges for Asian international doctoral students in science, technology, engineering, and mathematics (STEM) fields. These students often had unique concerns regarding funding, choice of advisor, and were often secluded from their peers (Le & Gardner, 2010). Doctoral students in the STEM fields have the highest attrition rates within their first year (Lott et al., 2009). Lott et al. (2009) also found a variation of attrition rates within first year doctoral students among major and gender. Gardner (2008) identified a gap in persistence and completion amongst other populations of students including: students with families, part-time students, older students, female students, and students of color. Gardner (2008) wanted

to further understand the process of socialization within the chemistry and history disciplines, at different universities, and how it related to doctoral student persistence. Additionally, McAlpine, Jazvac-Martek, and Hopwood (2009) also stressed the importance of doctoral student experiences within their academic communities, within global institutions, which resulted in low completion rates.

Felder (2009) explored how faculty and female doctoral students addressed managing the balance of work and life demands. I found that developing the skills for being successful at managing both work and life begins at the graduate level. Mullen, Fish, and Hutinger (2010) explored the problems of control and scholarship in mentoring connections through the perspectives of female doctoral students. The authors offered a viewpoint on the feminist process of mentoring and its combined influence on learning and scholastic engagement. Other studies have also addressed the uniqueness of the female perspective on doctoral study progress as well (Felder, 2009; Gardner, 2008; Lott et al., 2009).

Numerous studies have been completed in attempts to identify reasons for low doctoral completion rates (Gardner, 2008; Sowell, Zhang, Redd, & King, 2008; Stallone, 2003). Despite many attempts to identify sources contributing to low persistence and high attrition, however, there remains a lack of consensus. In addition, the literature consistently recommends further research to better address high student attrition and low completion rates in doctoral programs (Barnes & Randall, 2012; Cockrell & Shelly, 2010; Gardner, 2007; Lott, Gardner, & Powers, 2009). Many authors have discussed

doctoral student persistence and attrition related to specific educational organizations, programs, and student demographics. It remains important, therefore, for a study to be conducted solely with Flagship University doctoral students to identify gaps in practice that, if addressed effectively, may lead to higher persistence and better completion rates of doctoral students within the programs.

**Persistence in Online Graduate Programs**

Although doctoral program demand is increasing and leading many institutions to create online or hybrid programs, the rates of persistence for doctoral students across the U.S. are not easily calculated and the demand for such programs does not necessarily relate to the completion of degrees (Storms et al., 2011). Colleges and universities are identifying the majority of their student population as nontraditional students who have unique adult challenges as they work full-time jobs, and balance their families with education (Stokes, 2006). Tinto (1975) suggested that student persistence is a result of social and scholastic integration within an institution, and collaboration between students and faculty results in higher commitment to persist and achieve goals within that institution. However, Tinto's model can only be partially applicable when discussing nontraditional students at online institutions.

Bean and Metzner (1985) created an attrition model for nontraditional students, focusing on nonpersistent academic outcomes and the affiliation with environmental and psychological factors. External factors relating to financial status, employment level,

support system, and family responsibilities had a greater effect on student persistence than social-academic factors for nontraditional students (Bean & Metzner).

Online education students are different from traditional students based on unique characteristics needed to thrive in a virtual learning environment when compared to a more traditional, on-campus environment. Lee, Choi, and Kim (2012) identified the dissimilarities between online student characteristics of those who persist and those who do not complete their program, and found similar results. Frydenberg (2007) was able to further narrow down specific factors, such as work/learning schedule conflicts and personal problems of the student, which attributed to the lack of persistence and completion for students online programs of study. Even though many studies have attempted to classify reasons affecting students' persistence, insufficient empirical studies have studied this issue, and no agreements have been reached classifying which considerations may have certain impacts on nontraditional distance learner's persistence within their academic programs (Park & Choi, 2009).

**Assessing Doctoral Student Persistence**

The design concept for this study required the assessment and survey of doctoral persistence factors for comparison across multiple doctoral programs. The literature review revealed two survey instruments, one created by Stallone (2003) and one created by Varney (2003), which were used in research with objectives that were similar to this study. The survey instrument created for this study was a hybrid of the two 2003 instruments, combining appropriate items from both. This approach was used because

the two aforementioned instruments possessed evidence reliability and validity (Stallone, 2003; Varney, 2003). Neither instrument was appropriate in its entirety to conduct this study based on factors identifying cohort groups and campus location; therefore, portions of both instruments were placed together to create a new instrument called the Doctoral Completion and Persistence Scale (DCPS).

Stallone (2003) introduced an attrition and persistence model based on the four factors of (a) program culture, (b) faculty-student relationships, (c) cohort factors, and (d) individual factors. Stallone compared students on these scales to determine which of the four factors had the greatest influence on doctoral completion rates. Varney (2003) also discussed academic motivation as a component to enable the dissertation process and eventually doctoral program completion. Varney initiated his concern based on a growing shortage of leadership, which prompted him to assess doctoral student perception of value and value of program factor and relationships. The three factors examined by Varney included (a) program cohorts, (b) mentorship, and (c) experiences with dissertation preparation. As a result, Varney suggested that students who made the most progress were the students who also valued the different components of their doctoral program highly.

Based on these two studies, a survey instrument was created utilizing components from the Doctoral Student Experience Questionnaire (Stallone, 2003) and Doctoral Program Components Scale (Varney, 2003). As noted in the literature review, dissertation preparation, program culture, individual factors, and faculty-student

relationships were some of the key reasons why doctoral students did not persist throughout their program. The dissertation preparation portion of Varney's instrument was used in place of Stallone's portion that focused on cohorts because Flagship University does not utilize cohorts throughout their doctoral programs. Instrumentation for this study is further discussed in more detail in the next (Methodology) section.

## Implications

The implications for possible project directions based on the anticipated findings of the data collection and analysis included a policy analysis that could suggest additional supports to positively impact and increase doctoral student persistence and graduation in the academic programs studied for online universities. An additional project could lead to a new professional development program that outlines how faculty and staff may adjust their efforts based on the research-derived needs of doctoral students. Student persistence and degree completion benefit society, as a whole, in terms of social values, productivity, contribution, and the economy (Pascarella & Terenzini, 1991; Zusman, 1991). Likewise, this institution's doctoral programs and students may benefit from research-derived recommendations to implement policy guidelines, strategies, and procedures that mitigate harmful distress and encourage improved doctoral student persistence through graduation.

## Summary

This study proposes to add to current knowledge of the factors that play a role in doctoral student persistence and completion within a distance learning institution.

Knowledge gained from this research may provide a more thorough conceptual framework for understanding the role that various factors play in determining doctoral student persistence and completion within the distance learning institution studied. Findings may contribute to the overall issue of a connection between doctoral student persistence and low doctoral student completion rates within a distance learning institution, and could be used in the creation of new policies, practices, and recommendations for further research intended to increase doctoral program completion rates.

According to Storms et al. (2011), program need does not directly translate to persistence or completion of degrees despite the necessity for more options needed for working educators who seek out doctoral programs. The demand for EdD programs is anticipated to increase based on the need of leaders who have both the knowledge and skills gained from the intensive study and rigor of doctoral programs, as well as extensive administrative experience (Storms et al., 2011).

Additionally, Nicolson, Rourke, and Kanuka (2010) identified recurrent topics resulting in low doctoral completion rates. The influence of peers, mentoring of faculty, variation of academic disciplines, and identity formation among doctoral students was also found as a factor when researching low completion rates (Nicolson et al., 2010). The researchers suggested longitudinal studies of doctoral students in online programs in comparison with residency options, alternative disciplines, and socialization in the most successful online programs for further research (Nicolson et al., 2010). With this

information, it is important to continue to research the effects that student persistence has on our doctoral student population, especially as many institutions start to transition to a distance learning modality.

# Section 2: The Methodology

## Introduction

The purpose of this mixed-methods study was to compare factors of doctoral student persistence across 11 different academic programs at a single online university. This comparison was conducted in order to identify and recommend assistance and support structures to improve completion rates across all programs. This section contains a description of the quantitative and qualitative methods and procedures used to collect and analyze data for this study. The rationale for this mixed-methods research approach and the sampling methods that were used to gather the study data are also discussed. This data collection was conducted using student persistence scores in Likert scale-format that were provided from the Doctoral Completion and Persistence Scale (DCPS), as well as open-ended questions intended to clarify persistence issues being experienced by individual students. The results of these student persistence data were compared to see if there was any variation based on academic program completion rates. The data analyses and results from this study are intended to be shared with the institution's leadership as a foundation for improving training programs to increase doctoral student persistence and program completion rates.

## Research Design and Approach

A convergent mixed-methods design was used to gather quantitative and qualitative data concurrently, combine the data, and use the results to comprehend the research problem (Creswell, 2012). According to Creswell (2012),

> A basic rationale for this design is that one data collection form supplies strengths to offset the weaknesses of the other form, and that a more complete understanding of a research problem results from collecting both qualitative and quantitative data. (p. 540)

This design allowed for me to compare doctoral student groups across academic programs in order to identify similarities and differences of persistence factors as they related to corresponding program completion rates. I used a convergent design and measured students' seniority levels within their programs; this allowed me to gather both the qualitative and quantitative data, examine both data sets, compare the results, and make a determination as to whether the results support or challenge each other (Creswell, 2012).

An advantage to using a mixed methods approach to determine and identify student persistence factors allows for a greater understanding from the combination of both quantitative and qualitative research. Creswell (2012) stated that by combining both quantitative and qualitative methods, a better interpretation of the research problem can be attained than if either method were to be used by itself. By providing statistical information and student experience descriptions, an informative arrangement regarding the understanding of the relationship between student success factors and the ability to use that data to further recommend assistance and support structures to improve completion rates across all programs was discovered. A two-way analysis of variance (ANOVA) procedure was used to analyze the quantitative data derived from the DCPS,

and content analysis was utilized to adequately code and analyze the qualitative data provided in written form from the participants.

**Setting and Population**

The target population included 11 groups of students associated with the doctoral programs at Flagship University. The groups consisted of all students who are currently active in the following doctoral programs: PhD in Counselor Education and Supervision, PhD in Education, PhD in Health Services, PhD in Human Services, PhD in Management, PhD in Psychology, PhD in Public Health, PhD in Public Policy, Doctor of Business Administration (DBA), Doctor of Nursing Practice (DNP), and the Doctor of Education (EdD). After I obtained appropriate IRB and university permissions (IRB approval #03-07-14-0274095), I uploaded the survey into Flagship University's research participant pool where students falling into the appropriate demographic were able to participate in the study on a voluntary basis, which created a richer sample of the population desired.

The target population consisted of Flagship University's doctoral students across all academic doctoral programs. I obtained a sample of students through Flagship University's internal participant pool, which students, staff, and faculty can access and voluntarily participate in posted studies that they are qualified for. Participation in this university pool is voluntary and anonymous. Students, faculty, and staff have the ability to post their surveys within this platform to allow for a completely anonymous and voluntary participant processes. This participant pool is an active pool that is accessible

to the Flagship University's community of students, faculty and staff. The participant pool serves as a research bulletin designed to announce a study within the university; therefore, the sample is loosely based on the university population. Since the sampling method is not random, however, a generalization of results cannot be made to the remainder of the university.

Convenience sampling was used to invite individual participants from each of the 11 doctoral programs. Convenience sampling is a nonprobability sampling method where subjects are carefully chosen because of their willingness and suitable availability to participate in the study (Creswell, 2012). Based on the structure of the Participant Pool, convenience sampling was the best way to obtain responses from a portion of the doctoral student population due to the willingness of the participants and the availability to participate in this study. In order to gain access to the Participant Pool a student must willingly sign up and be sent anonymous login credentials to the website to participate. All doctoral students within Flagship University may volunteer to participate in the study.

Once a student has volunteered to access the Participant Pool, they are given access to the Participant Pool website and can review all of the currently available surveys. Participants must examine the surveys to identify whether they are eligible for that particular survey before accepting to take it based on the researcher's description of the study. Convenience sampling was the best avenue to obtain participants for this study because of the willingness and availability of participants through the use of the Participant Pool through the institution. Although a random sampling method would

have been ideal to create a more broad description of the entire doctoral student population and restrict the potential bias, due to restrictions and policies within Flagship University the only way to gather student data was through the use of the Participant Pool. Restrictions regarding communication methods with active and non-active students did not allow for any type of email, mail, or phone communication to any students; thus, the participation pool was the only option for communication of my study.

The survey instrument was made available to any participants who were qualified and willing to take part in the research within the institution participant pool on a voluntary basis. The interval and noninterval scale data collected were web-based electronic data. The interval data were analyzed through a series of two-way analysis of variance (ANOVA) procedures using the Statistical Package for Social Sciences (SPSS) software, where the doctoral students from each program were compared to determine whether there is any relationship that can be an attributing factor to the variation in program completion rates based on the seniority of the student in each program. The independent variables within this study were the program completion rates and seniority level of students. The dependent variables were the four factors being studied and included (a) academic program culture, (b) dissertation preparation, (c) individual persistence, and (d) relationships.

Sample size of a study can be a cause of concern for some researchers. Brooks and Johanson (2011) reported in-depth research on sample size focusing on posthoc comparisons using ANOVA when omnibus tests demonstrated significant differences.

Salkind (2009) explained the need for balancing sample size with the need to accurately represent the population being studied. Accordingly, the generally accepted research standard of 30 participants per group (Salkind, 2009) would indicate a sample size of 330 for the 11 groups proposed for this study. Alternatively, Hair, Black, Babin, Anderson, and Tatham (2006), suggested that groups of at least 20 participants are needed for statistical comparative analyses using tests such as ANOVA. As a result, if all of the proposed 11 groups were retained for this study, an ideal sample size would have been between 220 and 330 total participants. However, based on the voluntary nature of the participant group, I conducted statistical analysis with fewer participants in each group because of the actual response rate from the participant pool.

**Eligibility criteria for study participants**

In order for participants to be eligible to participate in this study, they were required to be a current, active doctoral student in one of the 11 doctoral programs of interest at Flagship University. They could be at any progress point within their program, but were ineligible if they had withdrawn or graduated. I expected that newer students within their program would answer that they were less ready than students who were towards the end of their program under the dissertation preparation variable. I also predicted that some students would have already had a previous doctoral experience at another institution and may feel more confident within their dissertation skills earlier within Flagship University's programs. To control for this confounding variable, and to account for the natural learning progression of all doctoral students, I added one question

to the demographics portion of the questionnaire to determine whether the student is a transfer student from another institution or a transfer student from another doctoral program within Flagship University.

Important aspects of conducting ethical research include planning the process for data collection that ensures ways to obtain confidentiality of the participants and adequately securing the data once collected (Creswell, 2012). "Ethical issues arise in survey research at distinct points in the research process, such as in collecting data, analyzing results, and reporting the results" (Creswell, 2012, p. 402). Accordingly, to ensure full confidentiality of the participants throughout the data collection process, and avoid any ethical concerns, the raw data was not to be published and the responses from the participants were to remain fully confidential. Furthermore, participants were provided a random user id when they voluntarily sign into the participant pool, so their responses remained fully confidential even to me. When the project concluded, I removed the survey from the participant pool. There were no incentives provided to individuals who participated in this study and risk to participants was considered minimal. Furthermore, I have completed the National Institute of Health online course for the ethical treatment and protection of participants in human research.

## Instrumentation and Materials

A unique instrument was crafted for this study because no instrument was available that focused specifically on student persistent factors without some area of focus on cohorts, and a cohort system is not used at Flagship University. The instrument

for this study was created because I was unable to locate a suitable existing research instrument after conducting an extensive library search. The instrument for this study was created by combining appropriate items from two separate instruments with established reliability and validity (Stallone, 2003; Varney, 2003). Therefore, it was expected that the internal reliability of the new instrument was approximately the same for the study based on the previous researcher's findings. Regardless, a small pilot study was planned to test and revise the research instrument, as necessary, prior to implementation in the full data collection process. As part of the revising process, estimates of internal reliability were employed using SPSS in order to increase the reliability of the instrument (Green & Salkind, 2011).

In crafting the instrument for this study, I was sensitive to the online education characteristics of the population being studied at Flagship University. For example, based on the lack of cohorts at Flagship University, it was necessary to omit all questions pertaining to Cohort variables on Stallone's (2003) original instrument. These seven questions were replaced with Dissertation Preparation questions taken from Varney's (2003) original instrument. As in Stallone's initial test for reliability, the reliability of this instrument was evaluated in part by using reverse scoring of some items. This approach for increasing reliability uses high scores to represent agreement on items that are worded in the positive and low, reversed scores to represent agreement on items that are negatively worded (Green & Salkind, 2011). Negatively worded items must be reverse-scored prior to data analysis.

**Doctoral Completion and Persistence Scale**

Based on a thorough review of related literature, no instrument existed that adequately focused on factors that may help determine persistence for a noncohort online doctoral program. Since Flagship University does not employ the cohort system, all components pertaining to cohorts were deleted from the questionnaire. Other modifications were required as well. For example, the DSEQ did not indicate specific demographic information such as age group or employment status. For the qualitative portion, the open-ended questions pertaining to cohorts were removed. When combining the remaining DSEQ components with the Dissertation Preparation Component from Varney's Doctoral Program Components Scale (2003), the resulting Doctoral Completion and Persistence Scale (DCPS) was created for this study. Written permission was obtained from the authors of both the original instruments (Appendix B, Appendix C) for modification and use in this study.

**Type of Instrument**

With appropriate permissions, such as institutional, University Research Review, and Institutional Review Board (IRB) approval (03-07-14-0274095), a web-based questionnaire survey instrument, the DCPS, was uploaded for the research participant pool to experience. An invitation to participate in the study was placed in the summary area for students to voluntarily fill out if they meet the participant requirements. The institution's Center for Research Quality sent out an announcement letting the institution's community know that there was a new study available, and I was prohibited

from sending out individual communication requests for participation. Participant responses were stored in a database for easy conversion into tabular numeric form for statistical analysis, which is an advantage of web-based surveys. Another advantage of utilizing a web-based survey is improved data accuracy due to the elimination manual transcription. An informed consent form was displayed with the survey as an initial page, and participants were required to indicate consent by clicking on a check box for moving forward with the survey. Participants who elected not to participate were thanked for their time and interest, and instructed to close their web browser to exit the survey. Upon conclusion of the study, a summary of the results was submitted to Flagship University, for placement on the Center for Research Success section of the website.

The survey instrument collected demographic information, quantitative data on four individual persistence variables, and four questions related to student experience in the doctoral program. The four quantitative variables of interest included (a) academic program culture, (b) dissertation preparation, (c) individual persistence, and (d) relationships. The four qualitative variables included (a) program culture experience, (b) program characteristics experienced, (c) overall program experience, and (d) dissertation preparation. The DCPS questionnaire consisted of seven questions pertaining to demographics, four open-ended questions to collect qualitative data, and 28 questions that were answered using a five-point Likert scale (seven items for each qualitative variable).

All 28 quantitative questions were answered using a five-point Likert scale with response options of *Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree.* All items in this section were coded as positive or negative, as shown in Appendix D. Negatively worded items were reverse scored with the following point system: *Strongly Agree (1), Agree (2), Neutral (3), Disagree (4), and Strongly Disagree (5).* All items that were worded in the positive were normally scored in the following way: *Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1).* A score of two represented a neutral response for both normal and reverse-scored items.

The additional four open-ended questions were analyzed based on a pragmatic approach from the student's responses, and grouped into themes or patterns through coding the data. When coding was complete, a summary of the codes were utilized to determine whether there were any relationships between the student's seniority level and their program's completion rates in conjunction with the quantitative data collected.

Data were housed on a secure server within the institution, and participants were each coded using their individual user identification code, which was randomly generated and assigned by the research participant pool system. Participants of this study were not inclusive of any vulnerable populations, nor subject to risk or solicitation from their involvement. Each participant was over the age of 18, a current active doctoral student of the university, and completed the survey in a voluntary, anonymous, and confidential manner. Participants agreed to informed consent by choosing to take the survey; therefore, a signed consent form was not necessary. The first page of the survey

instructions explained that responses would be anonymous and that participant rights to anonymity would be protected. The survey questions did not identify the participants in any way, so risk to participants was considered low. Any published findings could not identify any individual participant.

**Reliability and Validity of the Instrument**

The questionnaire, which contained components of surveys used in two previous studies, included evidence of validity and reliability as reported in previous research (Stallone 2003; Varney 2003). Stallone (2003) reported validity from a review of identifying factors, or constructs, found in the literature, that were related to doctoral degree completion, as well as through interviews with doctoral students to obtain authentic and relevant perceptions of the factors associated with degree completion. Stallone's instrument was further validated through the participation of educational doctoral program leaders who acted as a panel of experts to verify the content and construct validity of the instrument by evaluating the instrument for content, clarity, appropriateness of directions, vocabulary, and scoring. The reliability and validity of Stallone's instrument was increased through a pilot study of doctoral students that were not included in the actual study. The data were analyzed and the instrument was revised and edited upon completion of the analysis to further clarify constructs as per suggestions from the pilot group of respondents. Having only one researcher read, code, and classify the open-ended responses increased reliability for the qualitative portion of the

questionnaire. Ensuring that only original response content was used in the data analysis helped to mitigate researcher bias.

Varney (2003) constructed and validated his instrument, the Doctoral Program Component scale (DPC), using scale construction guidelines that included task analysis to delineate tasks requisite to writing a dissertation. Varney then submitted each scale to a panel of experts from his university's College of Education faculty members for feedback on face, content, and construct validity, as well as appropriateness of scale response format (Varney, 2003). A pilot study was then conducted to see if the measure of his three variables could be improved. The DPC's measures included (a) student perceptions of the value of being in a cohort, (b) mentoring, and (c) the dissertation preparation experiences built into the doctoral program (Varney, 2003). Each of these subscales was composed of ten items to total the 30-item Likert type scale, which ranged in response scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Varney's instrument also included a *Does Not Apply* response to account for participants that felt as though a particular question did not pertain to them. Varney's scale was then included in a pilot study to determine the measure of internal consistency of reliability, with a resultant Chronbach's alpha of .97 (Varney, 2003). For this study, Varney's subscale of Dissertation Preparation Experience was used to replace the Cohort questions that Stallone used in her instrument. The change was made in order to provide for a contextually appropriate survey for Flagship University because it does not use a cohort system in its online doctoral programs.

## Data Collection and Analysis

Each respondent participated by responding to the DCPS web-based questionnaire that was made available through the participant pool process. The 28 quantitative Likert scale items were presented with radio buttons for responding. Descriptive statistics, internal estimates of reliability, and ANOVA analyses were conducted using the quantitative items and scales. For the four open-ended qualitative items, participants typed their responses in a free text block provided next to each open-ended item. The maximum response for the open-ended items was 250 characters. Content analysis was conducted upon retrieval of the qualitative data, where similar language was grouped into themes to enhance any quantitative findings.

Raw data were accessible by me only throughout the data collection and survey process. The raw data were stored electronically and securely on the web-based survey's website. Once downloaded, raw data were also stored on my password protected desktop computer, which had active security and virus protection. Data were shared with research committee members to ensure the accuracy of data conversions.

Pilot studies are critical to good research instrument design, as they provide valuable insight into changes that may need to be made for the actual instrument and study (van Teijlingen & Hundley, 2001). "One of the advantages of conducting a pilot study is that it might give advance warning about where the main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated" (van Teijlingen & Hundley, 2001,

p.1). Therefore, the new DCPS was opened to the participant pool for one week to pilot study the instrument. A total of 14 participants responded during the pilot phase of the study. Based on the pilot study results, it was determined that the DCPS instrument items were sound, as written, and there were no questions revised as the instrument seemed to measure the constructs as designed. The directions for completing the survey, however, were revised slightly to reflect more accurately the actual time it took participants to complete the assessment (it took slightly less time than originally estimated).

The DCPS was made available to the participant pool respondents for three weeks following the pilot phase. After eight weeks, a total of 31 participants had responded to the DCPS and it was removed from the web-based survey system. Results were downloaded from the survey website in an Excel spreadsheet. Two respondents were removed from the study because they had failed to respond to critical elements of the survey. After the necessary items were reverse-scored, the quantitative survey responses and demographic data were entered into SPSS for analyses.

Descriptive statistics were used to gain an understanding of the data, including how the scores varied and compared (Creswell, 2012). A Likert scale provided data used to describe variance within and between the sample groups. Likert scale measures are typically defined and treated as interval scales, where the data are normally distributed and the distance between each value on the scale is equal (Creswell, 2012).

After removing one participant for missing data, internal estimates of reliability were run ($N$=30) to assess how well the four underlying constructs of the DCPS

measured the scales of (a) individual persistence, (b) program culture, (c) relationships, and (d) dissertation preparation. The four scales consisted of 7 items each. Two scales (relationships, $\alpha = .84$) and dissertation preparation ($\alpha = .82$) demonstrated high levels of internal consistency when limiting the analysis to the largest participant group (EdD, $n$=8). When limiting the internal consistency analysis to the EdD group and the second largest group (PhD in Psychology, $n$=7), the program culture scale demonstrated moderate internal consistency ($\alpha = .74$ and $\alpha = .79$, respectively). Adding the additional respondent groups resulted in reducing the Chronbach's alpha consistency statistic. It should be noted that when computing Chronbach's alpha on small samples, the analysis may not yield accurate results (Charter, 1999, 2003; Kline 1986; Lackey & Wingate, 1998; Nunnaly & Bernstein, 1994; Seagall, 1994).

Hypothesis testing is a process for making judgments about results by comparing an observed value of a sample with a population value to conclude whether a difference or association occurs between the values (Creswell, 2012). For Analysis of Variance (ANOVA) tests, independent variables are sometimes referred to as factors, or grouping variables, while dependent variables are often continuous interval or ratio measures provided by tests and surveys (Hair et al., 2006). The difference in seniority of the students was compared by using a two-way ANOVA that allowed for comparison within and between groups. For this causal-comparative research, the independent variable was the seniority level of students from the 11 doctoral programs while the dependent

variable was the four DCPS composite scale scores (individual persistence, relationships, program culture, and dissertation preparation).

Qualitative data were collected during the initial survey process, and then coded and reviewed separately from the quantitative data and categorized through thematic analysis (Creswell, 2012). In order to integrate the data, data transformation for comparison and data consolidation for emergent themes allowed for further analysis and comparison of both the quantitative and qualitative data as one. Data consolidation integrated findings from the mixed methods approach by converting quantitative data into narratives that were analyzed qualitatively (Creswell, 2012). The data collected were coded to simplify the data, and then analyzed using the appropriately selected methods (Creswell & Clark, 2011). Conventional content analysis was used to code and analyze the qualitative data directly from the participants written responses (Hsieh & Shannon, 2005).

The data were examined through single-item scoring (Creswell, 2012). Each demographic item stood on its own as a single measure. The 28 quantitative items were combined by one of four composite scale measures that contributed to the measure of the composite scale factor. The data collected were analyzed through ANOVA to statistically evaluate related null hypotheses. Stratification took place using two identified strata from the sample that was defined as students who have not started working on their prospectus within their program, and students who have started working on their prospectus within their program. These strata allowed for analysis within each

subgroup to help further identify how persistence factors within these groups may relate to program completion rates. The type of distribution of scores was assumed normal with appropriate normalcy tests applied at the time of analysis (Green & Salkind, 2011). The data were analyzed using SPSS software. The qualitative participant responses were also collected, coded for central themes, and interpreted by me.

Sample size was a main concern for tests such as the *t* test, ANOVA, MANOVA, and others which should have been judged based on individual group size and not necessarily the total sample size (Hair et al., 2006). Statistical analysis software, such as SPSS, can accommodate unequal group size, regardless of many previous practices that discussed the need for keeping the group size relatively equal because the effectiveness of the study was dictated by the smallest group size (Hair et al., 2006). Hair et al., also discussed and recommended that an adequate sample size was available for all groups, and also recommended a minimum of 20 observations for each ANOVA cell to be evaluated (2006). Based on the above guidance, at least 220 participants (a minimum of 20 in each group) may have provided an adequate sample size for evaluating the 11 groups using a series of one-way ANOVA procedures; however, statistical analysis was conducted with lesser participants in each group due to the low rate of participation by the groups.

## Research Questions

It is helpful in human science research to have a single guiding question to focus the overall inquiry (Creswell & Clark, 2011). The overarching question that anchored

this study was, “How do individual and program factors contribute to student success in online doctoral programs?” This study was guided further by the following research questions:

RQ1. Which success factors according to the DCPS (individual persistence, relationships, program culture, and dissertation preparation) are most associated with doctoral program completion rates, based on student seniority level, from the sample of doctoral pool participants in Flagship University?

RQ2. Are there differences according to the DCPS between program completion rates within each doctoral program in the online university based on doctoral student individual persistence when comparing student seniority levels?

RQ3. Are there differences according to the DCPS between program completion rates within each doctoral program in the online university based on doctoral student relationships when comparing student seniority levels?

RQ4. Are there differences according to the DCPS between program completion rates within each doctoral program in the online university based on doctoral student program culture when comparing student seniority levels?

RQ5. Are there differences according to the DCPS between program completion rates within each doctoral program in the online university based on doctoral student dissertation preparation when comparing student seniority levels?

RQ6. What experience-based themes are important to doctoral students in completing their programs of study when comparing based on student seniority level?

This study will evaluate the following alternate hypotheses and related nulls:

$H_1$ - There is a statistically significant difference in individual persistence between student seniority levels among the academic programs studied.

$H_{01}$ - There is no statistically significant difference in individual persistence between student seniority levels among the academic programs studied.

$H_2$ - There is a statistically significant difference in student relationships between student seniority levels among the academic programs studied.

$H_{02}$ - There is no statistically significant difference in student relationships between student seniority levels among the academic programs studied.

$H_3$ - There is a statistically significant difference in program culture between student seniority levels among the academic programs studied.

$H_{03}$ - There is no statistically significant difference in program culture between student seniority levels among the academic programs studied.

$H_4$ - There is a statistically significant difference in dissertation preparation between student seniority levels among the academic programs studied.

$H_{04}$ - There is no statistically significant difference in dissertation preparation between student seniority levels among the academic programs studied.

## Assumptions, Limitations, Scope, and Delimitations

### Assumptions

The following assumptions are essential to this study:

1. Certain conditions encouraged the persistence of the students in this study based on the problem statement.
2. Honest answers would be provided by the participants when the survey questions were administered, and the data collected would be accurate.
3. The participants would be truthful in determining whether they adequately qualified for this study based on their current academic status.
4. Participant understanding of confidentiality within their answers would be understood, and no repercussions would take place for participation or lack thereof.
5. Program Data provided by Flagship University about each program would be accurate.

**Limitations**

This research study may be limited by the following:

1. Quantitative and qualitative data were used to measure each of the four variables of the research study. Through the utilization of a convergent parallel mixed methods design, all data were collected at the same time to assist in determining if there were similarities, differences, or a combination of both amongst the data (Creswell, 2012). Assessing attitudes and outcomes, interactions, contexts, and processes are advantages of using mixed-methods designs (Lodico et al., 2010). The qualitative value of this study was limited by my inability to triangulate and verify participant responses due to the anonymous, single exposures to the survey instrument.

2. The sample size of the population: Only students willing to sign into the university's participant pool were able to participate in this survey. If a small sample size results, biases and errors would become more likely, further limiting the generalization of any results outside the participants studied.

3. Self-reporting data: All data provided were from participating doctoral students. Self-report data may lead to a tendency of inflation or misrepresentation by the participants based on the phenomenon of socially desirable responding.

**Scope**

The study was limited to doctoral students enrolled in Flagship University because of my interest in doctoral persistence and completion. In addition, only nine of the doctoral programs at Flagship University were studied based on data the availability of data provided. Two programs were omitted due to not yet having any graduates at the time of data collection by Flagship University.

**Delimitations**

The study is delimited to current students of the 11 doctoral programs who were also volunteers in Flagship University's research participant pool. The participants read and acknowledge the informed consent page at the beginning of the survey to ensure that they were qualified to participate in the survey and understand that they were voluntarily participating with no incentive. Each respondent participated by answering a series of questions where they clicked on the appropriate response electronically, and were free from harm as they would be able to leave the survey at any point during their

participation. Due to the nature of working with participant pools and related participant anonymity, the qualitative portion of the study was delimited to one response session per participate, even for the open-ended questions on the survey.

## Findings

Quantitative data were analyzed using two-way ANOVA and qualitative data were coded to unpack emerging themes (Felder 2010; Karp & Hughes 2008). A total of 31 participants responded to the survey, and participation was less than anticipated. The qualitative data elements, therefore, became even more important in my analyses to help understand the problem and develop implications for possible remedies. Emerging themes were interpreted alongside the results of the quantitative data analysis to yield increased understanding of doctoral student persistence factors within the variables of individual persistence, relationships, program culture, and dissertation preparation.

### Demographic Profiles

Flagship University allowed students and faculty to voluntarily register with the institution's participant pool without any reward or compensation for participating from the institution. The only notification that participant pool registrants received was emailed directly from the participant pool administrators when new studies were posted within the system. This study was communicated via email to participant pool registrants within one week of the study being activated. The number of active participants changed daily based on the voluntary nature of the participant sign-up process. Based on this process, the actual number of active participants within the participant pool is unknown.

Of those who were registered participants during the eight weeks that survey was active, 31 responded to the survey to participate in this study.

The participant's demographic characteristics are represented in Table 2. At the time of the study 26% of the respondents ranged in age from 30-39, 42% ranged in age from 40-49, and 32% responded that their age was 50 or older. Of the students who completed the survey 68% were female and 33% were male. Fifty-nine percent of respondents reported their ethnicity as White, 26% of respondents reported their ethnicity as Black, and 10% of respondents reported their ethnicity as other. Only 6% of the respondents indicated their ethnicity as Hispanic. The majority of the students indicated that they worked full-time (78%). Seventy-eight percent of students reported having not received any transfer of credit into their programs. Thirteen percent of students received transfer credit from an outside institution, while 10% of students received transfer credit from within Flagship University. The demographic characteristics of the participants are presented in Table 2.

Table 2

*Sample Demographic Characteristics*

| Characteristic | % of Respondents |
|---|---|
| Age Range of Participating Students | |
| 30-39 | 25.81 |
| 40-49 | 41.94 |
| 50+ | 32.26 |
| Gender Distribution of Participants | |
| Female | 67.7 |
| Male | 32.26 |
| Ethnicity | |
| Black | 25.81 |
| White | 6.45 |
| Hispanic | 9.68 |
| Other | 58.06 |
| Employment Status | |
| Full-Time | 77.42 |
| Part-Time | 9.68 |
| Unemployed | 12.9 |
| Transfer Status | |
| Inside Institution | 9.68 |
| None | 77.42 |
| Outside Institution | 12.9 |

The majority of students indicated that they had already started the prospectus phase of their doctoral studies (*n*=19, 61.2%). Ten respondents (32.3%) had not yet

started working on the prospectus and two respondents (6.5%) did not answer the seniority survey item. Table 3 shows the distribution of participants by doctoral program.

Table 3

*Participants by Doctoral Program (N=31)*

| Doctoral Program | # of Participants | % Of Respondents |
|---|---|---|
| Doctor of Business Administration (DBA) | 3 | 9.68 |
| Doctor of Education (EdD) | 8 | 25.81 |
| PhD in Education | 1 | 3.23 |
| PhD in Management | 4 | 12.9 |
| PhD in Psychology | 7 | 22.58 |
| PhD in Public Health | 5 | 16.13 |
| PhD in Public Policy | 3 | 9.68 |

**Quantitative Evaluation of the Doctoral Success Factors**

An ANOVA is a hypothesis-testing method used to evaluate mean differences between two or more treatments (Creswell & Clark, 2011). ANOVA uses sample data as the basis for depicting common assumptions about populations (Gravetter & Wallnau, 2005). The doctoral success factors were evaluated using SPSS by conducting a two-way ANOVA for each of the two factors (seniority level and doctoral program) and each dependent variable (individual persistence, relationships, program culture, and dissertation preparation). The two levels of seniority were (a) preprospectus and (b)

started or post-prospectus. A third level of seniority, defined by students who chose not to respond to the seniority item, was omitted for having an extremely small number ($n$=2), which were too few to run an ANOVA and those two records were omitted from the quantitative portion of the study. The six levels of doctoral programs analyzed were (a) Doctor of Business Administration, (b) Doctor of Education, (c) PhD in Management, (d) PhD in Psychology, (e) PhD in Public Health, and (f) PhD in Public Policy.

**Individual persistence.** The individual persistence data were inspected for equivalence of variance and normality of distribution across the factors before running the two-way ANOVA (Green & Salkind, 2011). The DCPS descriptive statistics for persistence based on the two seniority levels are provided in Table 4 (see Appendix E for individual persistence descriptive statistics disaggregated by program). There were no outliers, as assessed by inspection of the persistence boxplots for values greater than 1.5 box-lengths from the edge of the box (Laerd Statistics, Two-Way ANOVA, p. 3). The Shapiro-Wilk's test for normality was undefined for the levels of factors containing two or fewer participants. The individual persistence score was normally distributed for all the remaining group combinations of program and seniority level, as assessed by Shapiro-Wilk's test ($p > .05$). Higher scores for this test equate to greater persistence among students. Chronbach's alpha for internal consistency estimates was computed to determine the overall internal consistency of reliability, with a resultant of $\alpha$ of .73.

Table 4

*DCPS Descriptive Statistics for Individual Persistence by Seniority Level*

| Seniority Level | Doctoral Program | *N* | *M* | *SD* |
|---|---|---|---|---|
| Preprospectus | Doctor of Business Administration (DBA) | 4 | 3.57 | 0.37 |
| | PhD in Management | 2 | 3.14 | 0.61 |
| | PhD in Psychology | 1 | 3.86 | N/A |
| | PhD in Public Health | 2 | 3.57 | 0.61 |
| | PhD in Public Policy | 1 | 3.00 | N/A |
| | Total | 10 | 3.46 | 0.45 |
| Started –Post Prospectus | Doctor of Business Administration (DBA) | 3 | 3.71 | 0.76 |
| | Doctor of Education (EdD) | 3 | 2.86 | 0.65 |
| | PhD in Management | 1 | 2.29 | N/A |
| | PhD in Psychology | 6 | 3.26 | 0.61 |
| | PhD in Public Health | 3 | 2.48 | 0.44 |
| | PhD in Public Policy | 2 | 3.21 | 0.71 |
| | Total | 18 | 3.10 | 0.69 |

*Note*: N/A stands for not applicable (undefined) when $n<=1$.

A 6 x 2 ANOVA was conducted using SPSS to see if there were any differences in individual persistence between the six doctoral programs and two levels of doctoral student seniority. The ANOVA test results are shown in Table 5. The ANOVA indicated no significant interaction between seniority level and doctoral program, $F(4,17) = .56$, $p = .69$, partial $\eta^2 = .12$; no significant main effect for doctoral program, $F(5,17) = 1.57$, $p = .22$, partial $\eta^2 = .31$; but significant main effect for seniority level, $F(1,17) = 4.81$, $p =$

.04, partial $\eta^2 = .21$. The results for seniority level indicate that there was a significant difference in individual persistence between preprospectus and prospectus groups. While the seniority main effect indicated that individual persistence was slightly more important for preprospectus students, and the test supports rejecting the related null hypothesis ($H_{01}$), the results of the ANOVA should be viewed skeptically due to the small number of participants in each level evaluated by the statistical test. Additional descriptive statistics are shown in Appendix E.

Table 5

*Individual Persistence 2-Way ANOVA Test Results*

| Source of Variation | *dF* | *MS* | *F* | *Sig* | *Partial Eta Squared* |
|---|---|---|---|---|---|
| Corrected Model | 11 | .455 | 1.315 | .296 | .51 |
| Intercept | 1 | 196.756 | 569.088 | .000 | .96 |
| Seniority | 1 | 1.664 | 4.811 | .042 | .21 |
| Program | 5 | .492 | 1.475 | .223 | .31 |
| Seniority*Program | 4 | .192 | .556 | .697 | .12 |
| Error | 17 | .346 | | | |
| Total | 29 | | | | |
| Corrected Total | 28 | | | | |

**Student relationships.** The student relationships data were inspected for equivalence of variance and normality of distribution across the factors before running the two-way ANOVA (Green & Salkind, 2011). The descriptive statistics for relationships are provided in Table 6 (see Appendix F for student relationships descriptive statistics disaggregated by program). There were no outliers, as assessed by inspection of the relationships boxplots for values greater than 1.5 box-lengths from the

edge of the box (Leard Statistics, Two-Way ANOVA, p. 3). The Shapiro-Wilk's test for normality was undefined for the levels of factors containing two or fewer participants. The relationships score was normally distributed for all the remaining group combinations of program and seniority level, as assessed by Shapiro-Wilk's test ($p > .05$). Chronbach's alpha for internal consistency estimates was computed to determine the overall internal consistency of reliability, with a resultant of α of .57.

Table 6

*DCPS Descriptive Statistics for Relationships by Seniority Level*

| Seniority Level | Doctoral Program | *N* | *M* | *SD* |
|---|---|---|---|---|
| Preprospectus | Doctor of Business Administration (DBA) | 4 | 3.32 | 0.38 |
| | PhD in Management | 2 | 2.71 | 0.40 |
| | PhD in Psychology | 1 | 3.29 | N/A |
| | PhD in Public Health | 2 | 3.86 | 0.20 |
| | PhD in Public Policy | 1 | 3.57 | N/A |
| | Total | 10 | 3.33 | 0.47 |
| Started –Post Prospectus | Doctor of Business Administration (DBA) | 3 | 3.95 | 0.67 |
| | Doctor of Education (EdD) | 3 | 3.71 | 1.13 |
| | PhD in Management | 1 | 2.71 | N/A |
| | PhD in Psychology | 6 | 4.09 | 0.55 |
| | PhD in Public Health | 3 | 3.05 | 0.64 |
| | PhD in Public Policy | 2 | 4.14 | 0.00 |
| | Total | 18 | 3.76 | 0.75 |

*Note*: N/A stands for not applicable (undefined) when $n<=1$.

A 6 x 2 ANOVA was conducted using SPSS to see if there were any differences in student relationships between the six doctoral programs and two levels of doctoral student seniority. The ANOVA test results are shown in Table 7. The ANOVA indicated no significant interaction between seniority level and doctoral program, $F(4,17) = 1.12$, $p = .38$, partial $\eta^2 = .21$ and no significant main effect for doctoral program, $F(5,17) = 1.21$, $p = .35$, partial $\eta^2 = .26$. There was no significant main effect for seniority level, $F(1,17) = .44$, $p = .52$, partial $\eta^2 = .025$. Based on this test, there was no evidence to support rejecting the null hypothesis of no significant difference in student relationships between seniority levels based on academic programs ($H_{02}$).

Table 7

*Relationships 2-Way ANOVA Test Results*

| Source of Variation | *dF* | *MS* | *F* | *Sig* | *Partial Eta Squared* |
|---|---|---|---|---|---|
| Corrected Model | 11 | .612 | 1.605 | .184 | .57 |
| Intercept | 1 | 255.407 | 670.268 | .000 | .96 |
| Seniority | 1 | .167 | .437 | .517 | .025 |
| Program | 5 | .537 | 1.210 | .347 | ,26 |
| Seniority*Program | 4 | .428 | 1.123 | .378 | .21 |
| Error | 17 | .381 | | | |
| Total | 29 | | | | |
| Corrected Total | 28 | | | | |

**Program culture.** The program culture data were inspected for equivalence of variance and normality of distribution across the factors before running the two-way ANOVA (Green & Salkind, 2011). The descriptive statistics for program culture by

seniority level are provided in Table 8 (see Appendix G for program culture descriptive statistics disaggregated by program). There were no outliers, as assessed by inspection of the program culture boxplots for values greater than 1.5 box-lengths from the edge of the box (Leard Statistics, Two-Way ANOVA, p. 3). The Shapiro-Wilk's test for normality was undefined for the levels of factors containing two or fewer participants. The program culture score was normally distributed for all the remaining group combinations of program and seniority level, as assessed by Shapiro-Wilk's test ($p > .05$). Chronbach's alpha for internal consistency estimates was computed to determine the overall internal consistency of reliability, with a resultant of $\alpha$ of .44.

Table 8

*DCPS Descriptive Statistics for Program Culture by Seniority Level*

| Seniority Level | Doctoral Program | *N* | *M* | *SD* |
|---|---|---|---|---|
| Preprospectus | Doctor of Business Administration (DBA) | 4 | 3.78 | 0.36 |
| | PhD in Management | 2 | 3.93 | 0.10 |
| | PhD in Psychology | 1 | 4.57 | N/A |
| | PhD in Public Health | 2 | 4.29 | 0.20 |
| | PhD in Public Policy | 1 | 3.86 | N/A |
| | Total | 10 | 4.00 | 0.36 |
| Started –Post Prospectus | Doctor of Business Administration (DBA) | 3 | 4.43 | 0.65 |
| | Doctor of Education (EdD) | 3 | 4.14 | 0.38 |
| | PhD in Management | 1 | 3.14 | N/A |
| | PhD in Psychology | 6 | 3.83 | 0.47 |
| | PhD in Public Health | 3 | 3.48 | 0.84 |
| | PhD in Public Policy | 2 | 4.21 | 0.30 |
| | Total | 18 | 3.93 | 0.60 |

*Note*: N/A stands for not applicable (undefined) when $n<=1$.

A 6 x 2 ANOVA was conducted using SPSS to see if there were any differences in program culture between the six doctoral programs and two levels of doctoral student seniority. The ANOVA test results are shown in Table 9. The ANOVA indicated no significant interaction between seniority level and doctoral program, $F(4,17) = 1.67$, $p = .20$, partial $\eta^2 = .28$; no significant main effect for doctoral program, $F(5,17) = 1.25$, $p = .33$, partial $\eta^2 = .27$; and no significant main effect for seniority level, $F(1,17) = 1.90$, $p = .19$, partial $\eta^2 = .10$. Based on this test, there was no evidence to support rejecting the

related null hypothesis ($H_{03}$) that there is no difference in program culture between the doctoral programs based on seniority level.

Table 9

*Program Culture 2-Way ANOVA Test Results*

| Source of Variation | *dF* | *MS* | *F* | *Sig* | *Partial Eta Squared* |
|---|---|---|---|---|---|
| Corrected Model | 11 | .283 | 1.145 | .388 | .46 |
| Intercept | 1 | 316.184 | 1281.661 | .000 | .98 |
| Seniority | 1 | .469 | 1.903 | .186 | .10 |
| Program | 5 | .259 | 1.248 | .332 | .27 |
| Seniority*Program | 4 | .412 | 1.671 | .203 | .28 |
| Error | 17 | .247 | | | |
| Total | 29 | | | | |
| Corrected Total | 28 | | | | |

**Dissertation preparation**. The dissertation preparation data were inspected for equivalence of variance and normality of distribution across the factors before running the two-way ANOVA (Green & Salkind, 2011). The descriptive statistics for dissertation preparation by seniority level are provided in Table 10 (see Appendix H for dissertation preparation descriptive statistics disaggregated by program). There were no outliers, as assessed by inspection of the dissertation preparation boxplots for values greater than 1.5 box-lengths from the edge of the box (Leard Statistics, Two-Way ANOVA, p. 3). The Shapiro-Wilk's test for normality was undefined for the levels of factors containing two or fewer participants. The dissertation preparation score was normally distributed for all the remaining group combinations of program and seniority level, as assessed by

Shapiro-Wilk's test ($p > .05$). Chronbach's alpha for internal consistency estimates was computed to determine the overall internal consistency of reliability, with a resultant of α of .81.

Table 10

*DCPS Descriptive Statistics for Dissertation Preparation by Seniority Level*

| Seniority Level | Doctoral Program | *N* | *M* | *SD* |
|---|---|---|---|---|
| Preprospectus | Doctor of Business Administration (DBA) | 4 | 3.14 | 0.31 |
| | PhD in Management | 2 | 2.71 | 0.00 |
| | PhD in Psychology | 1 | 3.43 | N/A |
| | PhD in Public Health | 2 | 3.64 | 0.10 |
| | PhD in Public Policy | 1 | 3.57 | N/A |
| | Total | 10 | 3.23 | 0.39 |
| Started –Post Prospectus | Doctor of Business Administration (DBA) | 3 | 3.71 | 0.38 |
| | Doctor of Education (EdD) | 3 | 3.29 | 0.86 |
| | PhD in Management | 1 | 2.29 | N/A |
| | PhD in Psychology | 6 | 3.00 | 0.90 |
| | PhD in Public Health | 3 | 3.05 | 0.58 |
| | PhD in Public Policy | 2 | 2.86 | 0.20 |
| | Total | 18 | 3.12 | 0.71 |

*Note*: N/A stands for not applicable (undefined) when $n<=1$.

A 6 x 2 ANOVA was conducted using SPSS to see if there were any differences in dissertation preparation between the six doctoral programs and two levels of doctoral student seniority. The ANOVA test results are shown in Table 11. The ANOVA indicated no significant interaction between seniority level and doctoral program,

$F(4,17) = .37$, $p = .83$, partial $\eta^2 = .08$; no significant main effect for doctoral program, $F(5,17) = 1.30$, $p = .31$, partial $\eta^2 = .28$; and no significant main effect for seniority level, $F(1,17) = 1.86$, $p = .19$, partial $\eta^2 = .10$. Based on this test, there was no evidence to support rejecting the related null hypothesis ($H_{04}$) that there is no significant difference in dissertation preparation between the doctoral prog*rams based on seniority level.*

Table 11

*Dissertation Preparation 2-Way ANOVA Test Results*

| Source of Variation | *dF* | *MS* | *F* | *Sig* | *Partial Eta Squared* |
|---|---|---|---|---|---|
| Corrected Model | 11 | .335 | .848 | .600 | .45 |
| Intercept | 1 | .734 | 528.370 | .000 | .95 |
| Seniority | 1 | .734 | 1.856 | .191 | .10 |
| Program | 5 | .473 | 1.297 | .314 | .28 |
| Seniority*Program | 4 | .145 | .367 | .829 | .08 |
| Error | 17 | .395 | | | |
| Total | 29 | | | | |
| Corrected Total | 28 | | | | |

*Note. a* = 0.05

**Qualitative Findings and Emerged Themes**

Mixed-methods research involves a portion of the study relying on qualitative input from participants. Qualitative outcomes involve inductive processes of research to which the researcher collects evidence from open-ended questions and analyzes that data into themes or categories based on the participants' answers (Creswell, 2012). Wide-ranging patterns or generalizations from these experiences and related literature are joined to provide further insight into the participants' less structured data that was

collected through the open-ended question survey feedback. This study involved the routine approach to qualitative data analysis where data were coded into groups and themes in an effort to make sense out of the data. The process of making meaning is when the researcher utilizes what they have seen and read and consolidates, reduces, and interprets that information to mark significance within it (Merriam, 2009).

The data from the four open-ended items were hand-coded, structured, and classified using Microsoft Word for easy retrieval and accuracy during the qualitative analysis phase of the study. Direct quotes from respondents contained misspellings, which were corrected upon reporting. Codes were inductive as they were established upon direct investigation of the data (Creswell, 2012). Data analysis methods consisted of category construction where one key word or phrase was utilized in an attempt to identify reoccurring patterns in the data (See Appendix I). Analytical coding was then employed to sort and group keywords or phrases together to create a list of phrases that allowed for the development of reoccurring themes within categories. The process of coding and categorizing revealed the following four themes, and the qualitative analysis overall is summarized in Table 12.

1. Students revealed a variation in level of support among faculty when comparing success factors and seniority levels between the different programs.
2. Support services and availability of resources were a concern of all doctoral students regardless of seniority level or program.

3. Perhaps related to Number 2 above, financing the doctoral degree was a focus for all students.
4. The face-to-face residency component of each program is viewed as beneficial in preparing and motivating doctoral students, regardless of their program.

Table 12

*Qualitative Research Themes*

| Success Factors and Themes | Occurrences |
|---|---|
| Individual Persistence | |
| Support | 10 |
| Slow | 8 |
| Resources | 8 |
| Faculty | 6 |
| Relationships | |
| Faculty | 12 |
| Response | 8 |
| Support | 6 |
| Residency | 6 |
| Program Culture | |
| Culture | 9 |
| Faculty | 8 |
| Support | 8 |
| Atmosphere | 6 |
| Dissertation Preparation | |
| Research | 9 |
| Coursework | 7 |
| Dissertation Preparation | 6 |
| Faculty | 5 |

**Attributions related to relationships**. An emerging theme of faculty support and lack of support was consistent throughout the respondents' answers when participating in the research question focused on relationships. Another frequent theme

was the face-to-face residency component of the program. A number of respondents reported that the faculty support within the institution was very helpful when asked, "What program characteristics have been most helpful in moving you towards graduation?" Participant H suggested,

> Communicating with various professors who give an account of their experience. Gaining written support from peers online. Ease of online classes and positive pacing.

Participant S noted that support amongst faculty and an advisor was available, as long as the students are willing to reach out to them. In response to the item asking about positive program characteristics, the student said,

> The supportive nature and open communication with faculty if the student is willing to reach out.

An example of a second level of attribution reflected a somewhat different approach to interpreting communication and connectedness. Participant V suggested,

> Nothing stands out. I have been pretty self-motivated the whole way through. I was most happy when things were getting done on Flagship's end (I am getting ready to defend my dissertation).

Finally, Participant O responded,

> Had two previous chairs that were not very helpful. Most recent chairperson quite easy to work with and enthusiastic on my success. Previous two chairs did not show concern if I graduated or not.

The emerging theme of support in positive relationships was reflected more frequently within the preprospectus group when responding to the open-ended success factor question about relationships. Participants in the preprospectus seniority group, who were in all programs except the DBA, gave positive attributions to support services in addition to their relationships, indicating a main reason for persisting in their programs. Participants in the DBA were also the only students to mention the residency as an identifying factor of persistence after starting their prospectus. Other institutional support factors such as the writing center, residency, and library were mentioned quite frequently in a positive manner when asked about relationships; whereas participants who had started the prospectus in all programs consistently mentioned the themes of support, faculty, and success negatively when reflecting upon their relationships within departments and with faculty amongst the institution. For these participants, success was mentioned in a negative tone when describing relationships amongst different departments and faculty in regards to their overall persistence towards completion (Appendix J).

**Attributions related to program culture.** Faculty support and overall availability of support services within the institution were among the top themes emerging under the success factor of program culture. Participants that responded to the research question "How would you describe the doctoral program culture or atmosphere that you have experienced?" generated both different and similar themes between the two seniority levels. Differences seemed to emerge from distinctive viewpoints and skills of

the participants. Participants in the preprospectus group attributed negativity towards their experience related to their level of support by stating that,

> I would describe the atmosphere as lonely. It is difficult to find consistent support throughout the program.

Participant N also responded simply,

> Isolated.

Conversely, many students did attribute positive reflections about the institutional and faculty support. The majority of students in the preprospectus group strongly affirmed that they were highly supported. Participant X stated,

> It was a professional atmosphere. Fellow colleagues were supportive and encouraging. The energy was positive.

Participant D also stated a positive response to support:

> The culture is fair and impartial to an extent. I do feel that meeting people at residencies helped put a face on the program and gave me confidence that I could complete the program as I connected with my peers and felt I too was one of them.

A theme that overlapped in both the prospectus and preprospectus seniority groups was that overall, the majority of participants thought that the program culture was professional, fair, and supportive. Participants who had started the prospectus attributed the importance and role of faculty and staff more than the preprospectus group. Participant B from the prospectus group stated,

The faculty and staff are very helpful. I feel valued and supported

Another prospectus group participant, Participant U, reported,

Very supportive of the student.

Participants who had started the prospectus in the DBA, PhD in Management, and EdD programs identified support, faculty relationships, and feelings of connectedness and support as factors contributing towards their persistence. Participants who were in the preprospectus stage of these same programs; however, stated that they felt isolated, disconnected, and lonely. In contrast, participants who were in the preprospectus phase of the PhD in Public Health, PhD in Psychology, and PhD in Education made the opposite attributions. These participants identified that they felt a sense of professionalism, enjoyed the faculty, and felt connected throughout the preprospectus stage of their programs. On the other hand, participants from these programs who had started the prospectus stated that they lacked a sense of support and connectedness once they had started their prospectus.

The group of participants who declined to answer their seniority level within the program had the most negative comments out of all of the groups. Reoccurring attributions from these two participants included negative feelings regarding time to completion, slow responses from faculty, and a lack of collaboration with faculty (See Appendix K).

**Attributions related to individual persistence**. There are identifiable differences in attributions regarding individual persistence made by students based on

seniority level. Individual persistence included support services, face-to-face residency, and speed of responsiveness. Participants who had started the prospectus identified support services as their number one challenge in persisting through their program. One post-prospectus student, Participant I, stated,

> I would have been done a lot sooner with quicker response time from an advisor and if I had been able to attend more residencies and ESPECIALLY if I could have worked with the writing center once a week instead of having to wait so long for appointments.

Another post-prospectus student, Participant J, recalled similar challenges regarding support services for doctoral students, stating,

> I think the lack of doctoral resources slows the process down. Not having a writing team just for doctoral students and limiting it to 30 minutes sessions is troublesome. I also think we should have started the prospectus much earlier.

Conversely, students who had started the prospectus indicated that the face-to-face residency provided a positive attribution towards individual persistence. Participant S stated,

> The residencies have been helpful in face-to-face meetings with faculty. It helps to put a name with a face.

In contrast, very few students in the preprospectus group identified faculty support as their number one challenge. Pre-prospectus student, Participant G, lamented,

> There are some inconsistencies in the way some instructors provided feedback. Some were very specific with detailed responses while others were vague and less than helpful.

Most other participants mentioned that they enjoyed working with their faculty members and reported a more positive experience, which was a consistent theme throughout the preprospectus group for all success factors. Participant F responded:

> I feel like the professors are very approachable.

The majority of the preprospectus participants who responded attributed faculty as their greatest factor in helping them persist through their program. Participants who had not yet started their prospectus in the PhD in Public Health and PhD in Public Policy programs attributed overall support as their main motivating factor. For these participants, support was inclusive of many different departmental resources, as well as faculty.

Participants who had started their prospectus had similar responses within their programs; however, time and faculty response rates were negatively identified more often in the EdD and PhD in Management programs as compared to the other programs. Participants who started their prospectus in the PhD in

Public Policy and PhD in Public Health programs identified the same factors as students who had not yet started the prospectus; attributions of support and resources as primary reasons for persisting and progressing through their programs. Both the DBA and PhD in Psychology students who had started their prospectus attributed faculty as their main reason for persisting. Interestingly, participants in both of these programs who had not yet started the prospectus chose not to attribute any reason for persistence or lack thereof (See Appendix L).

Overall, participants responding to individual persistence reported that faculty responsiveness and timing of the face-to-face residency were the most important themes when considering individual persistence factors within their program. Participants who had started their prospectus mentioned time as a struggle within some of the programs, while other programs identified a lack of support as their biggest hurdle during this phase in their program. Participants in the majority of programs, who had not started the prospectus, felt that faculty was the number one identifiable reason for persisting.

**Attributions related to dissertation preparation**. Although an important factor, the face-to-face residency component of a student's program is not the only factor that impacts a prospectus level student's persistence and success. Participants who provided feedback for the open-ended question asking what could be emphasized or covered more thoroughly in their core program to better prepare them to complete their study were widely divided in their responses. Students indicated that additional focus on coursework

and integration of research within their core coursework would have been helpful when transitioning to the dissertation phase of their program. Some students indicated that an additional face-to-face residency should be required, while others wanted more on research statistics, design, and methodology. To this end, Participant R suggested,

> A course or residency intensive that focused on how to develop an idea into a research project and examples of the steps to completing a proposal would have been helpful.

Participant J stated:

> There should be more time devoted to methodology and a mandatory second residency. Residency within the first 3 months does not prepare a student for the scholarly project. It should be later in the program.

Students among all programs also frequently mentioned the timing of their topic development for their dissertation, and consistently referenced that they would have liked to have started their capstone study development sooner within their programs. Participant D shared,

> I believe students need to start as early as possible on research questions. I wish that I received a bit more urgency earlier in the program and had been given coaching or mentorship earlier on. It would have saved time and money later on in the process.

Other students surfaced the need for more guidance in choosing a topic, but did not necessarily pinpoint timing as an issue. Participant I discussed this related attribution,

> I needed more help with choosing a dissertation topic, writing the problem statement, APA, paraphrasing, time management, & using KAMs to my advantage.

Participant P suggested,

> Mentorship should come before the work. Just giving articles to review without guidance is not a best practice.

Participants in all programs with the exception of the EdD, who had started the prospectus, mentioned coursework and research as their top struggles, while EdD participants emphasized methodology as particularly challenging. In contrast, among the preprospectus students, only three programs were highlighted as needing help with dissertation preparation. Participants in the EdD and PhD in Psychology programs stated that research was their most difficult challenge. Participants in the PhD in Management program stated that preparing for the dissertation was the biggest concern (See Appendix M).

Students identified student support services as their main concern when considering success factors in their doctoral programs. Faculty response was attributed as challenging for both seniority groups and throughout all programs; however, students identified faculty relationships as one of the top reasons for their persistence through the program. The face-to-face residency also surfaced as both a positive factor, as well as a factor for concern among doctoral students from both seniority levels when discussing persistence factors within their programs.

## Conclusion

This section outlined the research plan to compare four factors hypothesized as related to persistence of doctoral students across 11 academic programs to see if there was a difference between the academic programs based on seniority levels. The quantitative and qualitative methods and procedures used to collect and analyze data for this study, as well as the rationale, and sampling methods were discussed. The methodology section also presented a new instrument created for this study, the DCPS, and explained how the instrument was constructed using items from two previous research instruments that measure similar constructs. Important to the methodology section is the principal research question, as well as the numerated supporting research questions, alternate, and null hypotheses. The methodology was concluded with a discussion about the limitations, delimitations, and scope of the research.

Overall, the themes that emerged from the coding analysis tied to the research questions and reflected students concerns regarding persistence within their programs. Themes identified in the data analysis included evidence of individual persistence factors attributing to overall persistence, evidence of challenging faculty responses, evidence of concerns of student support services, evidence of positive faculty relationships, and evidence of face-to-face residencies positive effects towards persistence. Each theme contributes to an understanding of doctoral student persistence factors in an online institution. The detail provided in the theme analysis added to my understanding of what success factors helped students persist in their online programs and affect their program

completion rates as outlined in research questions one and two. The theme analysis also discovered factors related to a student's ability to persist related to individual persistence, program culture, relationships, and dissertation preparation as noted in research questions three, four, five, and six. The theme identification of this study provides details of this analysis and the association of each theme to the research questions.

The development and use of the DCPS in this project study was intended to help clarify persistence and individual experience issues that may exist in the academic programs studied. It is hoped that potentially identifying more efficient ways for the institution to allow doctoral students to persist and complete their programs can be identified and shared in the form of training, policy, and support structure recommendations aimed at improving doctoral student persistence and program completion.

# Section 3: The Project

## Introduction

The purpose of this mixed-methods study was to evaluate student persistence factors across doctoral programs in order to develop and recommend research-derived support structures to improve completion rates within the doctoral programs across the institution. This section begins with a short description of the resulting project to improve doctoral completion rates, the project goals and objectives, and the research-derived rationale for the project's design. Based on my research findings, a review of the literature related to approaches for increasing student persistence is followed by a discussion of the project implementation, which includes a more detailed description of the project, as well as the project evaluation plan. A discussion of the implications of the project, including the potential for influencing positive social change, concludes this section.

In Section 2, the student-faculty relationship emerged as an important factor that seemed to influence doctoral student persistence. The project genre chosen for this study, therefore, needed to be of a type that facilitated working with faculty to develop and implement strategies that promote the highest quality student-faculty relationships. The project genre selected was professional development (PD) training with an overarching goal of sharing student observations with doctoral stakeholders. For the purpose of the project, a doctoral stakeholder was defined as anyone with an interest in doctoral student

success. Doctoral stakeholders, therefore, include faculty, administrators, leaders, staff, and doctoral students themselves.

This project was designed to share this study's findings, including student observations, through a process that will support a collaborative communication process to assist in developing stronger student-faculty relationships between doctoral students and their faculty. The collaborative communication process is also a communication initiative that becomes a learning focus and desired outcome of the project. The delivery format and timeframe proposed for the project is face-to-face and in conjunction with residency meetings as a preresidency workshop for doctoral faculty, but would also allow for web-conferencing capabilities for those faculty who are not able to attend in person. A three-day project schedule was created to cover a combination of collaborative, as well as individual learning activities designed to develop, strengthen, and enhance both technological and communicative outreach strategies for the participants.

The PD training project provided in Appendix A includes a series of presentations aligned with an overarching strategy to produce a collaborative communication initiative to address student success and persistence through the development of faculty-student relationships by using selected technological avenues. An important focus is the sharing of information about diverse communication avenues to potentially increase doctoral student persistence. The project concludes with a presentation of online doctoral student persistence factor data and discussions of approaches for collaboratively constructing

pathways for increasing online student success through proactive communication outreach efforts using additional resources.

## Project Goals

The overall goal of this project is to assist in increasing doctoral student persistence within Flagship University by enhancing the student-faculty relationship through proactive faculty communication. The project is a three-day faculty development workshop that will include a variety of interactive sessions designed to encourage discussion and development of best practices, as well as action plans for implementing the best of what was learned. A professional development curriculum was most appropriate for this project based on the responses from doctoral students' focus on their need for an increase in quality of student-faculty relationships. The overarching purpose of this project, therefore, is to provide faculty the opportunity to discuss and develop, strengthen, and enhance best practice ways to communicate with their students to create a more robust student-faculty relationship.

The goals for this project include increasing awareness of persistence factors in online students, as well as encouraging collaborative dialogue between stakeholders about ways to increase doctoral persistence. The project examines existing communication procedures and includes discussions of strategies to address research-derived doctoral student concerns. It promotes faculty and administration involvement in the change process, so as to make faculty more likely to accept the proposed changes (DuFour, 2011). Administrators, faculty, and institutional leadership have been included

as stakeholders because institutional change can only be affected if they support the initiative (Patria, 2012). Each point at which a doctoral student has the opportunity to interact within university presents an opportunity for them to develop a relationship to support persistence and completion, which is why support services knowledge is part of the PD training. The support services that I identified include the university's writing center, research center, residencies, financial aid office, library, academic advising, and career services center.

## Rationale

The data analysis used that informed this program included quantitative and qualitative data provided by online doctoral student participants who were currently active within one of Flagship University's online doctoral programs. This information was combined with the findings of a literature review on the persistence of online students to form a basis for understanding and identifying the need for additional faculty interaction with students. This information was used to inform building more robust student-faculty relationships with the assistance from support services. I designed this PD training project to interconnect the study's findings and promote change in communication practices to improve doctoral student persistence.

My research facilitated a better understanding of online learning experiences through the perceptions of online doctoral students, and guided my project development efforts aimed at enhancing outreach techniques from faculty to students. These findings were used to identify a need for creating and maintaining effective student-faculty

relationships. The research findings were also used to determine that a PD training initiative was the best choice to positively impact doctoral student persistence, and that this training should include faculty in order to achieve the best results. An important aspect of this project is its creation of an opportunity for collegial dialogue focused on improving online doctoral student persistence amongst this stakeholder groups.

## Review of the Literature

The purpose of this literature review was to explore and synthesize current knowledge and best practice measures to enhance effectiveness of doctoral student outcomes for universities. The review of literature was aimed at discovering action information related to the research findings. Saturation was reached by consulting numerous databases including ERIC, ProQuest, Education Research Complete, and Google Scholar. In this literature search, I studied terms in a progressive manner using Boolean terms; search keywords included *faculty development*, *active learning*, *online training, change*, *change management*, *strategic change implementation*, *faculty-student relationship*, *education*, *higher education*, *doctoral student persistence*, *collaboration, learning community*, *online teaching strategies*, *social media in online teaching*, *graduate student*, and *distance education.* The literature selected for review, including peer-reviewed journal articles, were targeted within the time frame of the last five years.

### Change Management

This study's research results pointed to the need for discovering additional strategies intended to increase online doctoral student persistence and program

completion through the creation of more robust and meaningful student-faculty relationships and communication. Qualitative participant responses suggested the need for communication enhancements and additional support services knowledge, as well as better avenues for building more robust and meaningful student-faculty relationships. When change is recommended, strategic planning can guide an institution's members toward a mutual objective (Roberts, 2008). Key theories in an organization's change management can help in understanding the different contexts needed for schools to make successful changes for students and teachers (Barrett, 2012). When a strategic plan is developed, it requires acceptance by the institution and requires contribution from stakeholders who embody the main parties within the institution. However, resistance to change among stakeholders within higher education institutions is a challenge (Evans & Henrichsen, 2008; Taylor & Machado-Taylor, 2010; Wishart & Guy, 2009). Collaboration in change management strategies can be used as a systematic approach to guide faculty and students through a varied approach to teaching and communication (Quinn et al., 2012). Transparent practices and good communication can provide reassurance for a supportive change process (Kim, 2011; Lawler & Sillitoe, 2010). Outlining strategic planning with deliberative thought for the organization's overall policies and culture promotes acceptance throughout the institution and pushes back on this resistance to change (Taylor & Machado-Taylor, 2010). Consequently, a universal viewpoint in emerging online communication and outreach strategies through a collaborative effort can position an institution for positive sustainable change. The

importance of updating and providing professional development training increases with the changing roles of faculty related to the pervasiveness of technologically facilitated instruction. When institutions make the necessary resource investments that are required to maintain and support online programs, faculty and students thrive (Wolf, 2006). With the continuous development of online programs, administrators need to address and provide adequate development programs to support the needs of faculty and students (Batts et al., 2010). Commitment to faculty and student outreach in the area of diverse online communication strategies and pro-active outreach, it seems, would add to the institution's overall value and program completion rates.

**Active Learning**

Active learning is an important characteristic of online learning because it is often overlooked in an online classroom, but is still vital to students for content mastery and application in real world situations (Fischer, 2010; Hatfield, 1995; Kim, 2011; Siberman; 1996). The objective of active learning is to stimulate conversation around a lifetime of habits that effect a student's education and allow for responsibility among each student towards successful completion (Hatfield, 1995). Active learning methods and the promotion of integrating technology into eLearning has been found to improve student's success and involvement (Pundak et al., 2010). Collaborative learning is an active learning method that has benefits if implemented in a way that students perceive the benefit (Wolfe, 2012). Students must be self-disciplined and work independently in an online class; however, incorporating active learning into the online classroom enhances

communication between the student and instructor (Wishart & Guy, 2009). Educational blogs, amongst other social networking outlets, are popular and have a profound benefit on student's engagement due to their increased cognitive and thinking levels (Jimoyiannis & Angelaina, 2012; Tucker, 2012). Role-play is an active learning method in which students are provided with an experience that is as close to real as possible to understand methods of resolution through a collaborative approach (Rao & Stupans, 2012). Excellence in online instruction was discussed by expanding on the implications of instructors attempting to use the same teaching methods in a distance-learning environment as they would in a face-to-face classroom (Boettcher & Conrad, 2010; Edwards et al., 2011). Lan and Lin (2011) found that student's learning performance improved significantly when students perceived usefulness form web-based learning environments that had question-posing activities. Mezirow's (1991) transformational learning theory challenged the thought that adults only use their past experiences to shape their current experience. Knowles (1973, 1980) similarly advocated that adult learners need to understand why change is necessary and developed six core learning principles for adult learners: (a) the need for learner's to know, (b) the self-concept of learners, (c) past experiences of learners, (d) learners' readiness to learn, (e) learner's orientation to learning, and (f) the motivation of learners to learn. Instructors are faced and challenged with discovering how to utilize new methods of instruction, as well as acceptable communication styles to reach their students in this ever-changing online environment,

processes that affect the overall effectiveness of online learning (Barrett, 2010; Stavredes, 2011).

**Student-Faculty Relationship**

Many researchers have identified the student-faculty relationship as an important variable in the overall success of students within their academic programs (Hagenauer & Violet, 2014; Hewitt & Forte, 2006; Kuhn et al., 2015; Metzger et al., 2010). Students favored their student-faculty relationship at a higher level when faculty initiated more frequent outreach, than when they only conducted outreach in a reactive way (Woods, 2002). When online communities begin to complement existing channels for student-faculty relationships, higher levels of participation surface with stronger degrees of satisfaction with their learning experience (Hewitt & Forte, 2006).

When students and faculty participate in online social networks, the traditional student-faculty relationship can become stronger, but also can become blurred (Metzger et al., 2010). A student may have enhanced performance and an overall higher quality of academic experience if this relationship is bounded appropriately (Metzger et al., 2010; Shaw, 2014). Higher education institutions have spent a great deal of effort and funding on research towards improvement in retention and persistence, but there is still too littler information on the specific factors, such as the student-faculty relationship, that relate directly to the greatest gain in a student's academic path (Fike & Fike, 2008; Lan & Lin, 2011; Shaw, 2014). Nonetheless, academic success in an online environment can be enhanced through a strong student-faculty experience (Gallen & Oomen-Early, 2008;

Hennig-Thurau et al., 2001; Palloff & Pratt, 2003). Students who were provided more personalized and frequent feedback from their instructor were identified as having higher satisfaction and stronger academic performance within their online classroom (Gallen & Oomen-Early, 2008). Strong, positive student-faculty relationships, along with adopted innovative approaches to teaching, play a crucial role in the overall success and continuation of a student's online academic path (Clark et al., 2014; Hoffman, 2014; Kuhn et al., 2015; Wood & Ireland, 2014).

**Online Faculty Development**

Theory and practice in using technology to enhance learning is imperative for a faculty member to be successful in their online classroom, and instructors' use and ability to use technology is a crucial benefit in their courses (Beck & Grieve, 2008). As colleges and universities grow their online programs, institutional leadership needs to recognize that effective improvement plans for online faculty is vital to the quality of student learning and program improvement (Herman, 2012). Many faculty members align their own teaching model with how they were educated; however, fewer faculty members have distance education experience as an instructor or student (Holmes et al., 2010; McQuiggan 2012). Faculty need to become keenly aware of their personal ability to use technology and they need to be able to pursue students that are having issues with the course content so that they can help them prior to falling too far behind (Beck & Grieve, 2008).

Professional development is critical in the transition to teaching online for faculty; along with the impact this development has on the learning experience for online students (Vaill & Testori, 2012). Faculty development experiences allow for suggestions to be shared that can be applied to benefit future course and self-development of other faculty (Henning, 2012). Technologies are transforming the landscape of learning as instructional and educational designers update systems to take advantage of technological advances (Visser & Visser-Valfrey, 2008). Establishing and documenting best practices can provide a prescription for online instructors at higher education institutions to obtain the understanding and abilities needed to improve their online teaching and communication, which in turn, allows them to become more effective within online learning environments (Gorsky & Blau, 2009; Stanovich & Stanovich, 2003; World Health Organization, 2009). Werner (2013) suggested that faculty development sessions may be more beneficial when held in student support centers, such as a writing center, to enhance collaboration and knowledge amongst attending faculty. In summary, it seems crucial for online faculty to possess expertise with the important learning technologies they utilize, and be able to identify alternative ways of communication based on their current student population.

The ubiquitous reach of technology has changed distance and higher education institutions, and will continue to shape the way that students learn in the future (Clevland-Innes & Garrison, 2012). Prensky (2001) suggested that in some cases, the online classroom is not currently being taught by those people that are running it. Rather,

sometimes it is the other way around; students are running the classroom due to their superior working knowledge of technologies involved. In turn, the online systems and their environments are designed to support the learning goals of the education programs cocreated by students and their faculty. The more proficient students and faculty are at using the technology and systems, the freer they are to cocreate and pursue meaningful learning goals related to their education programs.

Nontraditional students are navigating away from email, which is causing higher education institutions to rethink their online academic communication strategies (Kolowich, 2011). Effective teaching includes and encourages active learning, provides prompt feedback, encourages contact between faculty and students, and cultivates a mutual benefit and collaboration among students (Chickering & Gamson, 1991). Keeping online students on track through pro-active means of communication is one key factor towards student retention (Keengwe, 2014). According to Johnson et al. (2012), faculty are often reluctant to design and teach online higher education courses due to anxiety in relation to their technological skills. Faculty-student interaction through a variety of different technological avenues is the foundation of building lasting student-faculty relationships that have meaning and encourage students to persist through their programs (Rogers, 2014; Stein et al., 2013). With a balance of autonomy and support, faculty development sessions have resulted in a higher overall satisfaction rating by students (deNoyelles et al., 2012). These effective teaching, technology, and communication principles need to be applied and enforced by online faculty so that they

can learn the importance of incorporating new technology into their communication strategies, and also to continue to be effective at enhancing learning and relationship building in online classrooms.

Instructor presence and response times are among the key barriers that continue to divide exemplary online instructors from sub-par instructors (Edwards et al. 2011; Gorsky & Blau 2009; Roblyer et al. 2008; Stein & Wanstreet 2013). Students have defined excellent instructor characteristics as the ability to motivate the students that excel, while also finding the ability to facilitate an effective online classroom environment (Vitale, 2010). Online students are often most satisfied when there is a nice blend of organization within the classroom, and availability of faculty, support, and resources (Calderon et al., 2012). Similarly, Williams (2012) mentioned that with the decentralized structure that plague many universities, it is imperative that online faculty incorporate student services knowledge into their development plans to provide a seamless online student experience.

Multiple methods of motivation and inclusivity are needed for dealing with difficult students in an online classroom, in which an instructor must have multiple ways to motivate and communicate to achieve a connection with all students in the course (Fisher, 2010; Kim, 2011; Xie, Debacker, & Ferguson, 2006). By having faculty participate in the creation of their own student communities and effectively utilizing technological applications for communication and participating in meaningful faculty development initiatives, online faculty can develop a better understanding of their

student's perspectives, as well as collaborate more effectively with other faculty members in their pursuit of education best practices.

Online forums present a way for faculty to develop and discuss their strategies, as well as interact in the same format that online students do (Brooks, 2010). According to Hara (2010), encouraging a course where instructors talk about meaningful learning experiences facilitates more communication where others are able to share similarly meaningful experiences. The discussion of meaningful experience and related learning, therefore, is less likely when faculty members are less communicative. Rausch and Crawford (2012) discussed the use of a cohort learning model to encourage students towards program completion, as well as assist in building a bond between faculty and the student community. Faculty is encouraged to create a learning community characterized by active engagement through diverse means of technology for all participants. Through this creation, faculty will be able to further develop themselves using active communication outreach efforts to create and build more robust student-faculty relationships (Rogers, 2014; Stein et al., 2013).

A considerable challenge in the online classroom is the ability to find the right balance of authority while not impeding learning (Hara, 2010). Professional development programs are critical for enabling instructors to stay up-to-date with changes implemented to achieve new and better methods for organizing the online environment and teaching (Howard & Taber, 2010; Joyce & Calhoun, 2010; Wlodskowski, 2008). According to Kelly (2012) some students will challenge the

authority of faculty; however, these times can provide valuable learning scenarios that facilitate growth for both students and faculty. For learning to occur during these challenging scenarios, it is important that faculty encourage positive and proactive communication amongst the entire group (Kelly). Faculty development training, therefore, should offer faculty participants the opportunity to create ways to identify struggling students, promote positive and active communication, and emphasize communication best practices for helping the diverse population of today's online learners. Finally, shrinking institution budgets and learning resources sometimes create barriers to professional development training (Sprouse, Ebbers, & King, 2008). In conclusion, it seems that targeted and well-designed professional development training is essential to help educators develop, strengthen, and enhance their knowledge of distance learning communication tools and instructional methodologies to increase student persistence towards program completion.

## Implementation

### Project Description

The feedback offered by participants in this study pointed to the need for enhancements to existing practices that include adopting more proactive and diverse communication with faculty. In their feedback, students referred to their faculty relationships as a positive persistence factor, while support services was generally described as lacking. By combining support services knowledge in the PD for faculty, students may be more encouraged to communicate with their faculty and persist longer

within their respective programs. These observations provided a starting point for a project to enhance communication strategies that address online doctoral student persistence and program completion. The principal variables and focus of the project, based on research findings and review of literature, are provided in Table 13.

Table 13

*Significant Research Findings and Project Foci*

| Proposed Initiative | Research-Derived Project-Based Supports |
|---|---|
| Quantitative Findings | |
| Individual Persistence | ✓ |
| Student Relationships | |
| Program Culture | |
| Dissertation Preparation | |
| Qualitative Attributions | |
| Individual Persistence | ✓ |
| Relationships | ✓ |
| Program Culture | ✓ |
| Dissertation Preparation | |

By providing a proactive plan of outreach from faculty, and allowing for enhanced support services knowledge, faculty can strive to build more effective relationships while also providing an additional outlet for support questions. Faculty can act as support liaisons between support services departments and students, while continuing to encourage a robust student-faculty relationship. Based on my data analysis, the faculty-student relationship was an important factor in student persistence; thus, the PD provides an intentional outreach protocol focused on helping faculty provide the highest level of personalized communication for each student.

**Potential Resources and Existing Supports**

Implementing this PD training and its embedded communication initiative supports the institutional goal to increase doctoral student persistence towards program

completion. By integrating communication strategies through diverse technology outlets, faculty can develop, strengthen, and enhance their confidence towards cultivating student-faculty relationships. Based on my review of literature, it appears that all faculty would benefit from the recommended PD training, regardless of their tenure with the institution, based on the strong focus on diversifying communication strategies. One way to control costs would be to extend currently scheduled doctoral residencies, while also providing a web-based training option for faculty that could not physically attend the session. This would allow for doctoral faculty who participate in residencies to cut down on additional travel costs by simply extending their original stay by an additional three days. The web-based version could be recorded during the synchronous PD training sessions and be available on-demand for quick reference for future training of additional faculty. In the following sections, I discuss potential resources, existing supports, potential barriers, a proposal for implementation, and the responsibilities of the researcher.

**Potential Barriers**

Leadership approval, associated with the training, timing and format of the sessions, and overall collaborative efforts are all potential barriers for the proposed faculty professional development training. Another potential barrier would be the refusal of institutional leadership to provide the funding needed to conduct the faculty development training in person as well as in an online format. With many faculty members being adjunct, the need for alternative formats, such as on-demand or

synchronous webinars, would be necessary to provide a better opportunity for the entire faculty to attend. By adding a web-based format for training, additional barriers may also include the cost associated with specialized staff and technology.

**Proposal for Implementation and Timetable**

Implementation of this project could take six months to a year to obtain appropriate approvals and funding. I will present the written project and faculty PD training to stakeholders during the institution's annual leadership conference. I will discuss the research findings and the reasons behind the development of the project, and if approved, the project should be ready to implement and launch no later than six months after the annual leadership conference, where I intend to propose the training.

**Roles and Responsibilities of Researcher and Others**

My role in the implementation of the faculty development training will be to provide the first series of annual training sessions to establish the foundation for the institution's training department, based on my research findings. The responsibilities of the student for this project will not change. Students will continue to focus on their academic knowledge, scholarly research skills, and persistence within their program. The involvement of faculty in communication should coincide with the student's daily academic responsibilities and enhance their viewpoint of the student-faculty relationship. Academic leadership of the institution plays an essential role in the faculty training implementation process, as they would approve the funding needed for appropriate staff and technology.

For the initial implementation, faculty participation in this project is voluntary. At the end of each PD training session, faculty would be presented with a certificate of completion that they could potentially use for their annual employee appraisal. It is anticipated that faculty who are registered for a doctoral residency will be able to adjust their travel days to accommodate the concurrent PD training; however, if faculty is unable to attend, they can participate in individual synchronous sessions or review the PD training on-demand upon completion of the live session.

For the inaugural year, I would conduct the first round of PD training sessions, while cotraining with a member of the institutional training department. Upon completion of the inaugural year sessions, the intent would be to transition all training responsibilities to the institutions training department for the future.

## Project Evaluation

An on-going evaluation of this project will be comprised of a daily evaluation after every training session (see Appendix A), as well as a comprehensive evaluation at the end of the three-day PD training. These daily evaluations will be conducted using different technology resources that were discussed during the daily session, and will be comprised of five-questions, with the first question being a quantitative, Likert-scaled evaluation of the overall training, and the other questions being open-ended for faculty comments. The comprehensive PD evaluation will be conducted via the website Survey Monkey utilizing a specific link provided at the end of day three where faculty will be asked to give their feedback on the overall PD training. The data from the evaluation will

reside on the Survey Monkey server for up to five years, where historical data related to the project will be available for longitudinal analysis.

The goal-based evaluation plan will be used upon conclusion of the faculty evaluation data analysis to provide further insight into the effectiveness of the faculty PD training project on doctoral student persistence towards completion among all programs. The open-ended questions of the PD evaluation will allow for institutional leadership to gain an in-depth understanding of the thoughts, questions, and concerns that faculty have regarding the effectiveness of the overall training. By using a longitudinal model for keeping data in Survey Monkey, future institutional trainers will be able to modify the PD training as needed, based on yearly comparisons of the data.

The evaluation and design of future PD training will be in direct response to feedback provided by faculty on the overall PD evaluations. Kirpatrick (1994) identified five levels of evaluation for professional development that include reaction of participants, learning of participants, support and change of the organization, the use of skills and knowledge of participants, and outcomes focused on student learning. The evaluations from each daily training session, as well as the overall evaluation, will focus on these five levels of evaluation of professional development. The evaluations will be the same for each training session and the online faculty members will be asked the following:

1. Overall, how would you rate this training? (1: lowest 9: highest)
2. What did you learn from this training?

3. What were you hoping to learn that you did not?

4. How will you implement what you have learned in this training in your online classroom?

5. How can we improve this training?

After collecting feedback, the data will be shared with leadership and faculty to identify successes and potential for project improvement. After completion of the inaugural year, I will conduct an assessment to identify likes, dislikes, and suggested areas of improvement based on faculty feedback for the individual sessions, as well as the overall PD training. Faculty attendance will be tracked for all sessions to be used for overall longitudinal data analysis, and will be compared to student graduation rates of programs to determine overall effectiveness of the implementation.

## Implications Including Social Change

Professional development training for online faculty is an important resource that is usually required by higher education institution accrediting agencies. Although there are many institutions that provide faculty development, the enforcement and tracking of professional development training is inconsistent (Maring & Koblinsky 2013). The professional development training proposed in this study would be significant for faculty with diverse ways to remain current with the latest means of communication by using diverse technology outlets and potentially enhancing the student-faculty relationship. By enhancing the student-faculty relationship through proactive communication strategies in

the project, students may be more likely to persist and complete their programs and be able to impact their communities to effect social change upon graduation.

**Local Community**

This project may have an encouraging influence on the local community by helping increase the amount of doctoral students completing their programs. Upon completion of their doctoral programs, students will have an opportunity to positively impact their communities and promote positive social change by implementing the knowledge that they have gained through their approved dissertations and doctoral projects. It is hoped that through the PD training contained in Appendix A, faculty will improve communication with their students and be able to enhance the student-faculty relationship to help students persist in their programs and complete them, so that graduates can meaningfully participate in and positively impact their local communities.

**Far-Reaching**

Doctoral graduates within a discipline positively affect the communities within which they work. As children grow, they are looking to adults as role models to determine their paths in life; thus allowing the continuation of the positive social change cycle to continue through scholarly academic pursuits and community involvement often demonstrated by people who have earned a doctoral degree. Once graduates leave their community, they will have positively impacted many members of their previous community who may be inspired and motivated to continue to do positive work, as well as continue to research new ways to solve community problems.

## Conclusion

In this mixed-methods research study, I gathered quantitative and qualitative responses from 31 online students at an online university. The methodology used in the study allowed an investigation of the success factors contributing towards persistence in online courses. The results of the study will help inform stakeholders of relevant factors affecting persistence, and will provide a framework for further research and training. My goal through the project was to increase the awareness of doctoral student persistence to help improve doctoral completion rates. The professional development training project resulting from this study succinctly outlines the key issues and suggests engaging the institutions' stakeholders collectively to further explore facets of online persistence and program completion to improve overall student success. In Section 4, I outline the strengths and limitations of this project study, along with my reflections as a scholar and possible avenues for future research.

Section 4: Reflections and Conclusions

## Introduction

In this section, I share my reflections on the project in general, my development as a scholar, implications of the project for positive social change, as well as my recommendations for PD training to increase communication and doctoral student persistence. My passion for student success fuels my desire to understand persistence through a wider lens. I designed this study to better understand the online doctoral student's perspectives and experiences. The PD curriculum suggested from this research will extend the tradition of improvement within higher education at Flagship University. My self-analysis emerged from my experience as a scholar-leader in higher education.

## Project Strengths

One project strength is its grounding in Knowles' adult learning theory, which states that adults are self-directed and have vast experiences appropriate to their approach to problem-centered learning (Knowles, Holton, & Swanson, 2005). Additionally, the project is strengthened by the face-to-face format through which faculty development will be pursued. This face-to-face format will build upon online training already conducted by Flagship University and facilitate additional collaboration and support through new technologies within the classroom environment. A synchronous webinar will also be available during the sessions, and recorded for later viewing by attendees and other faculty. The recommended seminar environment supports a variety of learning

styles and encourages collaboration among participants using a variety of learning activities, as suggested by Caffarella (2010).

## Recommendations for Limitations and Alternative Approaches

This professional development project is limited by scheduling challenges and sustainability concerns. Although research supports the importance of PD training for online faculty (Howard & Taber, 2010; Joyce & Calhoun, 2010; Wlodskowski, 2008), the rapid evolution of technology will impact the rate of modification that future training would need in order to continue to be effective; therefore, alternative approaches such as monthly faculty webinars that are optional and focus on a variety of different topics relating to technology will be necessary. These webinars would provide an adequate timeframe for new technologies to be discovered and tested, as well as for faculty to have a forum for problem troubleshooting that they have encountered with their students.

According to the Pew Research Center (2010), project adaptability to demonstrate the most current use of technology is impacted by the quickness in which technology is changing, similar to the rapidness to which students switched from email to text messaging or social media as their preferred communication. Any training project for online doctoral faculty requires continuous adjustments to keep up with changes in technology adaptations in the doctoral programs since the online doctoral programs are conducted using technology. Many of these updates would be addressed within the optional monthly sessions for faculty. The PD training will need to be evaluated and updated rapidly in order to keep up with the rapid evolution of technological resources

available; therefore, the resources and knowledge of the current training staff have a strong potential to limit the sustainability of PD training as well.

## Scholarship and Project Development

I have added deeply to my personal understanding of student persistence in doctoral programs through this research project and study. The literature search revealed themes that aligned with those found in this project study. The themes reflected in this study's findings were also identified in the scholarly literature. Applying those themes through the PD project is intended to cross-pollinate what I have learned about doctoral student persistence in an online institution and promote increasing persistence and completion of doctoral students across the institution.

The design of the project required an assessment of the audience, potential distribution methods, and identification of the project's purpose. The audience included online doctoral faculty from Flagship University. The institution's overall goal embraces student success and persistence through enhanced learning practices and policies. Although the audience reveals a unique perspective and bias, the increased understanding of these groups will enhance the ability for student persistence to potentially increase; thus, it is hoped, increasing program completion rates.

This journey has allowed me to discover and assess scholarly resources, which are essential in identifying the validity and the worth of the information presented in a research paper. In my doctoral coursework, I learned how to assess references by exploring the expertise, bias, precision, and effectiveness, and whether the reference was

peer-reviewed. My proficiencies as leader in higher education will be improved through the scholarly voice and objectivity developed throughout this process. What I learned was that my personal experiences, while valuable, are enhanced through incorporating peer-reviewed perspectives that balance my natural biases. The consumption of scholarly resources using fundamental research principles helps the leader-scholar by providing multiple, research-derived perspectives to inform important decisions.

Another significant feature of being a scholar is the development of a capability to integrate material with ideas that provide rationale for researching the problem. Synthesizing the research literature brings the research problem to life by grounding it in the broader context of theory and scholarly inquiry. Through writing my doctoral capstone research, I am learning to write more critically, constructively, and more purposefully. During my coursework, I learned the important aspects of scholarly writing, honed through the research project. Most of all, I have learned that becoming a proficient scholar is an emerging process of study and practice, facilitated and encouraged through the collaborative process of working with good colleagues; in this case, supportive and caring faculty.

## Leadership and Change

Leaders within higher education, who implement a focused approach to change guided by a clear and ubiquitous vision, should engender a greater consciousness and enthusiasm, especially when working on real problems informed by accurate data. Outstanding leadership is characterized by transparency and attempts to help solve local

problems. While some of the community may resist any change, leaders are encouraged to engage in brainstorming and critical thinking that will lead to prominence and obligation to the solution of those local problems. The significance of collaborative environment surpasses the tiered structure of many institutions and permits more focus on the project advantages that can create change amongst the retention efforts of the institution.

## Reflection of Importance of Work

I chose this topic for research because I am passionate about it and desire to be involved in furthering the quality of online education. In order for online faculty to be successful and effective, it is important that they are proficient and enhancing their knowledge of communication and technology through professional development and training activities. My doctoral studies and this capstone project have expanded my understanding of the online learning platform and the multifaceted needs of the online learner, especially pertaining to doctoral students. The exploration originating from this study has allowed for advancement in my ability to participate in scholarly discourse with my peers. I have also developed a new appreciation for continuous feedback from my colleagues and employees, both formative and summative, to continue to guide my development and effectiveness as a practitioner.

This project study presented the chance to improve my critical thinking skills, including the nuances of scholarly reading and writing, and the mechanics of conducting mixed-methods research. I accessed peer-reviewed literature that permitted me to

construct the study within a theoretical framework, as well as deduce the preliminary assumptions of the problem I chose to study. The research project was developed through finding relevant literature, and then critically reading and synthesizing research articles to apply theories and themes that materialized from the collective body of work. This research project has added to my growth as a scholarly researcher.

The challenge as a project developer was to select a suitable project genre to connect the research problem, purpose, methodology, and findings of my research study to the pertinent audiences while encouraging them to address research-based factors that contribute to doctoral student persistence. The first step of the process was to pinpoint stakeholder audiences. In turn, I acknowledged three distinct groups, including (a) faculty, (b) staff, and (c) administrators. While I perceived a common goal of improving persistence and completion, the three groups define their roles in diverse ways. Administrators may describe student persistence as an institutional goal while faculty and staff may focus on the aspect of programs, practices, and pedagogy. Based on my findings, faculty development training is an appropriate goal for all three groups, especially when considering the high demands on time and physical resources. Professional development training requires a clear and detailed presentation of the research outcomes and communication strategy towards improving the student-faculty relationship. With limited time and resources, gathering faculty just a few days before they are scheduled to attend a residency, or through an online webinar method, will facilitate the ideal environment to communicate ways to leverage diverse technologies

with the goal of increasing the student-faculty relationship. To answer this challenge, I have developed a professional development curriculum based on my research findings.

## The Project's Potential Impact on Social Change

The prominence of this project study and its related research is exposed in the implications not only for doctoral student success, but also persistence leading towards degree completion. The accomplishment of degree completion provides both a corridor for economic confidence, and motivation for other family members to follow academic achievements. Successful program completion also positions students, as prosperous scholars, leaders, and graduates, to support their local communities through more substantive involvement and enhanced economic status. A successful graduate may also be empowered to add to positive social change by giving back to their communities as a positive role model with enhanced self-confidence and credentials. The project also has the advantage of enhanced affiliations with colleagues and the community at large. Concern for the success and wellbeing of students serves to advance the image of the institution and also associations between the institution and the community. These positive relationships can reassure potential students to move forward towards their academic goals. Students should be assured that faculty, staff, and administrators work collaboratively towards their success in every facet of their college experience. Educators can assist and guide students more effectively towards achievement of their academic goals as a team than if they work through isolated efforts.

## Implications, Applications, and Directions for Future Research

Professional development for online faculty is a requirement that is usually recommended or required by the institution's accrediting agency. Professional development, therefore, is both an obligation and a necessity that is critical for making online programs and faculty successful. The project study provides evidence to the online community from a perspective not previously explored. Many individual and small group efforts have tried to address persistence in face-to-face programs, but have not explored online programs. This project provides a research-based method to explore and understand doctoral student persistence and program completion in online programs. Although the sample size was small, the study is significant and unique for focusing on online doctoral students. The problem would benefit from future research that aims to identify the unique needs of particular groups within the population of online doctoral students. The process and results of this mixed-methods study provide an initial step for studying doctoral student persistence in online programs. Quantitative research could more accurately evaluate hypotheses related to doctoral student persistence using the survey instrument created in this study with a larger sample size. Future research on this topic would benefit from improving the processes and instrument initially employed here.

## Conclusion

In this mixed-method study, I collected data from 31 doctoral students from an online university. The small sample allowed for a surface level snapshot of the barriers and success factors that may influence persistence in online doctoral students. The

results of the study will help inform stakeholders, and along with the research discoveries, provide a framework for further research. In Section 4, I have outlined potential limitations of the project study. In addition, specific recommendations for additional research have been recommended. With the increase in online learning programs, further research is needed to learn more about the persistence factors associated with doctoral students in online learning environments. Additional mixed-methods research will provide a more comprehensive understanding with a larger student sample size and potentially be more impactful on identifying additional ways to strengthen the faculty-student relationship in other online universities.

# References

Allen, I. E. & Seaman, J. (2008). *Staying the course: Online education in the United States, 2008*. Wellesley, MA: The Sloan Consortium - Babson College.

Allen, I. E., & Seaman, J. (2010). *Learning on demand: Online education in the United States, 2009.* Wellesley, MA: The Sloan Consortium - Babson College.

Attiyeh, G. M. (1999). *Determinants of persistence of graduate students in Ph. D. programs.* Princeton, NJ: Education Testing Service.

Austin, J., Cameron, T., Glass, M., Kosko, K., Marsh, F., Abdelmagid, R., & Burge, P. (2009). First semester experiences of professionals transitioning to full-time doctoral study. *College Student Affairs Journal*, *27*(2), 194-214.

Bair, C. R., & Haworth, J. G. (2005). Doctoral student attrition and persistence: A meta-synthesis of research. In *Higher education: Handbook of theory and research* (pp. 481-534). Springer, Netherlands.

Barbatis, P. (2010). Underprepared, ethnically diverse community college students: Factors contributing to persistence. *Journal of Developmental Education*, *33*(3), 14-25.

Barnes, B. J., & Randall, J. (2012). Doctoral student satisfaction: An examination of disciplinary, enrollment, and institutional differences. *Research in Higher Education*, *53*(1), 47-75.

Barnett, A. E. (2011).Validation experience and persistence among community college students. *The Review of Higher Education*, 34, 193-230.

doi:10.1353/rhe.2010.0019

Barrett, B. (2010). Virtual teaching and strategies: Transitioning from teaching traditional classes to online classes. *Contemporary Issues in Education Research, 3*(12), 17-20.

Barrett, S. K. (2012). *Redesigning schools to reach every student with excellent teachers: Change management--key theories to consider when extending reach.* Retrieved from EIRIC collection online. (ED539982).

Batts, D., Pagliari, L., Mallett, W., & McFadden, C. (2010). Training for faculty who teach online. *Community College Enterprise, 16*(2), 21-31.

Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research, 55*(4), 485-540.

Beck, E., & Greive, D. (2008). *Going the distance: A handbook for part-time & adjunct faculty who teach online.* Ann Arbor, MI*:* The Part-Time Press, Inc.

Bergstrand, K., & Savage, S. V. (2013). The chalkboard versus the avatar: Comparing the effectiveness of online and in-class courses. *Teaching Sociology*, *41*(3), 294-306.

Berman, R., & Ames, C. (2015). Private online workspaces for doctoral learners – Enhanced communication and reduced isolation. Proceedings of Informing Science & IT Education Conference (InSITE) 2015,101-112. Retrieved from http://Proceedings.InformingScience.org/InSITE2015/InSITE15p101-112Berman1773.pdf

Beutel, D., Gray, L., Beames, S. Y., Klenowski, V., Ehrich, L. C., & Kapitzke, C. (2010). An exploratory study of online social networking within a doctorate of dducation program. *International Journal of Learning*, *17*(3), 67-79.

Boettcher, J. & Conrad, R. (2010) *The online teaching survival guide: Simple and practical pedagogical tips.* San Francisco, CA: Jossey-Bass.

Bos, N., & Shami, N. S. (2006). Adapting a face-to-face role-playing simulation for online play. *Educational Technology Research and Development*, *54*(5), 493-521.

Brockman, J., Colbert, J. A., & Hass, M. (2011). The interrelationships among culture, communication, and conflict in a newly formed doctoral program. *Journal of Organizational Culture, Communications and Conflict*, *15*(1).

Brooks, C. F. (2010). Toward "Hybridised" faculty development for the twenty-first Century: blending online communities of practice and face-to-face meetings in instructional and professional support programmes. *Innovations in Education and Teaching International*, *47*(3), 261-270.

Brooks, G. P., & Johanson, G. A. (2011). Sample size considerations for multiple comparison procedures in ANOVA. *Journal of Modern Applied Statistical Methods*, *10*(1), 97-109.

Calderon, O., Ginsberg, A. P., & Ciabocchi, L. (2012). Multidimensional assessment of pilot blended learning programs: Maximizing program effectiveness based on student and faculty feedback. *Journal of Asynchronous Learning Networks*, *16*(4), 23-37.

Charter, R. A. (1999). Sample size requirements for precise estimates of reliability, generalizability, and validity coefficients. *Journal of Clinical and Experimental Neuropsychology*, *21*, 559-566.

Charter, R.A. (2003). Study samples are too small to produce sufficiently precise Reliability coefficients. *The Journal of General Psychology*, *130,* 117-129.

Chen, R., & DesJardins, S. L. (2010). Investigating the impact of financial aid on student dropout risks: Racial and ethnic differences. *The Journal of Higher Education*, *81*, 179-208. doi:10.1353/jhe.0.0085

Chickering, A.W., & Gamson, Z. F. (Eds.).(1991). Applying the seven principles for good practice in undergraduate education. *New Directions for Teaching and Learning 47*. San Francisco, CA: Jossey-Bass.

Chipere, N. (2015). Developing Online Doctoral Programmes. *International Journal on E-Learning*, *14*(2), 121-161.

Church, E. S. (2009). Facing reality: What are doctoral students' chances for success. *Journal of Instructional Psychology*, *36*(4), 307-316. Retrieved from http://www.freepatentsonline.com/article/Journal-Instructional-Psychology/217178562.html

Cicoria, S., Sherlock, J., Clarke, L., & Muniswamaiah, M. (2013). *Agile approach to the DPS dissertation process time-to-Degree: Traditional vs. agile*. Retrieved from http://www.cicoria.org/papers/Agile%20Approach%20to%20the%20DPS%20Dissertation%20Process%20-%20TTD%20Traditional%20vs%20Agile.pdf

Clark, C. M., Nguyen, D. T., & Barbosa-Leiker, C. (2014). Student perceptions of stress, coping, relationships, and academic civility: A longitudinal study. *Nurse educator*, *39*(4), 170-174.

Cockrell, C. N., & Shelley, K. (2010). The relationship between academic support systems and intended persistence in doctoral education. *Journal of College Student Retention: Research, Theory and Practice*, *12*(4), 469-484.

Council of Graduate Schools. (2004). *PhD completion and attrition: Policy, numbers, leadership, and next steps.* Retrieved from http://www.phdcompletion.org/resources/index.asp

Council of Graduate Schools. (2008). *PhD completion and attrition: Analysis of baseline program data from the PhD completion project.* Retrieved from http://www.phdcompletion.org/resources/index.asp

Creighton, L., Creighton, T., & Parks, D. (2010). Mentoring to degree completion: expanding the horizons of doctoral protégés. *Mentoring & Tutoring: Partnership in Learning*, *18*(1), 39-52.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Upper Saddle River, NJ: Pearson Education.

Creswell, J. W., & Clark, V. L. P. (2011). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.

Cuthbert, D., & Molla, T. (2015). PhD crisis discourse: a critical approach to the framing of the problem and some Australian 'solutions'. *Higher Education*,*69*(1), 33-53.

de Valero, Y. F. (2001). Departmental factors affecting time-to-degree and completion rates of doctoral students at one land-grant research institution. *The Journal of Higher Education*,*72*(3), 341-367.

Di Pierro, M. (2007). Excellence in doctoral education: defining best practices. *College Student Journal*, *2*, 368-375.

Diaz, D. (2002). Online drop rates revisited. *Technology Source*, *May/June 2002*. Retrieved from http://technologysource.org/article/online_drop_rates_revisited/

Diaz, D., & Cartnal, R. (2006). *Term length as an indicator of attrition in online learning*. Retrieved June 9, 2013 from http://www.innovateonline.info/index.php?view:article&id=196

DuFour, R. (2011). Work together: But only if you want to. *Phi Delta Kappan, 92*(5), 57-61. Retrieved from http://www.kappanmagazine.org/

Edwards, M., Perry, B., & Janzen, K. (2011). The making of an exemplary online educator. *Distance Education, 32*(1), 101-118. doi:10.1080/01587919.2011.565499

Erwee, R., Malan, R., & van Rensburg, H. (2013). Cultural diversity and university policies affecting research supervision: A case study in a distance and online environment. *Proceedings of the ODLAA 2013 Distance Education Summit*.

Evans, N., & Henrichsen, L. (2008). Long-term strategic incrementalism: An approach and a model for bringing about change in higher education. *Innovative Higher Education, 33*(2), 111-124. doi:10.1007/s10755-008-9067-y

Felder, P. (2009). Exploring Work Life Balance for the Female Doctoral Student. *The Teachers College Record*.

Fike, D. S., & Fike, R. (2008). Predictors of first-year student retention in the community college. C*ommunity College Review, 36*(2), 68-89. doi:1569189141

Fisher, K. (2010). Online student engagement. CCSSE finds enrollment status and online experience are key. (Cover Story). *Community College Week, 22*(20), 7-9.

Flagship University. (2012). *Doctor of Education.* Laureate Education, Inc., Baltimore, MD. Retrieved on December 25, 2012 from http://www.flagshipu.edu/doctoral/doctor-of-education?tab=program-data

Frydenberg, J. (2007). Persistence in university continuing education online classes. *The International Review of Research in Open and Distance Learning, 8*(3). Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/375/934

Gallen, T., & Oomen-Early, J. (2008). Personalized versus collective instructor feedback in the online courseroom: Does type of feedback affect student satisfaction, academic performance, and perceived connectedness with the instructor? *International Journal on ELearning, 7*(3), 463-477.

Gardner, S. K. (2007). "I heard it through the grapevine": Doctoral student socialization in chemistry and history. *Higher Education*, *54*(5), 723-740.

Gardner, S. K. (2008). Fitting the mold of graduate school: A qualitative study of socialization in doctoral education. *Innovative Higher Education*, *33*(2), 125-138.

Gardner, S. K. (2009). Student and faculty attributions of attrition in high and low-completing doctoral programs in the United States. *Higher Education: The International Journal of Higher Education and Educational Planning*, *58*(1), 97-112.

Golde, C. M. (2005). The role of the department and discipline in doctoral student attrition: Lessons from four departments. *The Journal of Higher Education, 76*(6), 669-700.

Gopaul, B. (2011). Distinction in doctoral education: Using Bourdieu's tools to assess the socialization of doctoral students. *Equity & Excellence in Education, 44*(1), 10-21.

Gorsky, P., & Blau, I. (2009). Online teaching effectiveness: A tale of two instructors. *International Review of Research in Open and Distance Learning, 10*(3).

Graves, F., & Bledsoe, C. (2015). Understand what research says about how to best meet the needs of your adult learners. *Recruiting & Retaining Adult Learners*, *17*(7), 8-8.

Gravetter, F. J., & Wallnau, L. B. (2005). *Essentials of statistics for the behavioral sciences.* Belmont, CA: Wadsworth, Inc.

Green, S. B., & Salkind, N. J. (2011). *Using SPSS for the MacIntosh and Windows: Analyzing and understanding data*. Prentice Hall PTR.

Hagenauer, G., & Volet, S. E. (2014). Teacher–student relationship at university: an important yet under-researched field. *Oxford Review of Education, 40*(3), 370-388.

Hair, J. F. Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Hara, B. (2010). Disruptive student behavior: The disrespecters. *The Chronicle of Higher Education. 2*(1).

Harker, L., & Lin, F. Y. (2015, March). Embracing Adult Learners in the Online Environment: Differentiation and Collaboration. *In Society for Information Technology & Teacher Education International Conference* (Vol. 2015, No. 1, pp. 7840-7844).

Harris, C. S. (2011). The case for partnering doctoral students with librarians: A synthesis of the literatures. *Library Review*, *60*(7), 599-620.

Hatfield, S. (1995). *The seven principles in action*: Improving undergraduate education. Boston, MA: Anker Publishing Company.

Heider, F. (1958). *The psychology of interpersonal relations.* New York, NY: Wiley.

Henning, T. B. (2012). Writing professor as adult learner: An autoethnography of online professional development. *Journal Of Asynchronous Learning Networks, 16*(2), 9-26.

Herman, C. (2011). Obstacles to success-doctoral student attrition in South Africa. *Perspectives in Education, 29*(3), 40-51.

Herman, J. H. (2012). Faculty development programs: The frequency and variety of professional development programs available to online instructors. *Journal Of Asynchronous Learning Networks, 16*(5), 87-106.

Hermanowicz, J. C. (2007). Reason and reasoning for leaving college among the academic elite: Case study findings and implications. *Journal of College Student Retention*, *8*, 21-38. doi:10.2190/711H-UY47-CED1-8M47

Hewitt, A., & Forte, A. (2006). Crossing boundaries: Identity management and student/faculty relationships on the Facebook. *Poster presented at CSCW, Banff, Alberta*, 1-2.

Hoffman, E. M. (2014). Faculty and student relationships: Context Matters. *College Teaching, 62*(1), 13-19.

Holmes, B. D., Robinson, L., & Seay, A. D. (2010). Getting to finished: Strategies to ensure completion of the doctoral dissertation. *Contemporary Issues in Education Research (CIER)*, *3*(7), 1-8.

Howard, L., & Taber, N. (2010) Faculty development in community colleges: Challenges and opportunities in teaching the teachers. *Brock Education, 20*(1), 34-38.

Howell,S. L., Williams, P. B., & Lindsay, N. K. (2003).Thirty-two trends affecting distance education: An informed foundation for strategic planning. *Online*

*Journal of Distance Learning Administration, 6*(3). Retrieved November 12, 2013, from http://www.westga.edu/~distance/ojdla/fall63/howell63.html

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277-1288.

Humphrey, R., Marshall, N., & Leonardo, L. (2012). The impact of research training and research codes of practice on submission of doctoral degrees: An exploratory cohort study. *Higher Education Quarterly*.

Jairam, D., & Kahl, D. H. (2012). Navigating the doctoral experience: The role of social support in successful degree completion. *International Journal of Doctoral Studies, 7*, 311-328. Retrieved from http://ijds.org/Volume7/IJDSv7p311-329Jairam0369.pdf

Jimoyiannis, A., & Angelaina, S. (2012). Towards an analysis framework for investigating students' engagement and learning in educational blogs. *Journal Of Computer Assisted Learning*, *28*(3), 222-234.

Jiranek, V. (2010). Potential predictors of timely completion among dissertation research students at an Australian Faculty of Sciences. *International Journal of Doctoral Studies*, *5*, 1-13.

Johnson Jr, L. A. (2011). *The impact of cognitive maps (conceptual understanding), background characteristics, and religious identity on doctoral students' Persistence across academic programs and demographic groups* (Doctoral dissertation). Retrieved from Washington Research Library Consortium.

Johnson, T., Wisniewski, M. A., Kuhlemeyer, G., Isaacs, G., & Krzykowski, J. (2012). Technology adoption in higher education: Overcoming anxiety through faculty bootcamp. *Journal Of Asynchronous Learning Networks, 16*(2), 63-72.

Joyce, B. R., & Calhoun, E. (2010). *Models of professional development: A celebration of educators.* Thousand Oaks, CA.: Corwin & NSDC.

Karp, M. M., & Hughes, K. L. (2008). Information networks and integration: Institutional influences on experiences and persistence of beginning students. *New Directions for Community Colleges*, *144*, 73-82. doi:10.1002/cc.347

Keengwe, J. (Ed.). (2014). Promoting active learning through the flipped classroom model. IGI Global.

Kelly, R. (2012). Managing controversy in the online classroom. *The Online Classroom*. *2*(1), Magna Publications.

Kim, K.W. (2011). Changes in student motivation during online learning. *Journal of Educational Computing Research, 44*(1), 1-23. doi:10.2190/EC.44.1.a.

Kim, E., Newton, F. B., Downey, R. G., & Benton, S., L. (2010). Personal factors impacting college student success: Constructing college learning effectiveness inventory (CLEI). *College Student Journal*, *44*, 112-125. Retrieved from http://search.proquest.com.ezp.Flagshipulebrary.org/docview/23655487?accountid=1472

Kline, P. (1986). *A handbook of test construction: Introduction to psychometric design*. New York: Methune & Company.

Knowles, M. (1980). *The modern practice of adult education: From pedagogy to andragogy.* Englewood Cliffs, NJ: Cambridge Adult Education, Prentice Hall Regents.

Knowles, M. (1973). *The adult learner: A neglected species.* Retrieved from http://www.eric.ed.gov/PDFS/ED084368.pdf

Knowles, M., Holton, E., & Swanson, R. (2005). The Adult Learner. Burlington, MA.

Kolowich, S. (2011, January 6). *How will students communicate?* Retrieved December 21, 2014, from https://www.insidehighered.com/news/2011/01/06/college_technology_officers_consider_changing_norms_in_student_communications

Kuhn, K. A. L., Russell-Bennett, R., & Rundle-Thiele, S. (2015, January). Promoting student learning with online videos: a research agenda: *The 2010 Academy of Marketing Science (AMS) Annual Conference* (pp. 206-210). Springer International Publishing.

Lackey, N. R., & Wingate, A. L. (1998). The pilot study: One key to research success. *Advanced design in nursing research*, 375-386.

Laerd Statistics (2013). Conducting two-way ANOVA. *Lund Research, Ltd*. Retrieved from https://statistics.laerd.com/premium/twa/two-way-anova-in-spss.php

Lan, Y., & Lin, P. (2011). Evaluation and improvement of student's question-posing ability in a web-based learning environment. *Australasian Journal Of Educational Technology, 27*(4), 581-599.

Lawler, A., & Sillitoe, J. (2010). Perspectives on instituting change management in large organizations. *Australian Universities' Review, 52*(2), 43-48. Retrieved from http://www.aur.org.au/

Le, T., & Gardner, S. K. (2010). Understanding the doctoral experience of Asian international students in the science, technology, engineering, and mathematics (STEM) fields: An exploration of one institutional context. *Journal of College Student Development*, *51*(3), 252-264.

Lee, Y., Choi, J., & Kim, T. (2012). Discriminating factors between completers of and dropouts from online learning courses. *British Journal of Educational Technology, 4*(2), 329-337.

Lieberman, J. M., & Dorsch, N. G. (2011). The "Big Paper Network"–supporting doctoral students to degree completion. *Journal of College Teaching & Learning (CTL)*, *2*(8).

Litalien, D., & Guay, F. (2015). Dropout intentions in PhD studies: A comprehensive model based on interpersonal relationships and motivational resources. *Contemporary Educational Psychology*, *41*, 218-231.

Lodico, M., Spaulding, D.T., & Voegtle, K.H. (2010). *Methods in educational research: From theory to practice* (Laureate Education, Inc., custom ed.). San Francisco: John Wiley & Sons.

Lott, J. L., Gardner, S., & Powers, D. A. (2009). Doctoral student attrition in the STEM fields: An exploratory event history analysis. *Journal of College Student Retention: Research, Theory and Practice*, *11*(2), 247-266.

Lovitts, B. E. (1996). *Who is responsible for graduate student attrition-the individual or the institution? Toward an explanation of the high and persistent rate of attrition.* Retrieved from Eric online collection. (ED399878).

Lovitts, B. E. (2001). *Leaving the ivory tower: The causes and consequences of departure from doctoral study* (1st ed.). New York: Rowman and Littlefield Publishers, Inc.

Mansson, D. H., & Myers, S. A. (2012). Using mentoring enactment theory to explore the doctoral student–advisor mentoring relationship. *Communication Education*, *61*(4), 309-334.

Maring, E. F., & Koblinsky, S. A. (2013). Teachers' challenges, strategies, and support needs in schools affected by community violence: a qualitative study. *Journal of School Health, 83*(6), 379-388.

Martinez, E., Ordu, C., Della Sala, M. R., & McFarlane, A. (2013). Striving to obtain a school-work-life balance: The full-time doctoral student. *International Journal of Doctoral Studies*, *8*.

McAlpine, L., & Amundsen, C. (2011). Challenging the taken-for-granted: how research analysis might inform pedagogical practices and institutional policies related to

doctoral education. *Studies in Higher Education*, *37*(6), 683-694. doi: 10.1080/03075079.2010.537747

McAlpine, L., Jazvac-Martek, M., & Hopwood, N. (2009). Doctoral student experience in Education: Activities and difficulties influencing identity development. *International Journal for Researcher Development*, *1*(1), 97-109.

McQuiggan, C. A. (2012). Faculty development for online teaching as a catalyst for Change. *Journal Of Asynchronous Learning Networks, 16*(2), 27-61.

Means, B., Toyama, Y., Murphy, R. F., & Baki, M. (2013). The Effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers College Record*, *115*, 1-47.

Mechanic, D. (1978). *Students under stress: A study of the social psychology of adaptation*. The University of Wisconsin Press.

Mendoza, P. (2007). Academic capitalism and doctoral student socialization: A case study. *The Journal of Higher Education*, *78*(1), 71-96e

Merriam, S.B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.

Metzger, A. H., Finley, K. N., Ulbrich, T. R., & McAuley, J. W. (2010). Pharmacy faculty members' perspectives on the student/faculty relationship in online social networks. *American journal of pharmaceutical education, 74*(10).

Metzner, B. & Bean, J.P. (1987). The estimation of a conceptual model of nontraditional undergraduate student attrition. *Research in Higher Education, 27*(1), 15-38. doi:10.1007/BF00992303

Meyers, C., & Jones, T. B. (1993). *Promoting active learning. Strategies for the college classroom*. San Francisco, CA: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning.* San Francisco, CA: Jossey-Bass.

Minor, A. J., Pimpleton, A., Stinchfield, T., Stevens, H., & Othman, N. A. (2013). Peer support in negotiating multiple relationships within supervision among counselor education doctoral students. *International Journal for the Advancement of Counseling*, *35*(1), 33-45.

Moore, M. G. (Ed.). (2013). *Handbook of distance education*. Routledge.

Mullen, C. A., Fish, V. L., & Hutinger, J. L. (2010). Mentoring doctoral students through scholastic engagement: Adult learning principles in action. *Journal of Further and Higher Education*, *34*(2), 179-197.

Murray, M. (2002). *Beyond the myths and magic of mentoring: How to facilitate an effective mentoring process*. Jossey-Bass.

Muurlink, O., & Poyatos Matas, C. (2011). A higher degree of stress: Academic well-being. *Taking well being forward in higher education: Reflections on theory and practice*, 60-71.

National Association of Graduate-Professional Students (NAGPS). (2000). *2000 National Doctoral Program Survey* (NDPS). Washington, DC. Retrieved on December 29, 2012 from www.nagps.org

National Center for Educational Statistics (NCES). (2008). *Digest of Education Statistics: 2008.* Retrieved from http://nces.ed.gov/

Neale-McFall, C., & Ward, C. A. (2015). Factors Contributing to Counselor Education Doctoral Students' Satisfaction with Their Dissertation Chairperson. *The Professional Counselor*, *5*(1), 185.

Nettles, M. T., & Millett, C. M. (2006). *Three magic letters: Getting to PhD* Baltimore: Johns Hopkins University Press.

Nicolson, V., Rourke, L., & Kanuka, H. (2010). Identity development in online soctoral nursing atudents: A review of the literature. In *World Conference on Educational Multimedia, Hypermedia and Telecommunications 2010*(1), 2846-2854.

Obama, B. (2013, August). *Remarks by the President on college affordability.* Speech presented at State University of New York Buffalo, Buffalo, NY.

Offerman, M. (2011). Profile of nontraditional doctoral degree students. *New Directions for Adult and Continuing Education, 129,* 21-30

Palloff, R. M., & Pratt, K. (2003). The virtual student: A profile and guide to working with online learners. San Francisco, CA: Jossey-Bass.

Park, J. H., & Choi, H. J. (2009). Factors influencing adult learners' decision to drop out or persist in online learning. *Educational Technology & Society*, *12*(4), 207-217

Parker, A., (January 2003). Identifying predictors of academic persistence in distance education. *United States Distance Learning Association Journal, 17*(1), Retrieved on June 9, 2013 from http://www.usdla.org/html/journal/JAN03_Issue/article06.html

Pascarella, E.T., & Terenzini, P.T. (1991). *How college affects students: Findings and insights from twenty years of research.* San Francisco, CA: Jossey-Bass.

Patria, B. (2012). Change management in the higher education context: A case of student centered learning implementation. *International Journal of Education, 4*(4) 176-191. doi:10.5296/ije.v4i4.2515

Patterson, B. & McFadden, C., (2009). Attrition in online and campus degree programs. *Online Journal of Distance Learning Administration, 12*(2). Retrieved on June 9, 2013 from http://www.westga.edu/~distance/ojdla/summer122/patterson112.html

Pauley, R., Cunningham, M., & Toth, P. (1999). Doctoral student attrition and retention: A study of a non-traditional Ed. D. program. *Journal of college student retention, 1*(3), 225-38.

Pitchforth, J., Beames, S. Y., Thomas, A., Falk, M. G., Farr, A. C., Gasson, S., Tharmin, S.A., & Mengersen, K. (2012). Factors affecting timely completion of a PhD: a complex systems approach. *Journal of the Scholarship of Teaching and Learning*, *12*(4), 124-135.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1-6. doi:10.1111/j.1467-8535.2007.00793.

Pundak, D., Herscovitz, O., & Shacham, M. (2010). Attitudes of face-to-face and e-learning instructors toward "Active Learning". *European Journal Of Open, Distance And E-Learning*, (2),

Quinn, D., Amer, Y., Lonie, A., Blackmore, K., Thompson, L., & Pettigrove, M. (2012). Leading change: Applying change management approaches to engage students in blended learning. *Australasian Journal Of Educational Technology*, *28*(1), 16-29.

Rao, D., & Stupans, I. (2012). Exploring the potential of role play in higher education: Development of a typology and teacher guidelines. *Innovations In Education And Teaching International, 49*(4), 427-436.

Rausch, D. W., & Crawford, E. K. (2012). Cohorts, communities of inquiry, and course delivery methods: UTC best practices in learning--the hybrid learning community model. *Journal Of Continuing Higher Education, 60*(3), 175-180.

Rapoport, A. I. (1998). *Summary of workshop on graduate student attrition*. Division of Science Resources Studies, Directorate for Social, Behavioral, and Economic Sciences, National Science Foundation.

Roberts, C. (2008). Implementing educational technology in higher education: A strategic Approach. *Journal of Educators Online*, 5(1), 1-16 Retrieved from http://thejeo.com/

Roblyer, M., Davis, L., Mills, S., Marshall, J., & Pape (2008). Toward practical procedures for predicting and promoting success in virtual school students, *The*

*American Journal of Distance Education, 22*(2), 90-109. doi.org/10.1080/08923640802039040

Rogers, S. (2014). Effective online communication in higher education. In M. Searson & M. Ochoa (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2014* (pp. 2614-2625). Chesapeake, VA: AACE.

Rovai, A. P. (2003). In search of higher persistence rates in distance education online programs. *The Internet and Higher Education, 6*(1), 1-16. Retrieved March 20, 2006, from the ScienceDirect database.

Russell, T. (2001). *The no significant difference phenomenon*. Raleigh, NC: North Carolina State University.

Salkind, N. J. (2009). *Exploring research* (7th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Sanchez, R. P. (2013). Learning business research: Graduate students performance. *Journal of Border Educational Research*, *7*(1).

Scrubb, M. M. (1997), *An examination of the doctoral student stress survey (DSSS) as an instrument for measuring the effects of stress as perceived by doctoral students in a distance learning university*. (Doctoral dissertation). Flagship University.

Shaw, M. (2014). Factors contributing to satisfaction and retention in an online doctoral program. *Journal of Online Higher Education, 5*(5).

Sigafus, B. (1998). *The Creation of ABDs: A turning point in educational doctoral programs?* Retrieved from ERIC online. (ED424650).

Sowell, R. S., Zhang, T., Redd, K., & King, M. F. (2008). *Analysis of baseline program data from the PhD completion project.* Washington, D.C.: Council of Graduate Schools.

Sprouse, M., Ebbers, L., & King, A. (2008). Hiring and developing quality community college faculty. *Community College Journal of Research and Practice, 32(*12), 985-998. doi.org/10.1080/10668920701831159

Stallone, M. N. (2003). *Factors associated with student attrition and retention in an educational leadership doctoral program.* (Texas A&M University - Kingsville). *ProQuest Dissertations and Theses,* 153-153 p. Retrieved from http://search.proquest.com/docview/305231549?accountid=14872. (305231549).

Stanovich, P., & Stanovich, K. (2003). *Using research and reason in education: How teachers can use scientifically based research to make curricular and instructional decisions.* National Institute for Literacy: University of Toronto.

Stavredes, T. (2011). *Effective online teaching: Foundations and strategies for student success.* San Francisco, CA: Jossey-Bass.

Stein, D. S., Wanstreet, C. E., Slagle, P., Trinko, L. A., & Lutz, M. (2013). From 'hello'to higher-order thinking: The effect of coaching and feedback on online chats. *The Internet and Higher Education, 16, 78-84.*

Stieha, V. (2010). Expectations and experiences: The voice of a first-generation first-year college student and the question of student persistence. *International Journal of Qualitative Studies in Education*, *23*, 237-249. doi:10.1080/09518390903362342

Storms, B. A., Prada, M., & Donahue, E. (2011). Advising doctoral candidates to degree completion. *Educational Leadership and Administration: Teaching And Program Development*, *23*85-92.

Sweitzer, V. B. (2009). Towards a theory of doctoral student professional identity development: A developmental networks approach. *The Journal of Higher Education*, *80*(1), 1-33.

Taylor, J. S., & Machado-Taylor, M. (2010). Leading strategic change in higher education: The need for a paradigm shift toward visionary leadership. *At The Interface / Probing The Boundaries, 72*, 167-194. Retrieved from http://www.rodopi.nl

Terrell, S. R., Snyder, M. M., & Dringus, L. P. (2009). The development, validation, and application of the Doctoral Student Connectedness Scale. *The Internet and Higher Education*, *12*(2), 112-116.

Tinto, V. (2012). *Completing college: Rethinking institutional action*. University of Chicago Press.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of educational research, 45*(1), 89-125.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition.* 2nd ed. Chicago: University of Chicago Press.

Tinto, V. (1988). Stages of student departure: Reflections on the longitudinal character of leaving. *Journal of Higher Education, 59*(4), 438-455. doi:10.2307/19811920

Torres, V., & Zahl, S. B. (2011). On becoming a scholar: Socialization and development in doctoral education (review). *Journal of College Student Development*, *52*(6), 761-763.

Tucker, S. Y. (2012). Promoting socialization in distance education. *Turkish Online Journal of Distance Education (TOJDE)*, *13*(1), 174-182. Retrieved from http://tojde.anadolu.edu.tr

U.S. Department of Education, National Center for Educational Statistics. (2013). *College navigator*. Retrieved from http://nces.ed.gov/collegenavigator/?q=Flagship+university&s=all&id=125231#admsns

U.S. Department of Education. (2 June 2011). *Obama Administration Announces New Steps to Protect Students from Ineffective Career College Programs.* Retrieved on June 2, 2013 from http://www.ed.gov/news/press-releases/gainful-employment-regulations

Vaill, A. L., & Testori, P. A. (2012). Orientation, Mentoring and Ongoing Support: A Three-Tiered Approach to Online Faculty Development. *Journal Of Asynchronous Learning Networks, 16*(2), 111-119.

van Teijlingen, E., & Hundley, V. (2001). The importance of pilot studies. *Social research update*, (35), 1-4.

Varney, J. J. (2003). *A study of the relationships among doctoral program components and dissertation self-efficacy on dissertation progress.* (Aurora University). ProQuest Dissertations and Theses, 218-218 p. Retrieved from http://search.proquest.com/docview/305221667?accountid=14872. (305221667).

Visser, V., & Visser-Valfrey, M. (Eds.). (2008). *Learners in a changing learning landscape: Reflection from a dialogue on new roles and expectations*. Dordrecht, Netherlands: Lifelong Learning Book Series. doi: 10.1080/01587910902846004.

Vitale, A. T. (2010). Faculty development and mentorship using selected online asynchronous teaching strategies. *Journal of Continuing Education In Nursing, 41*(12), 549-556. doi:10.3928/00220124-20100802-02

Walker, G. E., Golde, C. M., Jones, L., Bueschel, A. C., & Hutchings, P. (2008). *The formation of scholars: Rethinking doctoral education for the twenty-first century*. San Francisco, CA: Jossey-Bass.

Wang, X. (2009). Baccalaureate attainment and college persistence of community college transfer students at four-year institutions. *Research in Higher Education*, *50*, 570-588. doi:10.1007/s11162-009-9133-z

Wao, H. O. (2010). Time to the doctorate: Multilevel discrete-time hazard analysis. *Educational Assessment, Evaluation and Accountability, 22*(3), 227-247.

Wao, H. O., & Onwuegbuzie, A. J. (2011). A mixed research investigation of factors related to time to the doctorate in education. *International Journal of Doctoral Studies, 6*, 115-134. Retrieved from http://ijds.org/Volume6/IJDSv6p115-134Wao320.pdf

Ward-Smith, P., Schmer, C., Peterson, J., & Hart, C. (2013). Persistence among graduate nursing students enrolled in an online course. *Journal of Nursing Education and Practice*, *3*(9), p48.

Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology, 71*(1), 3–25.

Weiner, B. (2000). Intrapersonal and interpersonal theories of motivation from an attributional perspective. *Educational Psychology Review, 12*(1), 1–14.

Wells, R. (2008). The effects of social and cultural capital on student persistence: Are community colleges more meritocratic? *Community College Review*, 36, 25-46. doi:10.1177/0091552108319604

Wendler, C., Bridgeman, B., Cline, F., Millett, C., Rock, J., Bell, N., & McAllister, P. (2010). *The path forward: The future of graduate education in the United States.* Washington, D.C. The Commission of the Future of Graduate Education. Retrieved on December 29, 2012 from http://www.fgereport.org/

Werner, C. L. (2013). Constructing Student Learning through Faculty Development: Writing Experts, Writing Centers, and Faculty Resources. *CEA Forum, 42*(2), 79-92.

Wilkinson, R. (2005). *Aiding students, buying students: Financial aid in America*. Nashville, TN. Vanderbilt University Press.

Willging, P. A., & Johnson, S. D. (2004). Factors that influence students' decision to dropout of online courses. *Journal of Asynchronous Learning Networks, 8*(4), 2-15. Retrieved June 9, 2013 from http://www.aln.org/publications/jaln/v8n4_willging.asp

Williams, C. G. (2012). Starting from Scratch: The Evolution of One University's Administrative Structure for Adult Programs. *New Directions For Higher Education,* (159), 65-71.

Willis, B., & Carmichael, K. D. (2011). The lived experience of late-stage doctoral student attrition in counselor education. *Qualitative Report*, *16*(1), 192-207.

Wishart, C., & Guy, R. (2009). Analyzing responses, moves, and roles in online discussions. *Interdisciplinary Journal of E-Learning & Learning Objects*, *5*129 144.

Wlodkowski, R. (2008). *Enhancing adult motivation to learn: A comprehensive guide for teaching all adults* (3rd Ed). San Francisco, CA: Jossey-Bass.

Wolf, P. D. (2006). Best practices in the training of faculty to teach online. *Journal of Computing in Higher Education*, 17(2), 47-78.

Wolfe, A. (2012). Implementing Collaborative Learning Methods in the Political Science Classroom. *Journal Of Political Science Education*, *8*(4), 420-432.

Wood, J. L., & Ireland, S. M. Y. (2014). Supporting Black Male Community College Success: Determinants of Faculty–Student Engagement. *Community College Journal of Research and Practice, 38*(2-3), 154-165.

Woods Jr, R. H. (2002). How Much Communication Is Enough in Online Courses? Exploring the Relationship between Frequency of Instructor-Initiated Personal Email and Learner's Perceptions of and Participation in Online Learning. *International journal of instructional media, 29*(4), 377-94.

World Health Organization (2009). Guide for documenting and sharing best practices in health programmes. WHO Regional Office for Africa: Republic of Congo. Retrieved from www.afro.who.int/index.php?option=com_docman&task=doc.

Xie, K., Debacker, T., & Ferguson, C. (2006). Extending the traditional classroom through online discussion: the role of student motivation. *Journal of Educational Computing Research, 34*(1), 67-89. doi:10.2190/7BAK-EGAH-3MH1-K7C6.

Zhao, C. M., Golde, C. M., & McCormick, A. C. (2007). More than a signature: How advisor choice and advisor behavior affect doctoral student satisfaction. *Journal of Further and Higher Education*, *31*(3), 263-281

Zusman, A. (1991). Issues facing higher education in the twenty-first century. In P. Altbach, R. Berdahl, & P. Gumport (Eds.), *American higher education in the twenty-first century: Social, political, and economic challenges* (109-148). Baltimore, MD: Johns Hopkins University Press.

# Appendix A: The Project

## Professional Development Training Program

A three-day training for online doctoral faculty on enhancing and implementing communication strategies through the use of technology

## Contents

## Introduction

The goal of this professional development (PD) training program is for online doctoral faculty to participate in an interactive process to enhance their knowledge and skills for communicating with students in an online learning environment. The PD training program focus is on enhancing current technological skills, and identifying student-faculty best practices of communication to create a framework for a professional foundation of organizational communication. The purpose of the three-day training is to guide faculty in planning and implementing communication best practices within their online classrooms to be used towards enhancing the overall student-faculty relationship. The target audience for this training is doctoral faculty at Flagship University. Further, the participants will gain knowledge about how to continue the professional growth through the use of technology to be used towards an overall institutional goal of increasing persistence among all programs.

The learning objectives associated with this project are: (a) identify best practices in online education with respect to: student to teacher interaction, communication, and interactivity, (b) understand the mechanisms used to provide timely feedback and proactive communication, and (c) apply and enhance best practices to online student communication.

The project was created by identifying a project concept map from a project concept outline, and then adding a variety of activities, small group work, assessments, and group discussion over the course of the three-day training workshop. The project is

designed to be a fun, interactive method to share new ideas and brainstorm best practices within the online classroom environment.

## The Project Timeline

This project contains curriculum for three days of training. The curriculum will provide professional development for faculty following the timeline below.

- Day 1: Introduction & Issues
- Day 2: Communication & Technology
- Day 3: Support & Transformation

## Materials Required

Faculty will be required to attend with the following:

- Smartphone, Laptop, or Tablet with wireless capabilities
- Positive attitude and willingness to learn new things

## PD Training Schedule

**Day 1: Introduction & Issues (9:00am – 5:00pm)**

| | |
|---|---|
| 8:15 am – 8:45 am: | Registration and Breakfast |
| 8:45 am – 9:30 am: | Welcome and Introduction to Training |

Learning Objectives:

1. Identify best practices in online education with respect to: student to teacher interaction, communication, and interactivity

| | |
|---|---|
| | 2. Understand the mechanisms used to provide timely feedback and proactive communication<br>3. Apply and enhance best practices to online student communication. |
| 9:30 am – 11:30 am: | The Critical Role for Faculty in Transforming Higher Education for Doctoral Education in Online Institutions: Review of Research study |
| 11:30 am – 12:00 pm: | Open Discussion: How do Distance Learning and Face-To-Face classes differ? How are they similar? *Handout1* |
| 12:00 pm – 1:00 pm: | Keynote Lunch: Sharing with Past Doctoral Students |
| 1:00 pm – 2:30 pm: | Quality Issues in Distance Learning at our Institution |
| 2:30 pm – 2:45 pm: | Break |
| 2:45 pm – 4:45 pm: | Support Transformation Plan: Increasing Doctoral Student Persistence |
| 4:45 pm – 5:00 pm: | Closing – Standards of Good Practice *Handout2* |

**Day 2: Communication & Technology (9:00am – 5:00pm)**

| | |
|---|---|
| 8:15 am – 9:00 am: | Breakfast Small Group Discussion; facilitating discussion groups; evaluation of contributions; |

| | |
|---|---|
| | Providing Feedback **(How do we effectively and proactively communicate and connect with our students in an online environment?)** |
| 9:00 am – 9:45 am: | Interactive Distance learning Exercises that Really Work *Handout3* |
| 9:45 am – 11:00 am: | Enhancing Online Communication: Survival Tips |
| 11:00 am – 12:00 pm: | Understand the timing involved in providing effective feedback |
| 12:00 pm – 1:00 pm: | Lunch |
| 1:00 pm – 3:30 pm: | Strategic Outreach: Establishing and Incorporating Standards of Good Practice for Distance Learning Communication |
| 3:45 pm – 4:45 pm: | Group Communication Plan Preparation *Handout4* |
| 4:45 pm –5:00 pm: | Closing: Support Services and Pro-Active Communication *Handout5* |

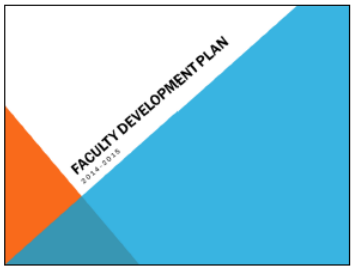
**Day 3: Support & Transformation (9:00am – 6:00pm)**

| | |
|---|---|
| 8:00 am - 9:00 am: | Breakfast Show and Tell: Support Services Treasure Hunt *Handout6* |
| 9:00 am – 11:30 am: | Support Services Presentations |
| 11:30 am – 12:00 pm: | Adobe Connect: Never Lose Touch *Handout7* |
| 12:00 pm – 1:00 pm: | Networking Lunch: Lunch with Support Service |

| | |
|---|---|
| | Directors |
| 1:00 pm – 2:30 pm: | Assessment through Many Means *Handout8&9* |
| 2:30 pm – 3:00 pm: | Break |
| 3:00 pm – 4:45 pm: | Support Transformation Plan/ Conference Recap: What Did We Learn? *Handout10* |
| 4:45 pm – 6:00 pm: | Session Closing Q&A/ Track Certification Ceremony |

# Professional Development Training Slides

## Day 1: Introduction & Issues

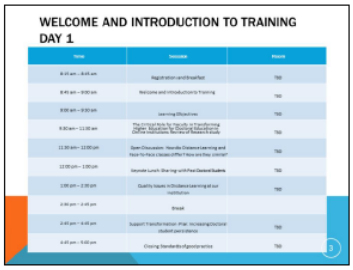



Slide 1: Introduction Slide

1


Slide 2: Brief overview and objectives

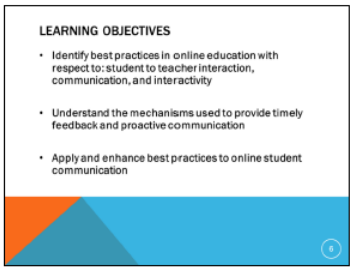
2



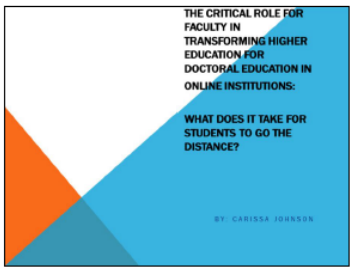

Slide 3: Day 1 Training Schedule


Slide 4: Day 2 Training Schedule


Slide 5: Day 3 Training Schedule



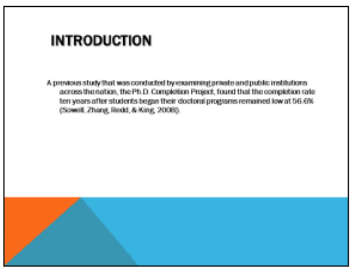

Slide 6: Overview of learning objectives




Slide 7: Introduction Slide - The Critical Role for Faculty in Transforming Higher Education for Doctoral Education in Online Institutions:

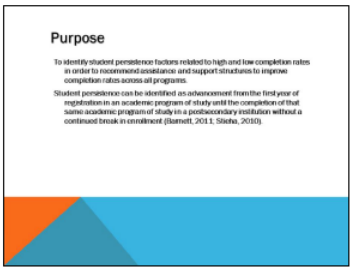
What Does it Take for Students to Go the Distance?

7



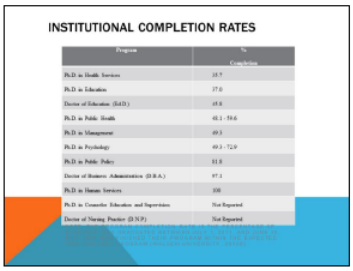

Slide 8: Introduction and overview of the study

8



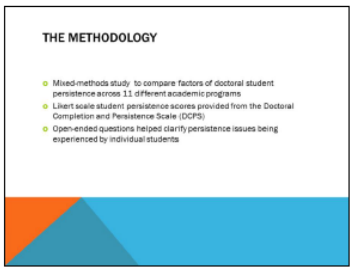

Slide 9: Overview of the purpose of the study

9

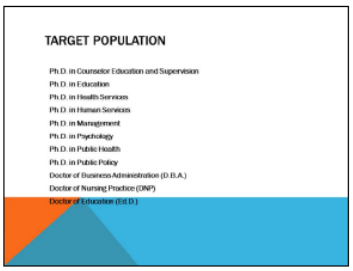



Slide 10: Table of institutional completion rates

10

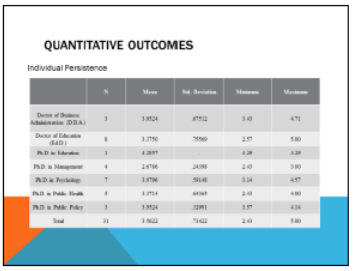



Slide 11: Overview of the methodology




Slide 12: Discussion of the target population


Slide 13: Overview of research questions




| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Doctor of Business Administration (D.B.A.) | 3 | 3.9524 | .67512 | 3.43 | 4.71 |
| Doctor of Education (Ed.D.) | 8 | 3.3750 | .75569 | 2.57 | 5.00 |
| Ph.D. in Education | 1 | 4.2857 | . | 4.28 | 4.29 |
| Ph.D. in Management | 4 | 2.8750 | .24398 | 2.43 | 3.00 |
| Ph.D. in Psychology | 7 | 3.3786 | .59148 | 2.14 | 4.57 |
| Ph.D. in Public Health | 3 | 3.3714 | .64369 | 2.43 | 4.00 |
| Ph.D. in Public Policy | 3 | 3.9524 | .32991 | 3.57 | 4.14 |
| Total | 31 | 3.5022 | .71422 | 2.43 | 5.00 |

Slide 14: Discussion of quantitative outcomes: Individual Persistence

- The results for seniority level indicate that there was a significant difference in individual persistence between pre-prospectus and prospectus groups. While the seniority main effect indicated that individual persistence was more important for pre-prospectus students, and the test supports rejecting the related null hypothesis ($H_{03}$), the results of the ANOVA should be viewed skeptically due the small number of participants in each level evaluated by the statistical test.

Relationships

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Doctor of Business Administration (D.B.A.) | 3 | 3.7143 | .57796 | 3.29 | 4.00 |
| Doctor of Education (Ed.D.) | 8 | 3.9714 | .62905 | 2.14 | 4.14 |
| Ph.D. in Education | 1 | 3.8571 | . | 3.86 | 3.86 |
| Ph.D. in Management | 4 | 2.5000 | .24744 | 2.29 | 2.71 |
| Ph.D. in Psychology | 7 | 3.0612 | .82031 | 1.86 | 4.14 |
| Ph.D. in Public Health | 5 | 3.2857 | .52489 | 2.71 | 3.71 |
| Ph.D. in Public Policy | 3 | 3.0952 | .63441 | 2.71 | 3.57 |
| Total | 31 | 3.1198 | .63485 | 1.86 | 4.14 |

15

Slide 15: Discussion of quantitative outcomes: Relationships

- No significant difference in student relationships between seniority levels based on academic programs.

Program Culture

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Doctor of Business Administration (D.B.A.) | 3 | 4.4286 | .65465 | 3.71 | 5.00 |
| Doctor of Education (Ed.D.) | 8 | 3.9750 | .59090 | 3.43 | 4.57 |
| Ph.D. in Education | 1 | 4.1429 | . | 4.14 | 4.14 |
| Ph.D. in Management | 4 | 3.6429 | .37796 | 3.14 | 4.00 |
| Ph.D. in Psychology | 7 | 3.9388 | .51463 | 3.43 | 4.57 |
| Ph.D. in Public Health | 5 | 3.8000 | .74162 | 2.86 | 4.43 |
| Ph.D. in Public Policy | 3 | 4.0952 | .29730 | 3.86 | 4.43 |
| Total | 31 | 3.9909 | .50892 | 2.86 | 5.00 |

16

Slide 16: Discussion of quantitative outcomes: Program Culture

- No difference in program culture between the doctoral programs based on seniority level.

Dissertation Preparation

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Doctor of Business Administration (D.B.A.) | 3 | 3.7143 | .75593 | 3.14 | 4.57 |
| Doctor of Education (Ed.D.) | 8 | 3.9750 | .63401 | 2.14 | 4.14 |
| Ph.D. in Education | 1 | 2.8571 | . | 2.86 | 2.86 |
| Ph.D. in Management | 4 | 2.8571 | .53452 | 2.29 | 3.57 |
| Ph.D. in Psychology | 7 | 3.3469 | .59964 | 2.57 | 4.14 |
| Ph.D. in Public Health | 5 | 2.8143 | .73688 | 2.00 | 4.00 |
| Ph.D. in Public Policy | 3 | 3.1429 | .51508 | 2.71 | 3.71 |
| Total | 31 | 3.2212 | .62905 | 2.00 | 4.57 |

17

Slide 17: Discussion of quantitative outcomes: Dissertation Preparation

- No significant difference in dissertation preparation between the doctoral programs based on seniority level.

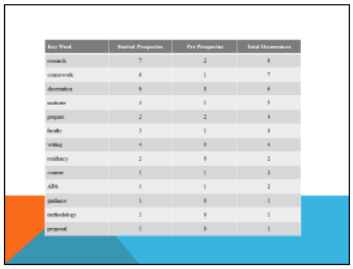
QUALITATIVE OUTCOMES
SUCCESS FACTOR THEMES OVERALL

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| family | 9 | 3 | 12 |
| response | 6 | 2 | 8 |
| residency | 3 | 3 | 6 |
| support | 4 | 2 | 6 |
| research | 1 | 3 | 4 |
| writing | 2 | 2 | 4 |
| process | 3 | 0 | 3 |
| motivation | 1 | 2 | 3 |
| concerns | 0 | 1 | 1 |
| success | 0 | 0 | 0 |

18

Slide 18-21: Discussion of qualitative outcomes

Students identified student support services as their main concern when considering success factors in their doctoral programs. Faculty response was attributed as challenging for both seniority groups and throughout all programs; however, students identified faculty relationships as one of the top reasons for their persistence through the program.



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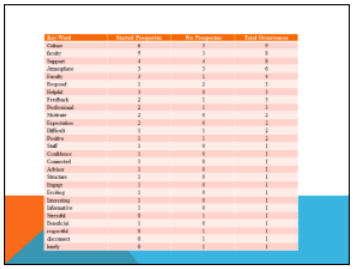

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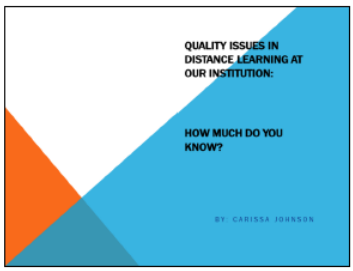
21

WHAT DOES IT ALL MEAN?

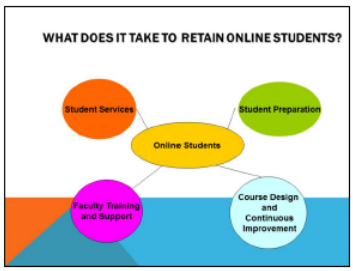
Slide 22: Conclusion & Wrap up

22



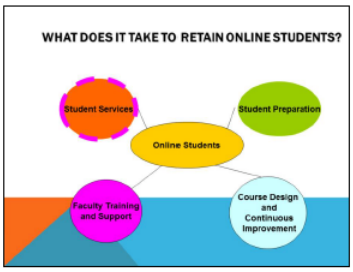

Slide 23: Introduction: Quality Issues in Distance Learning at our Institution

23




Slide 24: Many things play an integral part in retaining students including:
- Student Services
- Student Preparation
- Faculty Training and Support
- Course Design and Continuous Improvement

24



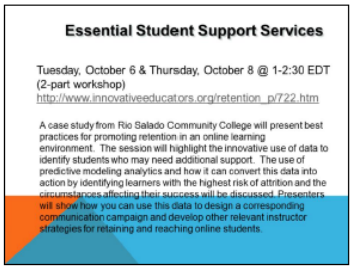

Slide 24: Student Services may include a variety of departments depending on the institution. These services are a vital part to retention and persistence, especially for the online student.

25


Slide 26: At our institution, the most essential support services include:
- Library
- Writing Center
- Research Center
- Residency
- Academic Advisors
- Faculty

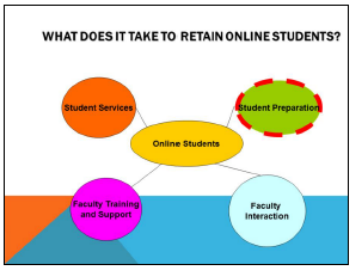
Each of these departments play a crucial role in the ability for students to persist and retain throughout their program. Many of these services interact with students on a day-to-day basis and can assist with creating stronger roles within the institution to support the students to graduation.

26



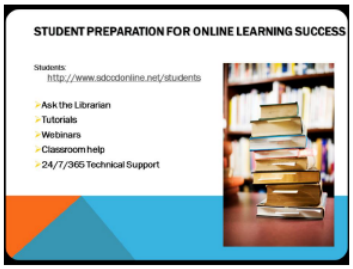

27

Slide 27: This is a suggested webinar to review for reference on the importance of students services and the role that student services plays in a students retention




28

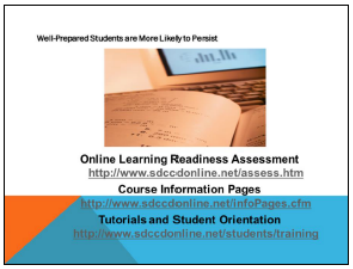
Slide 28: Student Preparation




29

Slide 29: Will show faculty the webpage

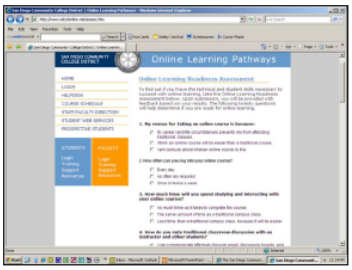
This institution does a great job of providing students the ability to self manage their questions/concerns through a plethora of online resources. Faculty can be very instrumental in assisting students to be accountable and self-sufficient, but many do not know the full list of resources that are available at our institution. For those that do, some many not know where to turn when a student reaches out for help.




30

Slide 30: Well-Prepared students are more likely to assist

If you see that a student is struggling, being able to offer resources is a critical step towards overall persistence. Some of these resources may be foundational tutorials (such as a new student orientation) that will allow the student to get back to basics with their level of knowledge for online learning. These types of resources can spur further communication and relationship building between students and faculty as well.




Slide 31: Example of online learning readiness

31


Slide 32: Example of additional online student resources

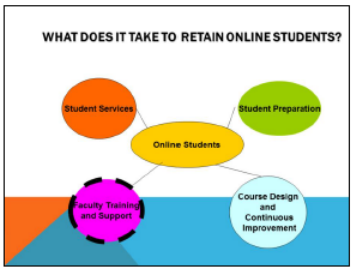
32


Slide 33: Faculty contact information

*Always a must!

Make sure that students feel as though you are accessible to them. If they don't, they will be less likely to reach out to you and may continue to struggle and likely withdraw.

33




Slide 34: Faculty Training and Support

So now you know what you can do, but how do you do it?

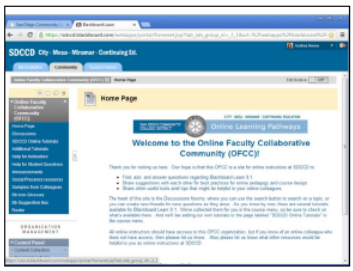
34


Slide 35: There are a variety of different trainings and support bases available to faculty depending on the institution you teach at. Here are a few examples of different kinds of training found at varying institutions.

35


Slide 36: Ideally, faculty should have over 10 hours of classroom design support and annual faculty development.... But how does this tie into the students?

36

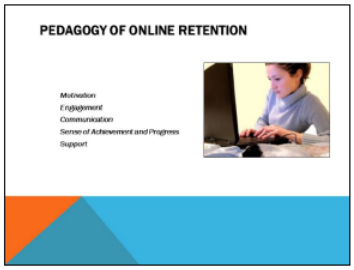



Slide 37: Example of Faculty Development

37


Slide 38: Additional resource examples for faculty

38




Slide 39: When faculty understand that they have resources to be able to structure their communication or coursework according to the needs of their students, many things are taken into consideration such as:

- Motivation
- Engagement
- Sense of Achievement and Progress
- Support

39

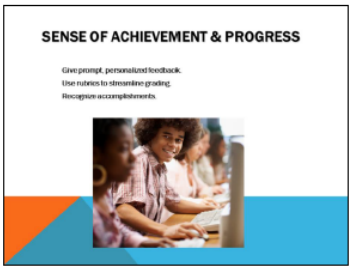

Slide 40: One principal foundation for student persistence and retention is Communication

- By encouraging reciprocal communication between you and your students, you may be able to build more robust student-faculty relationships which is a good starting point to enhancing persistence among students

40

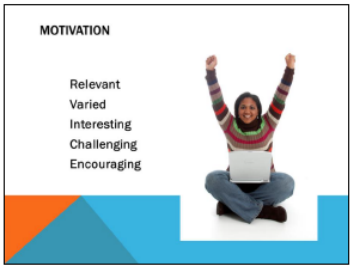

Slide 41: Engagement is more than just weekly discussion posts and submitting assignments. Be creative and experiment with the plethora of technological tools that are available to you to enhance engagement amongst yourself and your students.

41



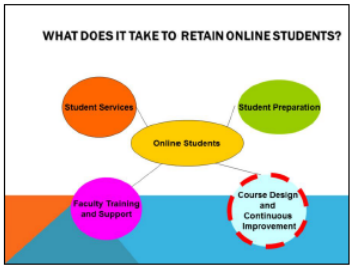

Slide 42: When you are able to create those lasting relationships with students through enhanced communication and diversity in connecting, students are able to feel a greater sense of achievement and progress. Recognize and acknowledge your top performers in your classroom and pro-actively reach out to yoru lower performers for interventions.

42




Slide 43: Motivated students stay interested with relevant and challenging information. In order to keep students motivated, it is important to continue to communication through encouragement and challenging conversations.

43

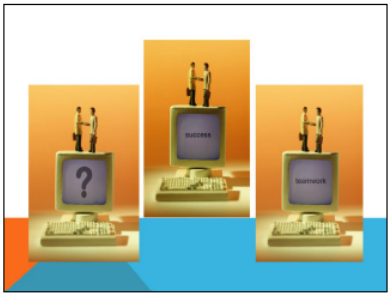



Slide 44: Persistence and retention are more than just great communication. Course design and continuous improvement to curriculum, technology, and personal knowledge are all important as well.

44


Slide 45: Online student testimonials verifying the things we just discussed

45




Slide 46: Persistence is more than just success and teamwork....


47

Slide 47: Persistence is a partnership between you and the student with the common language being pro-active and open communication

**POSITIVE**
**FEEDBACK FROM ONLINE STUDENTS**

I found the online discussion group was a good replacement for class discussion. I found the online homework assignments with teacher feedback and grading gave me a chance to stand out and show I was really putting in the effort to learn the material. This hopefully made up for the unproctored testing, which was not as stressful or challenging as a test in a classroom (although for me, I believe the online testing was effective.)

48

Slide 48: Student testimonial

**POSITIVE**
**FEEDBACK FROM ONLINE STUDENTS**

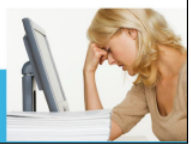
Professor **** was extremely diligent in sending reminders for every deadline (quiz, reports, tests) as well as very responsive to any questions emailed to her. She also gave advanced notice when she would not be available to log in, giving the students ample time to look ahead and present questions before she was unavailable, i.e. weekends or gone for conferences.

49

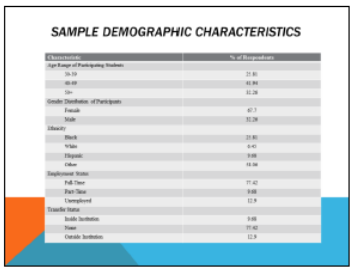
Slide 49: Student testimonial

***STUDENT TESTIMONIAL:***

*Online learning has been an outstanding experience for me. It is fun and convenient. I am a working mother of 2 and my husband works evenings. It would be quite difficult to go to school at night. Online learning is great because I can access it anytime, any day, from anywhere. Not to mention my teacher is wonderful. She is easy to contact if I need help and she also is extremely encouraging. I used to think that it would be harder for a teacher to help the students, but I was wrong, it's not. I like that I can pace myself and do as much I can. Online learning has been greatly rewarding and I look forward to continuing my education this way.*

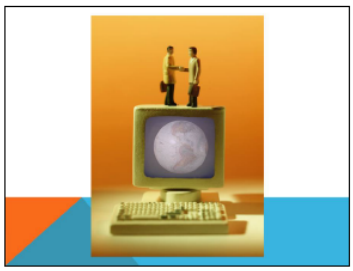


Slide 50: Student testimonial



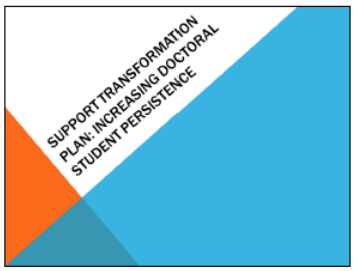

Slide 51: This is the sample of the doctoral student population that participated in my study. While there may not be a vast amount of participants, the breakdown of demographics aligns with the current population. These are the students that you want to communicate with. These are the students that are at risk and believe in the power of a strong student-faculty relationship.

51



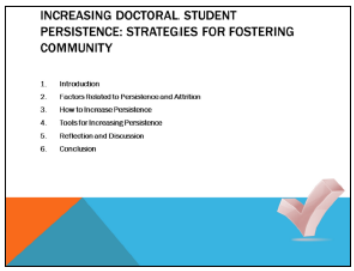
Slide 52: Remember: Keep the lines of communication open and be sure to include a diverse way of communicating. Online learning allows students from all across the globe to gain knowledge that was once not available to them, and the enhancement of persistence starts with you!

52




Slide 53: Support Transformation Plan: Increasing Doctoral Student Persistence

53

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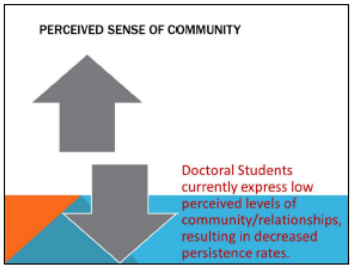


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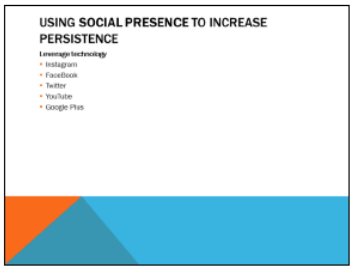


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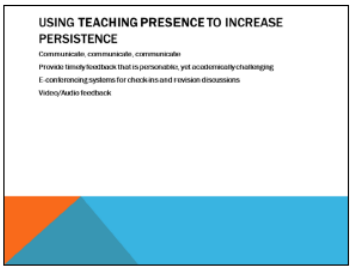


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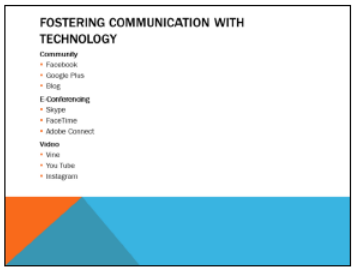
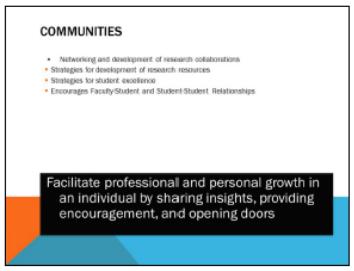



Slide 60: Communication techniques using diverse technological outlets





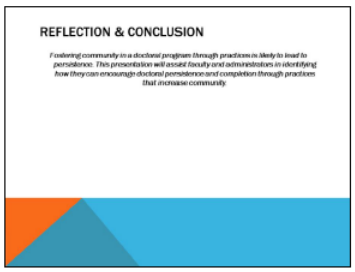

Slide 61: Student communities are a great way for faculty to pro-actively communicate with a variety of students all at once, while enhancing the current student-faculty relationships




Slide 62: Almost every student uses Facebook


63

Slide 63: Many students use Google communities as well. This might be a way for you to connect all of your students and foster positive communication in a venue outside of the academic classroom

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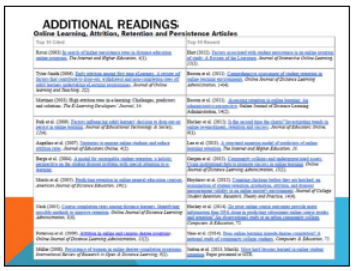
Slide 64: Communities can be a pro-active and efficient way to foster communication with a vast amount of students all at once. This frees up your time, encourages collaboration among students, and also provides a sense of belonging to students who are struggling, potentially giving them the avenue that they need to reach out to someone for support and persist longer than they may have without this pro-active communication method

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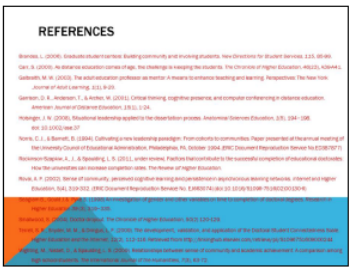
Slide 65: A list of additional readings suggested on the importance of communication and student communities for online students success

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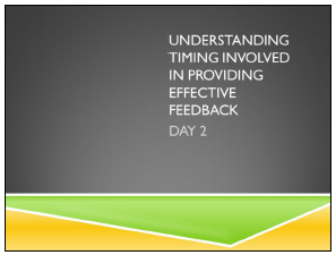
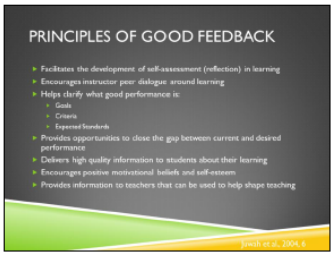
Slide 66: References

# Day 2: Communication & Technology



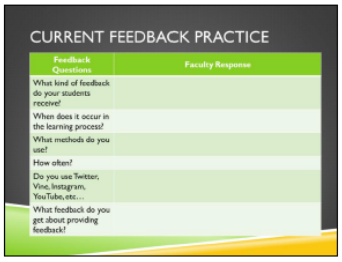

Slide 1: Understanding Timing Involved in Providing Effective Feedback

1



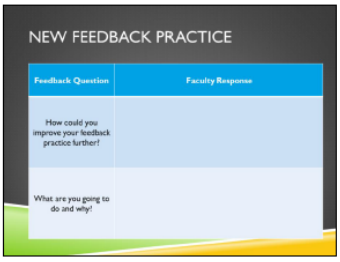

Slide 2: Principles of Good Feedback

2



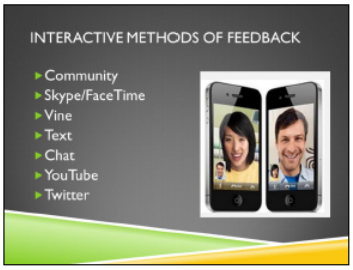

Slide 3: Activity/Group Discussion on Current Feedback Practices

3



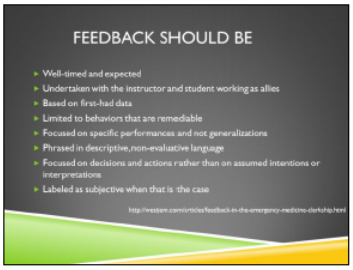

Slide 4: Activity/Group Discussion on how we think feedback should be and what we can do better

4




Slide 5: Interactive methods of feedback include a variety of different technologies. A few have been listed on this slide that we will learn more about today and you will see incorporated in the rest of the training.

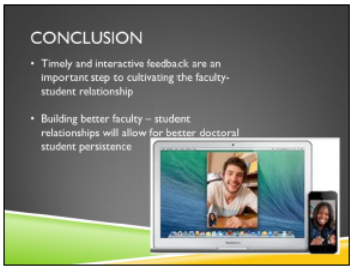
5




Slide 6: What should feedback be?

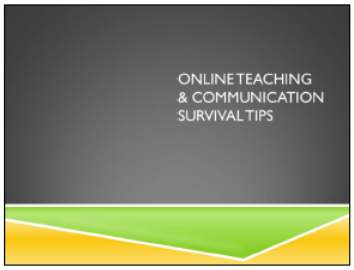
http://westjem.com/articles/feedback-in-the-emergency-medicine-clerkship.html

6



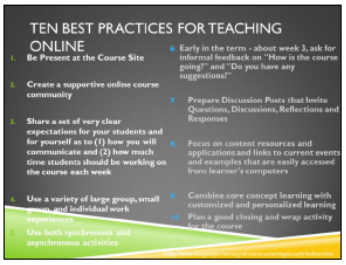

Slide 7: Timely and interactive feedback are an important step to cultivating the faculty-student relationship

7




Slide 8: Online Teaching & Communication Survival Tips

8



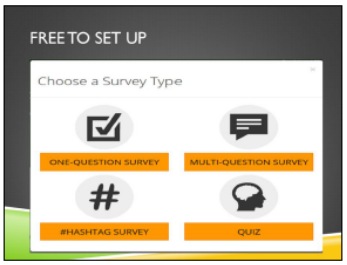

Slide 9: Best Practices for Online Teaching

http://www.designingforlearning.info/services/writing/ecoach/tenbest.html

9


Slide 10: Intro to Twitter Polling

10




Slide 11: How to Set up. It's Free!

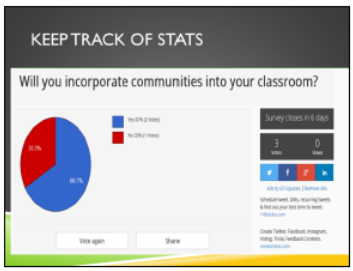
11


Slide 12: Go to this link and take the poll

12


Slide 13: Variety of ways to announce a twitter poll using social media. Can also be presented in class or in a community using a link.

13




Slide 14: Review results from Twitter poll just taken (To look like this once faculty takes poll live during training).

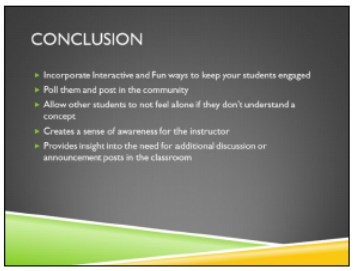
14


Slide 15: Engagement through pro-active communication can possibly lead to more positive faculty-student relationships, which ultimately can lead to increased persistence

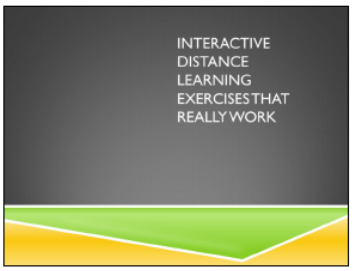
15


Slide 16: Activity - Create your own Twitter Poll and invite everyone at your table to participate

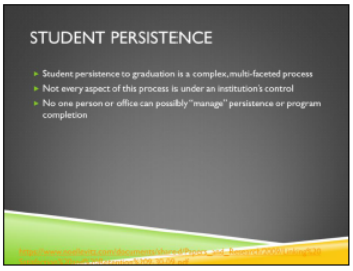
16




Slide 17: Always remember to incorporate interactive and FUN ways to keep your students engaged!

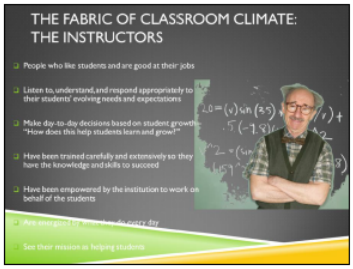



Slide 18: Introduction Slide



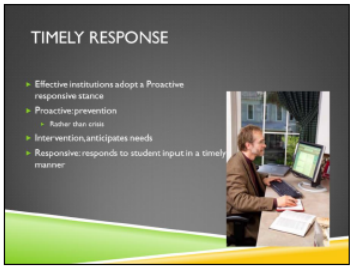

Slide 19: Identify best practices in online education with respect to: student to teacher interaction, course components, communication, interactivity, and course design
Understand the mechanisms used to provide timely feedback and proactive communication
Apply best practices to online course delivery and communication strategy


Slide 20: Can Learning with technology be social?



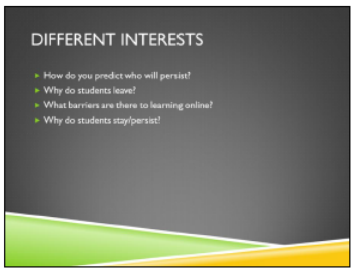

21

Slide 21: Faculty is the most important part of a productive and successful classroom




22

Slide 22: Timely Response is crucial to supporting and creating robust student-faculty relationships.

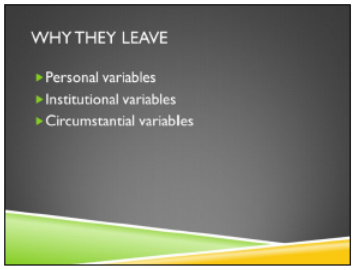



23

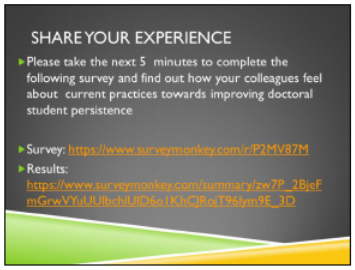
Slide 23: Each student persists due to a variety of different things within their program. We will further discuss more in depth the reasoning behind persistence, what barriers students face, and why students leave.


24

Slide 24: Students stay because of robust support and personal growth gained from the classroom. Students also stay because of how engaged they feel within their learning community.

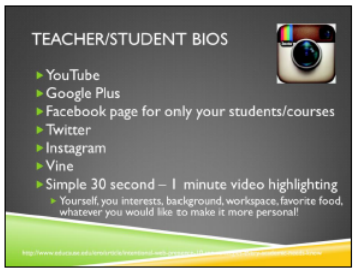



Slide 25: Students usually leave under one of these three variables




Slide 26: Complete the survey


Slide 27: Faculty can help in a variety of ways... each starting with pro-active and open communication with the students.

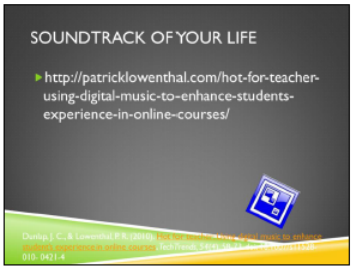



Slide 28: Increase your communication approach by thinking of using a variety of methods for student/teacher bios

http://www.educause.edu/ero/article/intentional-web-presence-10-seo-strategies-every-academic-needs-know


Slide 29: In an asynchronous environment, there may be times that incorporating some type of voluntary, synchronous element may benefit the student and faculty member. Remember, these do not always have to be conference calls via telephone! Get creative and interactive with your students. Many students are looking for a way to connect with their faculty member, and a face-to-face conference might be just the thing they need to succeed!

29




Slide 30: Review of how using digital music may enhance students experiences in an online environment

Dunlap, J. C., & Lowenthal, P. R. (2010). Hot for teacher: Using digital music to enhance student's experience in online courses. *TechTrends, 54*(4), 58-73. doi: 10.1007/s11528-010- 0421-4

30


Slide 31: Incorporate more interactive ways of giving feedback, instead of just writing comments in students papers. Take a video of your feedback or record yourself doing a problem on a whiteboard for more clarity.

Dunlap, J. C., & Lowenthal, P. R. (2009). Horton hears a tweet. *Educause Quarterly*, *32*(4), 1-11.

31


Slide 32: Again, synchronous discussions are not always a bad thing when they can be planned and flexible to students schedules. With a variety of great tools out there, the ability to be able to connect and share with your students in a group, or individually should seem effortless to both you and your student

http://www.ucdenver.edu/academics/CUOnline/FacultyResources/additionalResources/Handbook/Documents/DiscussionProtocols.pdf

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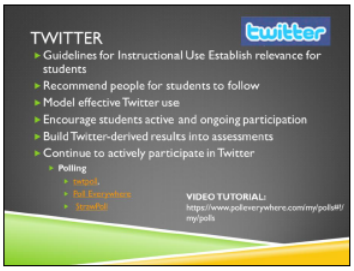


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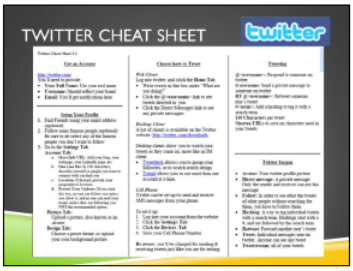
Slide 33: Twitter is a great tool to utilize as a quick communication tool. Twitter polls are a great way to gain quick and easy access to a variety of different questions or concerns that you might have within your current student group.

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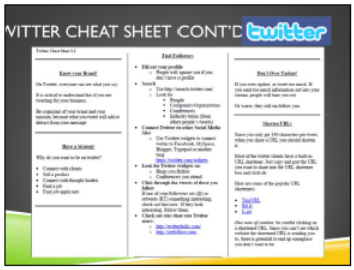
Slide 34: Twitter Cheat Sheet

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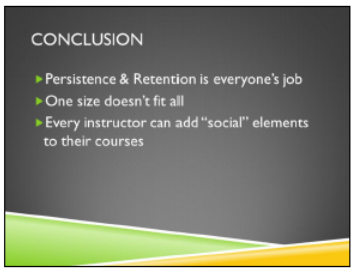
Slide 35: Twitter Cheat Sheet continued

http://portfolio.ginaminks.com/job_aides/twitter_cheat_sheet.pdf


36

Slide 36: Attend a free training or webinar on different ways to effectively impact online communication with students through technology

Many are available here: www.innovativeeducators.org/Free-Training-for-Higher-Educators-s/55.htm




Slide 37: There are a variety of ways to outreach to your students by utilizing technology. Start trying different methods within your courses and see what you feel comfortable with and what your students respond to best. Each course and group of students will be different, so don't forget to utilize your new list of choices!

37


Slide 38: References:

Joni Dunlap and Patrick Lowenthal, Tweeting the Night Away: Enhancing Social Presence with Twitter, paper presented at EDUCAUSE 2009, Denver, CO.
See Alan Haskvitz, Twitter in the Classroom, *Reach Every Child*; and Kate Messner, Making a Case for Twitter in the Classroom,*School Library Journal* (December 1, 2009); National Education Association, Can Tweeting Help Your Teaching?*NEA Today Magazine*, (2009); and Laura Walker, Nine Reasons to Twitter in Schools,*Tech & Learning*, (April 16, 2009).
Michael Moore, Theory of Transactional Distance,in *Theoretical Principles of Distance Education*, Desmond Keegan, ed. (New York: Routledge, 1993), pp. 20-35.
George Kuh, How Are We Doing at Engaging Students *About Campus*, vol. 8, no. 1 (March/April 2003), pp. 9-16.
Ellen A. Skinner and Michael J. Belmont, Motivation in the Classroom: Reciprocal Effects of Teacher Behavior and Student Engagement Across the School Year,*Journal of Educational Psychology*, vol. 85, no. 4 (1993), pp. 571-581.
Arthur W. Chickering and Zelda F. Gamson, Seven Principles for Good Practice in Undergraduate Education, *AAHE Bulletin*, vol. 40 (1987), pp. 3-7.
George Kuh, Assessing What Really Matters to Student Learning: Inside the National

38

Survey of Student Engagement,*Change*, vol. 33, no. 3 (May/June 2001), pp. 10-18.
Joe F. Donaldson and Steve Graham, A Model of College Outcomes for Adults, *Adult Education Quarterly*, vol. 50, no. 1 (1999), pp. 24-40, see p. 28.
Arthur W. Chickering and Stephen C. Ehrmann, Implementing the Seven Principles: Technology as Lever,*AAHE Bulletin*, (October 1996), pp. 3-6.
Tisha Bender, *Discussion-Based Online Teaching to Enhance Student Learning* (Sterling, VA: Stylus, 2003).
See Patrick Lowenthal, Social Presence,*Encyclopedia of Distance and Online Learning*, Patricia L. Rogers, Gary A. Berg, Judith Boettcher, Caroline Howard, Lorraine Justice, and Karen Schenk, eds. (Hershey, PA: IGI Global, 2009), pp. 1906-1906; and Patrick Lowenthal, The Evolution and Influence of Social Presence Theory on Online Learning,in *Online Education and Adult Learning: New Frontiers for Teaching Practices*, Terry T. Kidd, ed. (Hershey, PA: IGI Global, 2010), pp. 124-139.
John Short, Ederyn Williams, and Bruce Christie, *The Social Psychology of Telecommunications* (London: John Wiley & Sons, 1976).
D. Randy Garrison, Terry Anderson, and Walter Archer, Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education, *The Internet and Higher Education*, vol. 2, no. 2/3, (Spring 1999), pp. 87-105, see p. 94.
Michael Moore, Theory of Transactional Distance,in *Theoretical Principles of Distance Education*, Desmond Keegan, ed. (New York: Routledge, 1993), pp. 20-35.
D. Randy Garrison and Terry Anderson, *E-Learning in the 21st Century*(London: RoutledgeFalmer, 2003).
See Terry Anderson, Teaching in an Online Learning Context, in *The Theory and Practice of Online Learning*, Terry Anderson, ed. (Edmonton, AB: AU Press, Athabasca University, 2008), pp. 343-365; Steven R. Aragon, Creating Social Presence in Online Environments,*New Directions for Adult and Continuing Education*, vol. 2003, no. 100 (Winter 2003), pp. 57-68; Charlotte N. Gunawardena, Social Presence Theory and Implications for Interaction and Collaborative Learning in Computer Conferences, *International Journal of Educational Telecommunications*, vol. 1, no. 2/3 (1995), pp. 147-166; and Matthew Lombard and Theresa Ditton, At the Heart of It All: The Concept of Presence,*Journal of Computer-Mediated Communication*, vol. 3, no. 2 (September 1997).
See Patrick R. Lowenthal and Joanna C. Dunlap, From Pixel on a Screen to Real Person in Your Students Lives: Establishing Social Presence Using Digital Storytelling,*The Internet and Higher Education* (to be published in 2010); and Joanna C. Dunlap and Patrick R. Lowenthal, Hot for Teacher: Using Digital Music to Enhance Student Experience in Online Courses, *TechTrends* (in press).
Tisha Bender, *Discussion-Based Online Teaching to Enhance Student Learning* (Sterling, VA: Stylus, 2003); and Jane Vella, *Listening to Learning, Learning to Teach* (San Francisco: Jossey-Bass, 1997).
Jonathan E. Finkelstein, *Learning in Real Time* (San Francisco: Jossey-Bass, 2006).
Lev S. Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*

38

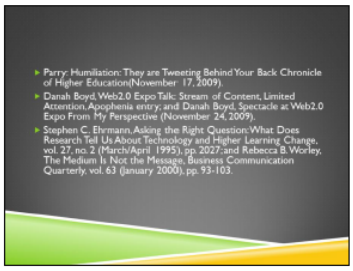
(Cambridge, MA: Harvard University Press, 1978).
David Lebow, Constructivist Values for Instructional Systems Design: Five Principles Toward a New Mindset, *Educational Technology Research and Development*, vol. 41 (1993), p. 6.
Gordon Pask, *Conversation, Cognition, and Learning* (New York: Elsevier, 1975).
Joanna C. Dunlap and Patrick R. Lowenthal, â€œLearning, Unlearning, and Relearning: Using Web 2.0 Technologies to Support the Development of Lifelong Learning Skills, under review for publication.
For more on Twitter see Vance Stevens, Trial by Twitter: The Rise and Slide of the Yearâs Most Viral Microblogging Platform, *TESLEJ: Teaching English as a Second or Foreign Language*, vol. 12, no. 1 (June 2008); also see EDUCAUSE Learning Initiative, 7 Things You Should Know About Twitter.
Suzie Boss, Twittering, Not Frittering: Professional Development in 140 Characters,Edutopia (August 23, 2009).
Kate Messner, Pleased to Tweet You: Making a Case for Twitter in the Classroom, *School Library Journal*, December 1, 2009.

38

Slide 39: References

Mizuko Ito, Sonja Baumer, Matteo Bittanti, Danah Boyd, Rachel Cody, Becky Herr-Stephenson, Heather A. Horst, Patricia G. Lange, Dilan Mahendran , Katynka Z. Martinez, C. J. Pascoe, Dan Perkel, Laura Robinson, Christo Sims, and Lisa Tripp, Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media,John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning, 2009.
Chen, Friends Versus Followers: Twitters Elegant Design for Grouping Contacts,(March 16, 2009); and Joshua Porter, Relationship Symmetry in Social Networks: Why Facebook Will Go Fully Asymmetric, Bokardo.com (March 29, 2009).
See Danah Boyd, Living and Learning with Social Media, presentation at the Symposium for Teaching and Learning with Technology (April 18, 2009).
Steve Thornton, Twitter Versus Facebook: Should You Choose One? Twitip (January 13, 2009).
David Nagel, Most Faculty Donâ€™t Use Twitter, Study Reveals, *Campus Technology* (August 26, 2009).
Marc Beja, Professors Are Not Sold on Twitterâ€™s Usefulness, Chronicle of Higher Education (August 26, 2009).
Pete Cashmore, 60% of Twitter Users Quit Within the First Month, Mashable (April 28, 2009), http://mashable.com/2009/04/28/twitter-quitters/
Others have also found that Twitter is a great resource sharing tool. See Erick Hilberts Twitter post, Twitter used as a resource gathering tool is very powerful in education, #educause09 (November 4, 2009).
Joanna C. Dunlap and Patrick R. Lowenthal, Learning, Unlearning, and Relearning.
Joshua Porter, The Opaque Value Problem (Or, Why Do People Use Twitter?)Bokardo.com (June 22, 2007).
See Jean Lave and Etienne Wenger, *Situated Learning: Legitimate Peripheral Participation* (Cambridge, UK: Cambridge University Press, 1991); and Etienne Wenger, *Communities of Practice: Learning, Meaning, and Identity* (Cambridge, UK: Cambridge University Press 1998) for more on communities of practice.
Joanna C. Dunlap and Patrick R. Lowenthal, Tweeting the Night Away: Using Twitter to Enhance Social Presence, *Journal of Information Systems Education*, vol. 20, no. 2 (2009), pp. 129-136.
Wenger, *Communities of Practice*; John S. Brown, Allan Collins, and Paul Duguid, Situated Cognition and the Culture of Learning, *Educational Researcher*, vol. 18, no. 1 (1989), pp. 32-42; and Alan Collins, John S. Brown, and Ann Holum, â€œCognitive Apprenticeship: Making Thinking Visible,*American Educator*, (Winter 1991), pp. 6-46.
Ron White, Back Channelling, Repair, Pausing, and Private Speech, *Applied Linguistics*, vol. 18, no. 3 (1997), pp. 314-344.
Parry, Tweckling Twitterfolk: Chronicle Readers React to the New World of Twitter Conference Humiliation, *Chronicle of Higher Education*(November 18, 2009). Others have wondered if students that is, not just conference goers would also fall into this practice of heckling; for example, in a Twitter post (November 4, 2009) Pete Juvinall #edtwitter #educause09 wonders about the dynamic of having student chatter displayed on a screen...and if there are hecklers that result.

39




Slide 40: References

Parry: Humiliation: They are Tweeting Behind Your Back Chronicle of Higher Education(November 17, 2009).
Danah Boyd, Web2.0 Expo Talk: Stream of Content, Limited Attention, Apophenia entry; and Danah Boyd, Spectacle at Web2.0 Expo From My Perspective (November 24, 2009).
Stephen C. Ehrmann, Asking the Right Question: What Does Research Tell Us About Technology and Higher Learning Change, vol. 27, no. 2 (March/April 1995), pp. 2027; and Rebecca B. Worley, The Medium Is Not the Message, Business Communication Quarterly, vol. 63 (January 2000), pp. 93-103.

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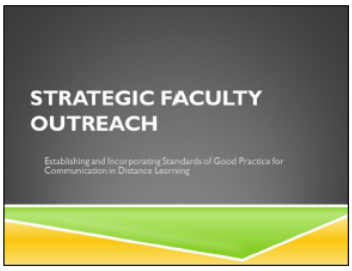
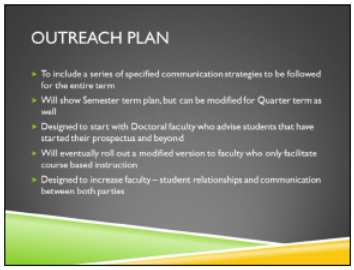


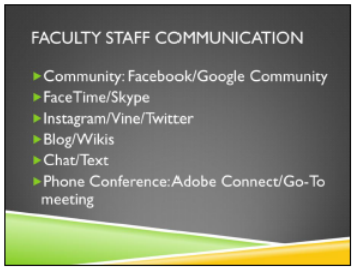

Slide 41: Strategic Faculty Outreach-Establishing and Incorporating Standards of Good Practice for Communication in Distance Learning

41



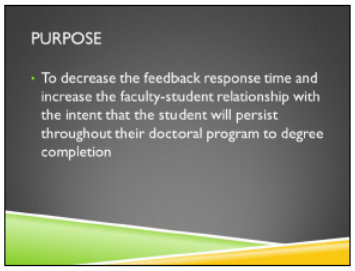

Slide 42: Today's session will include a proposed pro-active outreach plan based on a semester term. This plan can be modified for quarter terms as well. Ideally this plan can be followed by faculty within their courses to align with a more pro-active communication plan which will potentially enhance current student-faculty relationships

42




Slide 43: Different ways of communication that will be discussed in this plan

43

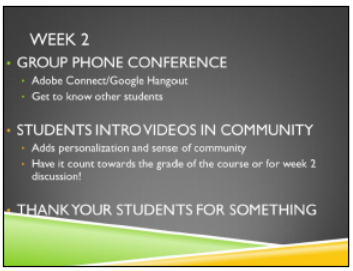



Slide 44: Purpose

44

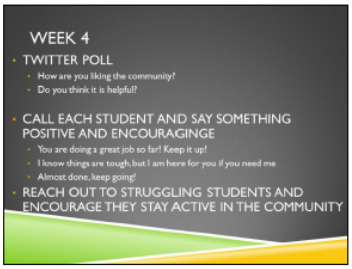

Slide 45: Week 1 Plan

45

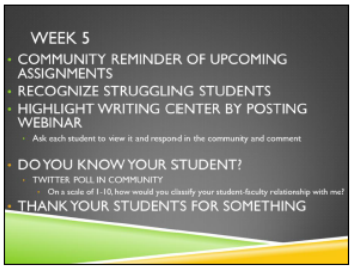



Slide 46: Week 2

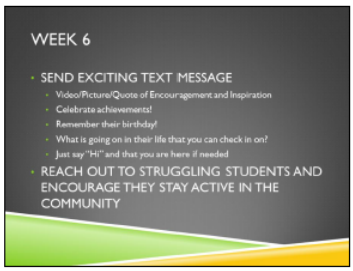

Slide 47: Week 3



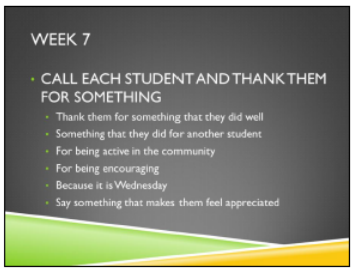

Slide 48: Week 4



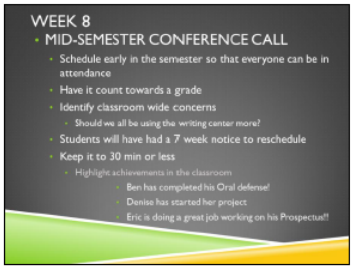

Slide 49: Week 5



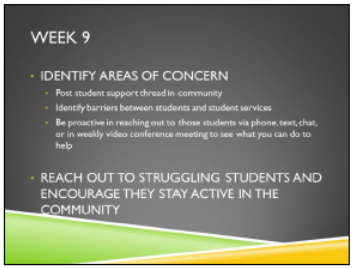

Slide 50: Week 6



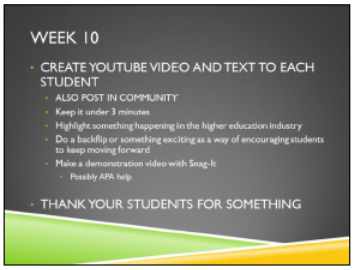

Slide 51: Week 7




Slide 52: Week 8

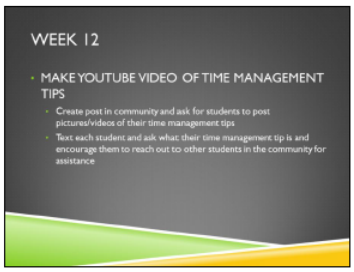



Slide 53: Week 9

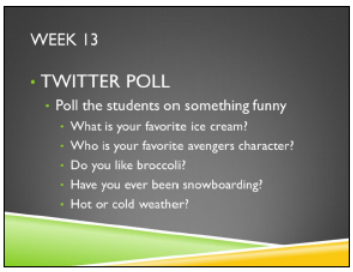



Slide 54: Week 10

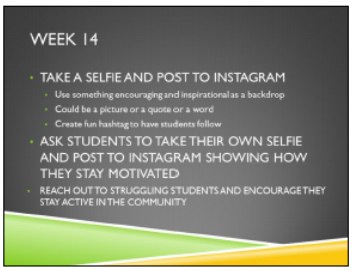

Slide 55: Week 11



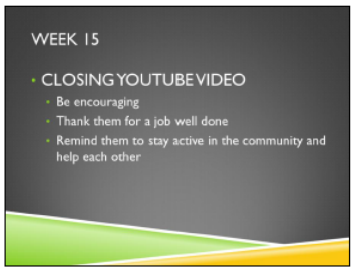

Slide 56: Week 12



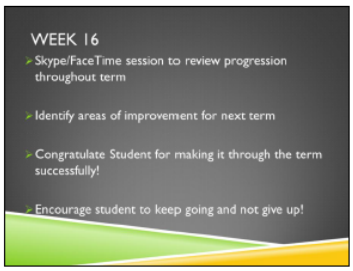

Slide 57: Week 13



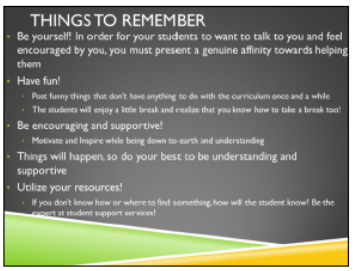

Slide 58: Week 14



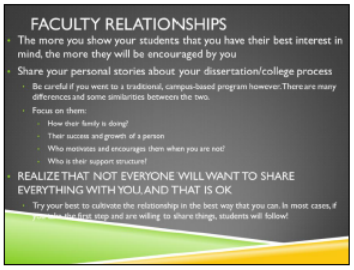

Slide 59: Week 15




Slide 60: Week 16

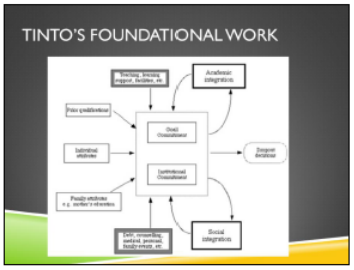



Slide 61: Things to remember




Slide 62: Faculty Relationships

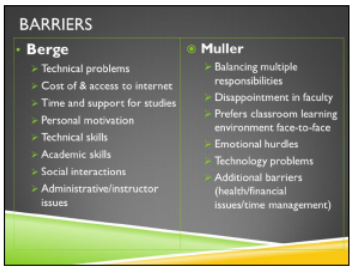





Slide 63: Tinto's foundational work on college student retention. Tinto believed that the formula to college retention all started with a goal of commitment by the students, as well as a goal of commitment by the faculty and institution.

Tinto, V. (2005). Moving from theory to action. *College student retention: Formula for student success*, 317-333.

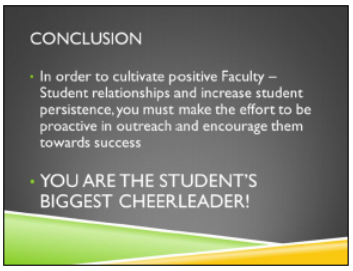




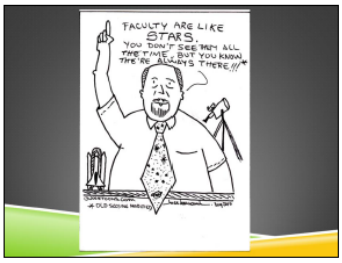

Slide 64: Barriers

Berge, Z. L., & Collins, M. P. (2000). Perceptions of e-moderators about their roles and functions in moderating electronic mailing lists. *Distance Education*,*21*(1), 81-100.
Müller, T. (2008). Persistence of women in online degree-completion programs. *The International Review of Research in Open and Distributed Learning*, *9*(2).






Slide 65: Conclusion




Slide 66:

66


Slide 67: References


•Asidao, C., & Sevig, T. (2014). Reaching In to Reach Out: One Counseling Center's Journey in Developing a New Outreach Approach. *Journal of College Student Psychotherapy*, *28*(2), 132-143.

•Berge, Z. L., & Collins, M. P. (2000). Perceptions of e-moderators about their roles and functions in moderating electronic mailing lists. *Distance Education*,*21*(1), 81-100.

•Braxton, J. M., Sullivan, A. S., & Johnson, R. M. (1997). Appraising Tinto's theory of college student departure. *Higher education: Handbook of theory and research*, *12*, 107-164.

•Driscoll, A., & Lynton, E. A. (1999). *Making Outreach Visible: A Guide to Documenting Professional Service and Outreach. AAHE Forum on Faculty Roles and Rewards*. American Association for Higher Education, One Dupont Circle, Suite 360, Washington, DC 20036-1110.

•Gomez, C. (2014). Outreach to veterans, military students needs improvement, our survey reveals.

•Hurtado, S. (2008). 4 The Study of College Impact. *Sociology of higher education: Contributions and their contexts*, 94.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•Millen, D. R., Fontaine, M. A., & Muller, M. J. (2002). Understanding the benefit and costs of communities of practice. *Communications of the ACM*, *45*(4), 69-73.

•Müller, T. (2008). Persistence of women in online degree-completion programs. *The International Review of Research in Open and Distributed Learning*, *9*(2).

•Shaw, M. (2014). Factors Contributing to Satisfaction and Retention in an Online Doctoral Program. *Journal of Online Higher Education*, *5*(5).

•Tinto, V. (2005). Moving from theory to action. *College student retention: Formula for student success*, 317-333.

•Vandenhouten, C. L., Lepak, S. G., Reilly, J., & Berg, P. R. (2014). Collaboration in E-Learning: A Study Using the Flexible E-Learning Framework.*Online Learning: Official Journal of the Online Learning Consortium*, *18*(3).


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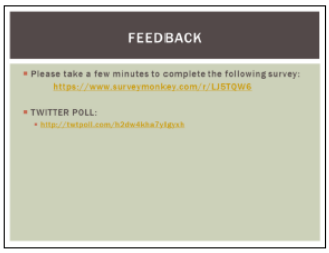
# Day 3: Support & Transformation


Slide 1 – Any comments or concerns as we wind down our training for the week?

1




Slide 2 – Please follow the links to take the training evaluation

2


Slide 3 – THANK YOU!

3

Handouts

**Day 1 Handout 1: Online versus Face-to-Face Students**

| Skill/Topic/Benefit/Concern/Etc – To be filled in by faculty audience | Online | Face-to-Face | Both |
|---|---|---|---|
| | | | |
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**Day 2**
**Handout 3**

**ACTIVITY:**

- Each small group will take this time to prepare for a 10-15 minute presentation on one of the following:
  - Twitter/Chat
  - Facebook/Google Community
  - Instagram/Snag-It
  - YouTube/Vine
  - Skype/FaceTime
- The presentation should include:
  - Features
  - Benefits
    - Student
    - Faculty
    - Institution
  - Favorite aspect of it
  - When/Where you will incorporate into your classroom

**Handout 5**

**ACTIVITY**:

- This evening create a Vine video describing what you learned today
  - Remember, Vine is a looping video, so have fun and be creative!
  - Be creative!
  - Use #FacultyDevelopmentTraining
  - Search for other faculty's video's and Like your favorite ones!

**Day 3**
**Handout 6**

**ACTIVITY:**

- Presenter will ensure there is one laptop per table. Each table will have assigned seating. Participants will be assigned one of the following Scavenger Hunts:
  - Research Center
  - Writing Center
  - Library/EBSCOHost
  - Google Plus
- Participants will have the entire breakfast hour to work with their table and complete their assigned task.
- Each participant will be provided the link to the activity to use with their students

*Research Center*

APA Overview and Scavenger Hunt

This activity will familiarize you with the APA resources.

---

**Reference Entries**

- There is a basic format to APA reference entries, but the specifics will change based on the type of source you are using (i.e., a book versus a journal article). To help you learn the nuances of how to cite different types of sources, **find our common reference entry examples**, writing out the example we have for the content on an organization's website.

Bookmark this page on your Internet browser so you can use it as you write.

- You have used a book called *Global Health: An Introduction* by Kevin Crack in your literature review. You note that it was published by Routledge in Abingdon, UK, in 2000. **Format a reference list entry for this source below**. Consult the Writing Center website for examples if you get stuck.

- You are trying to help a classmate edit her reference list, and you notice she has written the entry below for a journal article. **Correct and rewrite the entry** (and tell her how to find an article's doi).

Stew, M. (7 August 2015). "Electronic Records," in *Journal of Legal*. Volume 2, Issue 4. (pg. 49-56).

- In your course you have viewed a Laureate-produced video called "Management: Employees Succeed," the third part of a series called *Theory Management.* You can't locate a date the video was produced.

**Locate the appropriate page** on the Writing Center's website for citing online videos, and **format a reference list entry below.**

Bookmark this page on your Internet browser so you can use it as you write.

- APA uses what is called a **hanging** indent. Find out how to set a hanging indent in your reference list.

Practice adding a hanging indent to a previous paper or a draft you are currently writing.

---

**Citations**

1. APA uses the author and publication year for citing sources within the body of your paper. **Find the two different ways you can format your citation within a sentence** using the author name "Straw" and the publication year "2010," listing them here. Consult the Writing Center website for examples if you get stuck.

2. You are trying to decide which way to cite the following quotation from page 1263 of Mayd, Gibson, and Maryland's 2012 article "Empowerment— Fab?? A Multilevel Review of the Past Two Decades of Research.": "psychological empowerment has been operationalized within the literature". **Write two sentences incorporating the direct quotation in different ways. Use correct APA citation style in each example**.
   Consult the Writing Center website for examples if you get stuck.

3. APA allows students to replace some surnames in citations with "et al.," meaning "and others." **Find APA's rules about when you can use "et al." and use them to create a first and second citation** of an article by Lange and Torgeson published in 2000. You are quoting from a passage that appeared on page 8, as well as a passage on page 11.

   Consult the Writing Center website for examples if you get stuck.

---

**Formatting**

- Using templates to write your papers will help make formatting your paper per APA much easier. We have many different templates for students in different programs. **Find the template that is appropriate for your program and assignments.**

Once you have found the template, download it to your desktop so you can easily access it every time you work on an assignment.

- APA's heading rules are very specific regarding capitalization, as well as formatting. If you were writing a paper titled "Leadership Practices of Faculty" with the following heading levels, **how would you capitalize and format them in your paper?**

Consult the Writing Center website for examples if you get stuck.

Faculty job satisfaction [Level 1 heading]
Mentorships—[Level 1 heading]
Formal mentoring—[Level 2 heading]
Informal mentoring—[Level 2 heading]
Barriers to mentoring—[Level 1 heading]
Empowering mentorship—[Level 1 heading]
Conclusion—[Level 1 heading]
References

- APA's rules also address writing style. Although there are many of these rules, common errors students make concern capitalization, numbers, and serial commas. **Fix the following sentences for these APA style rules.**

Consult the Writing Center website for examples if you get stuck.

- Tinto's Social Learning Theory incorporates modeling as one of its foundations.
- The employer surveyed 3 of his employees, asking that they respond within two days.
- Based on these theories, instruments and variables, I was able to pose specific research questions.

*Google Plus*

**Complete the following tasks:**

**a.** Create a community
**b.** Introduce Yourself and create a profile
**c.** Post a link
**d.** Invite students/colleagues
**e.** Post a message
**f.** Respond to another person's post
**g.** Input a picture for your community
**h.** Download the Google Plus App on your phone/tablet
**i.** Create a question and take a poll from your community members
**j.** Be able to explain what a Hangout and Circle is

http://www.google.com/intl/en_us/+/learnmore/features.html

**Handout 7:**
**Adobe Connect**

- Each faculty member will be asked to sign up for a Demo webinar: http://www.adobe.com/cfusion/event/index.cfm?event=detail&id=2457281&loc=en_us
- Use Adobe Connect to not only reach out proactively to your students, but also to your fellow colleagues
    - Monthly: Utilize this tool to have monthly calls with other faculty in your school to discuss best practices, get advice on tough situations with students
    - Quarterly: Connect with faculty at Flagship University, as well as academic advising, library, research center, writing center, student support team, and residency team to share and communicate best practices and concerns that are lingering amongst students

**Handout 8:**
**Twitter Poll**

- Twitter poll –
    - What is your current outreach strategy?
    - Is it working?
    - What type of feedback have you received from your current students through end-of-semester evaluations?
    - How many graduates have you had in your program?

- How many students are you currently overseeing?
- What stage of their dissertation/doctoral study are they in?

**Handout 9:**
**Community Polling Activity**

**Activity:**
1. Create a poll (either twitter/google)
Find another faculty member that is not in your current school and work together to create at least 2-3 other polls that will work amongst both of your schools students.

2. Create a Google Community for your Class
- Post a picture of yourself
- Create a 2 minute welcome video and post to your community
- Invite other faculty at your table to your community
- Have them comment on your video

3. Find an inspirational quote and post to Instagram
- Create a Hashtag
- Post hashtag and Instagram link in your community

4. Create a poll in your community
- Ask members whether they like your picture

5. Ask community members to take a selfie and post to your community with a thumbs up or thumbs down to whether they are having fun

**Handout 10: Small Group Activity**

**ACTIVITY:**
- Each small group will take this time to prepare for a 10-15 minute presentation on one of the following:
  - Twitter/Chat
  - Facebook/Google Community
  - Instagram/Snag-It
  - YouTube/Vine
  - Skype/FaceTime
- The presentation should include:
  - Features
  - Benefits
    - Student
    - Faculty
    - Institution

- Favorite aspect of it
- When/Where you will incorporate into your classroom

**Handout 11: Certificate of Completion**

Project Evaluation Plan

1. Overall, how would you rate this training? (1: lowest 9: highest)
   __1
   __2
   __3
   __4
   __5
   __6
   __7
   __8
   __9
2. What did you learn from this training?

3. What were you hoping to learn that you did not?

4. How will you implement what you have learned in this training in your online classroom?

5. How can we improve this training?

Appendix B: Permission Letter From Dr. James Varney

Subject : Re: Permission Request to use Doctoral Program Components Scale

Date : Wed, Nov 27, 2013 02:07 PM CST
From : James Varney <jvarney@aurora.edu>
To : Carissa Johnson <carissa.johnson1@waldenu.edu>

Hi Carissa,
Yes you may use components of my doctoral Program Components scale in your dissertation. I am glad you can use it to further your study. Please keep my appraised of your progress and please do persist!
Dr. Varney

---

**From:** "Carissa Johnson" <carissa.johnson1@waldenu.edu>
**To:** jvarney@aurora.edu
**Cc:** "carissa johnson1" <carissa.johnson1@waldenu.edu>
**Sent:** Monday, November 25, 2013 5:52:00 PM
**Subject:** Permission Request to use Doctoral Program Components Scale

Greetings Dr. Varney,

I am a current doctoral student at Walden University and am requesting permission to utilize a portion of your Doctoral Program Components Scale for my study. I am conducting a study to identify doctoral student persistence factors and see if there is a relationship between the persistence factors and program completion rates. I have attached the Abstract of my study for your review.

If you have further questions or concerns, please feel free to reach out to myself or my chair at:

carissa.johnson1@waldenu.edu
richard.hammett@waldenu.edu

Thank you for your consideration,

Carissa Johnson

Dr. Jim Varney
Associate Professor

Chair of Undergraduate Elementary Education Initial Licensure Program
Kappa Delta Pi Counselor
School of Education, Aurora University, Institute 222B
347 S. Gladstone, Aurora, IL 60506
1-630-844-4572  jvarney@aurora.edu

Appendix C: Permission Letter From Dr. Michelle Brown (Stallone)

Subject : RE: Permission Request to use Doctoral Student Experience Questionnaire

Date : Mon, Nov 25, 2013 06:05 PM CST
From : Michelle Brown <Michelle.Brown8@xxxu.edu>
To : Carissa Johnson <carissa.johnson1@waldenu.edu>

Greetings Carissa,

Yes, you have my permission to use the Doctoral Student Experience Questionnaire. From your abstract, it sounds like you're planning a very interesting study. I look forward to reading it. Best of luck in your endeavors! You have an excellent chair guiding your journey.

Warm regards,

Michelle

Michelle Brown

Core Faculty and URR

361.207.5018 (central time)
michelle.brown8@xxxu.edu

**From:** Carissa Johnson [mailto:carissa.johnson1@waldenu.edu]
**Sent:** Monday, November 25, 2013 5:49 PM
**To:** Michelle Brown
**Cc:** carissa.johnson1@waldenu.edu
**Subject:** Permission Request to use Doctoral Student Experience Questionnaire

Greetings Dr. Stallone,

I am a current doctoral student at Walden University and am requesting permission to utilize a portion of your Doctoral Student Experience Questionnaire for my study. I am conducting a study to identify doctoral student persistence factors and see if there is a relationship between the persistence factors and program completion rates. I have

attached the Abstract of my study for your review.

If you have further questions or concerns, please feel free to reach out to myself or my chair at:

carissa.johnson1@waldenu.edu

richard.hammett@waldenu.edu

Thank you for your consideration,

Carissa Johnson

# Appendix D: Description of Variables

Doctoral Completion and Persistence Scale (DCPS) Item Characteristics

| Number | Name | Type | Coding |
|---|---|---|---|
| 1 | Age | Categorical | 4 Categories |
| 2 | Gender | Categorical | 2 Categories |
| 3 | Ethnicity | Categorical | 4 Categories |
| 4 | Academic Program | Categorical | 9 Categories |
| 5 | Employment | Categorical | 3 Categories |
| 6 | Student Status | Categorical | 3 Categories |
| 7 | Academic Term | Categorical | 6 Categories |
| 8 | Ind01 | Likert | Normal |
| 9 | Cult01 | Likert | Normal |
| 10 | Relat01 | Likert | Normal |
| 11 | Diss01 | Likert | Normal |
| 12 | Ind02 | Likert | Reverse |
| 13 | Cult02 | Likert | Reverse |

(Table Continues)

(Table Continued)

| Number | Name | Type | Coding |
|---|---|---|---|
| 14 | Relat02 | Likert | Normal |
| 15 | Diss02 | Likert | Reverse |
| 16 | Ind03 | Likert | Reverse |
| 17 | Cult03 | Likert | Normal |
| 18 | Relat03 | Likert | Reverse |
| 19 | Diss03 | Likert | Normal |
| 20 | Ind04 | Likert | Reverse |
| 21 | Cult04 | Likert | Reverse |
| 22 | Relat04 | Likert | Normal |
| 23 | Diss04 | Likert | Reverse |
| 24 | Ind05 | Likert | Normal |
| 25 | Cult05 | Likert | Reverse |
| 26 | Relat05 | Likert | Reverse |
| 27 | Diss05 | Likert | Reverse |

(Table Continues)

(Table Continued)

| Number | Name | Type | Coding |
|---|---|---|---|
| 28 | Ind06 | Likert | Reverse |
| 29 | Cult 06 | Likert | Normal |
| 30 | Relat06 | Likert | Reverse |
| 31 | Diss06 | Likert | Reverse |
| 32 | Ind07 | Likert | Reverse |
| 33 | Cult07 | Likert | Reverse |
| 34 | Relat07 | Likert | Normal |
| 35 | Diss07 | Likert | Normal |
| 36 | ProgCult | Qualitative | Open-Ended |
| 37 | ProgChar | Qualitative | Open-Ended |
| 38 | ProgExp | Qualitative | Open-Ended |
| 39 | DissPrep | Qualitative | Open-Ended |

*Note*. Variable name abbreviations are (a) Ind = Individual Persistence, (b) Cult = Academic Program Culture, (c) Rela = Relationships, (d) Diss = dissertation preparation, (e) ProgCult = Program Culture Experience, (f) ProgChar = Program Characteristics Experience, and (g) ProbExp = Overall Program Experience. Normally

scored Likert items are coded 4-0 and reverse scored items are 0-4.

Appendix E: DCPS Descriptive Statistics for Individual Persistence by Program

| Degree Program | *N* | *M* | *SD* | Min | Max |
|---|---|---|---|---|---|
| Doctor of Business Administration (DBA) | 3 | 3.7143 | .75593 | 3.14 | 4.57 |
| Doctor of Education (EdD) | 8 | 3.3750 | .63401 | 2.14 | 4.14 |
| PhD in Education | 1 | 2.8571 | N/A | 2.86 | 2.86 |
| PhD in Management | 4 | 2.8571 | .53452 | 2.29 | 3.57 |
| PhD in Psychology | 7 | 3.3469 | .59964 | 2.57 | 4.14 |
| PhD in Public Health | 5 | 2.9143 | .73955 | 2.00 | 4.00 |
| PhD in Public Policy | 3 | 3.1429 | .51508 | 2.71 | 3.71 |
| Total | 31 | 3.2212 | .62905 | 2.00 | 4.57 |

Appendix F: DCPS Descriptive Statistics for Relationships by Program

| Degree Program | *N* | *M* | *SD* | Min | Max |
|---|---|---|---|---|---|
| Doctor of Business Administration (DBA) | 3 | 3.7143 | .37796 | 3.29 | 4.00 |
| Doctor of Education (EdD) | 8 | 3.0714 | .62968 | 2.14 | 4.14 |
| PhD in Education | 1 | 3.8571 | N/A | 3.86 | 3.86 |
| PhD in Management | 4 | 2.5000 | .24744 | 2.29 | 2.71 |
| PhD in Psychology | 7 | 3.0612 | .82831 | 1.86 | 4.14 |
| PhD in Public Health | 5 | 3.2857 | .52489 | 2.71 | 3.71 |
| PhD in Public Policy | 3 | 3.0952 | .43644 | 2.71 | 3.57 |
| Total | 31 | 3.1198 | .63685 | 1.86 | 4.14 |

Appendix G: DCPS Descriptive Statistics for Program Culture by Program

| Degree Problem | *N* | *M* | *SD* | Min | Max |
|---|---|---|---|---|---|
| Doctor of Business Administration (DBA) | 3 | 4.4286 | .65465 | 3.71 | 5.00 |
| Doctor of Education (EdD) | 8 | 3.8750 | .39998 | 3.43 | 4.57 |
| PhD in Education | 1 | 4.1429 | N/A | 4.14 | 4.14 |
| PhD in Management | 4 | 3.6429 | .37796 | 3.14 | 4.00 |
| PhD in Psychology | 7 | 3.9388 | .51413 | 3.43 | 4.57 |
| PhD in Public Health | 5 | 3.8000 | .74642 | 2.86 | 4.43 |
| PhD in Public Policy | 3 | 4.0952 | .29738 | 3.86 | 4.43 |
| Total | 31 | 3.9309 | .50692 | 2.86 | 5.00 |

Appendix H: DCPS Descriptive Statistics for Dissertation Preparation by Program

| Degree Program | *N* | *M* | *SD* | Min | Max |
|---|---|---|---|---|---|
| Doctor of Business Administration (DBA) | 3 | 3.9524 | .67512 | 3.43 | 4.71 |
| Doctor of Education (EdD) | 8 | 3.3750 | .75569 | 2.57 | 5.00 |
| PhD in Education | 1 | 4.2857 | N/A | 4.29 | 4.29 |
| PhD in Management | 4 | 2.6786 | .24398 | 2.43 | 3.00 |
| PhD in Psychology | 7 | 3.9796 | .59148 | 3.14 | 4.57 |
| PhD in Public Health | 5 | 3.3714 | .64365 | 2.43 | 4.00 |
| PhD in Public Policy | 3 | 3.9524 | .32991 | 3.57 | 4.14 |
| Total | 31 | 3.5622 | .71422 | 2.43 | 5.00 |

# Appendix I: Success Factor Themes Overall

Table I1

*Student Relationships*

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Faculty | 9 | 3 | 12 |
| Response | 6 | 2 | 8 |
| Residency | 3 | 3 | 6 |
| Support | 4 | 2 | 6 |
| Research | 1 | 3 | 4 |
| Writing | 2 | 2 | 4 |
| Process | 3 | 0 | 3 |
| Motivation | 1 | 2 | 3 |
| Concerns | 0 | 1 | 1 |
| Success | 0 | 0 | 0 |

Table I2

Dissertation Preparation

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Research | 7 | 2 | 9 |
| Coursework | 6 | 1 | 7 |
| Dissertation | 6 | 0 | 6 |
| Motivate | 4 | 1 | 5 |
| Prepare | 2 | 2 | 4 |
| Faculty | 3 | 1 | 4 |
| Writing | 4 | 0 | 4 |
| Residency | 2 | 0 | 2 |
| Content | 1 | 1 | 2 |
| APA | 1 | 1 | 2 |
| Guidance | 1 | 0 | 1 |
| Methodology | 1 | 0 | 1 |
| Proposal | 1 | 0 | 1 |

Table I3

Program Culture

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Culture | 6 | 3 | 9 |
| Faculty | 5 | 3 | 8 |
| Support | 4 | 4 | 8 |
| Atmosphere | 3 | 3 | 6 |
| Faculty | 3 | 1 | 4 |
| Respond | 1 | 2 | 3 |
| Helpful | 3 | 0 | 3 |
| Feedback | 2 | 1 | 3 |
| Professional | 2 | 1 | 3 |
| Motivate | 2 | 0 | 2 |
| Expectation | 2 | 0 | 2 |
| Difficult | 1 | 1 | 2 |
| Positive | 1 | 1 | 2 |
| Staff | 1 | 0 | 1 |
| Confidence | 1 | 0 | 1 |
| Connected | 1 | 0 | 1 |
| Advisor | 1 | 0 | 1 |
| Structure | 1 | 0 | 1 |
| Engage | 1 | 0 | 1 |
| Exciting | 1 | 0 | 1 |
| Interesting | 1 | 0 | 1 |
| Informative | 1 | 0 | 1 |
| Stressful | 0 | 1 | 1 |
| Beneficial | 1 | 0 | 1 |
| Respectful | 0 | 1 | 1 |
| Disconnect | 0 | 1 | 1 |
| Lonely | 0 | 1 | 1 |

Table I4

Individual Persistence

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Support | 6 | 4 | 10 |
| Slow | 6 | 2 | 8 |
| Resources | 5 | 3 | 8 |
| Faculty | 3 | 3 | 6 |
| Debt | 2 | 0 | 2 |
| Residency | 2 | 1 | 3 |
| Prepare | 1 | 1 | 2 |

# Appendix J: Relationship Themes by Program and Seniority Level

Table J1

Doctor of Business Administration (DBA)

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Faculty | 2 | 0 | 2 |
| Response | 1 | 0 | 1 |
| Residency | 2 | 0 | 2 |
| Support | 1 | 0 | 1 |
| Research | 1 | 0 | 1 |
| Writing | 1 | 0 | 1 |
| Process | 1 | 0 | 1 |
| Motivation | 0 | 0 | 0 |
| Concerns | 0 | 0 | 0 |
| Success | 0 | 0 | 0 |

Table J2

Doctor of Education (EdD)

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Faculty | 1 | 2 | 3 |
| Response | 0 | 1 | 1 |
| Residency | 1 | 1 | 2 |
| Support | 2 | 1 | 3 |
| Research | 0 | 0 | 0 |
| Writing | 1 | 1 | 2 |
| Process | 0 | 0 | 0 |
| Motivation | 0 | 0 | 0 |
| Concerns | 0 | 0 | 0 |
| Success | 0 | 0 | 0 |

Table J3

PhD in Education

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Faculty | 0 | 1 | 1 |
| Response | 0 | 1 | 1 |
| Residency | 0 | 1 | 1 |
| Support | 0 | 1 | 1 |
| Research | 0 | 0 | 0 |
| Writing | 0 | 0 | 0 |
| Process | 0 | 0 | 0 |
| Motivation | 0 | 0 | 0 |
| Concerns | 0 | 0 | 0 |
| Success | 0 | 0 | 0 |

Table J4

PhD in Management

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Faculty | 1 | 0 | 1 |
| Response | 1 | 0 | 1 |
| Residency | 0 | 0 | 0 |
| Support | 0 | 1 | 1 |
| Research | 0 | 0 | 0 |
| Writing | 0 | 1 | 1 |
| Process | 1 | 0 | 1 |
| Motivation | 0 | 0 | 0 |
| Concerns | 0 | 0 | 0 |
| Success | 1 | 0 | 1 |

Table J5

PhD in Psychology

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Faculty | 2 | 0 | 2 |
| Response | 1 | 0 | 1 |
| Residency | 1 | 1 | 2 |
| Support | 5 | 0 | 5 |
| Research | 0 | 1 | 1 |
| Writing | 0 | 0 | 0 |
| Process | 2 | 1 | 3 |
| Motivation | 1 | 0 | 1 |
| Concerns | 0 | 0 | 0 |
| Success | 1 | 1 | 2 |

Table J6

PhD in Public Health

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Faculty | 2 | 1 | 3 |
| Response | 0 | 0 | 0 |
| Residency | 0 | 0 | 0 |
| Support | 1 | 1 | 2 |
| Research | 0 | 0 | 0 |
| Writing | 0 | 0 | 0 |
| Process | 1 | 0 | 1 |
| Motivation | 1 | 2 | 3 |
| Concerns | 0 | 0 | 0 |
| Success | 1 | 0 | 1 |

Table J7

PhD in Public Policy

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Faculty | 1 | 0 | 1 |
| Response | 1 | 0 | 1 |
| Residency | 0 | 0 | 0 |
| Support | 0 | 0 | 0 |
| Research | 0 | 1 | 1 |
| Writing | 0 | 0 | 0 |
| Process | 0 | 0 | 0 |
| Motivation | 0 | 0 | 0 |
| Concerns | 0 | 0 | 0 |
| Success | 0 | 0 | 0 |

# Appendix K: Program Culture Themes by Program and Seniority Level

Table K1

Doctor of Business Administration (DBA)

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Culture | 0 | 0 | 0 |
| Faculty | 1 | 0 | 1 |
| Support | 1 | 0 | 1 |
| Atmosphere | 0 | 0 | 0 |
| residency | 1 | 0 | 1 |
| Respond | 0 | 0 | 0 |
| Helpful | 0 | 0 | 0 |
| Feedback | 1 | 0 | 1 |
| Professional | 0 | 0 | 0 |
| Motivate | 0 | 0 | 0 |
| Expectation | 0 | 0 | 0 |
| Difficult | 0 | 0 | 0 |
| Positive | 0 | 0 | 0 |
| Staff | 1 | 0 | 1 |
| Confidence | 1 | 0 | 1 |
| Connected | 1 | 0 | 1 |
| Advisor | 0 | 0 | 0 |
| Structure | 0 | 0 | 0 |
| Engage | 0 | 0 | 0 |
| Exciting | 0 | 0 | 0 |
| Interesting | 0 | 0 | 0 |
| Informative | 0 | 0 | 0 |
| Stressful | 0 | 0 | 0 |
| Beneficial | 0 | 0 | 0 |
| Respectful | 0 | 0 | 0 |
| Disconnect | 0 | 0 | 0 |
| Lonely | 0 | 0 | 0 |
| Isolated | 0 | 0 | 0 |

Table K2

Doctor of Education (EdD)

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Culture | 3 | 0 | 3 |
| faculty | 0 | 1 | 1 |
| Support | 1 | 1 | 2 |
| Atmosphere | 1 | 0 | 1 |
| Faculty | 0 | 0 | 0 |
| Respond | 2 | 0 | 2 |
| Helpful | 0 | 0 | 0 |
| Feedback | 1 | 0 | 1 |
| Professional | 0 | 0 | 0 |
| Motivate | 1 | 0 | 1 |
| Expectation | 1 | 0 | 1 |
| Difficult | 0 | 0 | 0 |
| Positive | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 |
| Confidence | 0 | 0 | 0 |
| Connected | 0 | 0 | 0 |
| Advisor | 1 | 0 | 1 |
| Structure | 0 | 0 | 0 |
| Engage | 0 | 0 | 0 |
| Exciting | 0 | 0 | 0 |
| Interesting | 0 | 0 | 0 |
| Informative | 0 | 0 | 0 |
| Stressful | 0 | 0 | 0 |
| Beneficial | 0 | 0 | 0 |
| Respectful | 0 | 0 | 0 |
| Disconnect | 0 | 1 | 1 |
| Lonely | 0 | 1 | 1 |
| Isolated | 0 | 0 | 0 |

Table K3

PhD in Education

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Culture | 0 | 1 | 1 |
| Faculty | 0 | 0 | 0 |
| Support | 0 | 0 | 0 |
| Atmosphere | 0 | 0 | 0 |
| Faculty | 0 | 0 | 0 |
| Respond | 0 | 1 | 1 |
| Helpful | 0 | 0 | 0 |
| Feedback | 0 | 0 | 0 |
| Professional | 0 | 0 | 0 |
| Motivate | 0 | 0 | 0 |
| Expectation | 0 | 0 | 0 |
| Difficult | 0 | 0 | 0 |
| Positive | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 |
| Confidence | 0 | 0 | 0 |
| Connected | 0 | 0 | 0 |
| Advisor | 0 | 0 | 0 |
| Structure | 0 | 0 | 0 |
| Engage | 0 | 0 | 0 |
| Exciting | 0 | 0 | 0 |
| Interesting | 0 | 0 | 0 |
| Informative | 0 | 0 | 0 |
| Stressful | 0 | 0 | 0 |
| Beneficial | 0 | 0 | 0 |
| Respectful | 0 | 0 | 0 |
| Disconnect | 0 | 0 | 0 |
| Lonely | 0 | 0 | 0 |
| Isolated | 0 | 0 | 0 |

Table K4

PhD in Management

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Culture | 1 | 0 | 1 |
| Faculty | 1 | 1 | 2 |
| Support | 1 | 0 | 1 |
| Atmosphere | 1 | 0 | 1 |
| Faculty | 0 | 0 | 0 |
| Respond | 0 | 1 | 1 |
| Helpful | 0 | 0 | 0 |
| Feedback | 0 | 0 | 0 |
| Professional | 0 | 0 | 0 |
| Motivate | 0 | 0 | 0 |
| Expectation | 0 | 0 | 0 |
| Difficult | 0 | 0 | 0 |
| Positive | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 |
| Confidence | 0 | 0 | 0 |
| Connected | 0 | 0 | 0 |
| Advisor | 0 | 0 | 0 |
| Structure | 0 | 0 | 0 |
| Engage | 0 | 0 | 0 |
| Exciting | 0 | 0 | 0 |
| Interesting | 0 | 0 | 0 |
| Informative | 0 | 0 | 0 |
| Stressful | 0 | 0 | 0 |
| Beneficial | 0 | 0 | 0 |
| Respectful | 0 | 0 | 0 |
| Disconnect | 0 | 1 | 1 |
| Lonely | 0 | 0 | 0 |
| Isolated | 0 | 1 | 1 |

Table K5

PhD in Psychology

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Culture | 0 | 0 | 0 |
| Faculty | 2 | 0 | 2 |
| Support | 3 | 0 | 3 |
| Atmosphere | 0 | 0 | 0 |
| Faculty | 0 | 0 | 0 |
| Respond | 0 | 0 | 0 |
| Helpful | 0 | 0 | 0 |
| Feedback | 0 | 0 | 0 |
| Professional | 2 | 1 | 3 |
| Motivate | 0 | 0 | 0 |
| Expectation | 1 | 0 | 1 |
| Difficult | 0 | 0 | 0 |
| Positive | 0 | 1 | 1 |
| Staff | 0 | 0 | 0 |
| Confidence | 0 | 0 | 0 |
| Connected | 0 | 1 | 1 |
| Advisor | 0 | 0 | 0 |
| Structure | 1 | 0 | 1 |
| Engage | 0 | 1 | 1 |
| Exciting | 1 | 0 | 1 |
| Interesting | 1 | 0 | 1 |
| Informative | 1 | 0 | 1 |
| Stressful | 0 | 0 | 0 |
| Beneficial | 0 | 0 | 0 |
| Respectful | 0 | 0 | 0 |
| Disconnect | 0 | 0 | 0 |
| Lonely | 0 | 0 | 0 |
| Isolated | 0 | 0 | 0 |

Table K6

PhD in Public Health

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Culture | 1 | 1 | 2 |
| Faculty | 1 | 1 | 2 |
| Support | 1 | 0 | 1 |
| Atmosphere | 2 | 0 | 2 |
| Faculty | 0 | 0 | 0 |
| Respond | 0 | 1 | 1 |
| Helpful | 1 | 0 | 1 |
| Feedback | 1 | 1 | 2 |
| Professional | 0 | 1 | 1 |
| Motivate | 0 | 0 | 0 |
| Expectation | 1 | 0 | 1 |
| Difficult | 1 | 0 | 1 |
| Positive | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 |
| Confidence | 0 | 0 | 0 |
| Connected | 0 | 0 | 0 |
| Advisor | 0 | 0 | 0 |
| Structure | 0 | 0 | 0 |
| Engage | 0 | 0 | 0 |
| Exciting | 0 | 0 | 0 |
| Interesting | 0 | 0 | 0 |
| Informative | 0 | 1 | 1 |
| Stressful | 0 | 0 | 0 |
| Beneficial | 0 | 0 | 0 |
| Respectful | 0 | 0 | 0 |
| Disconnect | 0 | 0 | 0 |
| Lonely | 0 | 0 | 0 |
| Isolated | 0 | 0 | 0 |

Table K7

PhD in Public Policy

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| Culture | 0 | 0 | 0 |
| Faculty | 0 | 0 | 0 |
| Support | 0 | 0 | 0 |
| Atmosphere | 0 | 0 | 0 |
| Faculty | 0 | 0 | 0 |
| Respond | 0 | 0 | 0 |
| Helpful | 1 | 0 | 1 |
| Feedback | 0 | 0 | 0 |
| Professional | 0 | 0 | 0 |
| Motivate | 0 | 0 | 0 |
| Expectation | 0 | 0 | 0 |
| Difficult | 0 | 0 | 0 |
| Positive | 1 | 0 | 1 |
| Staff | 0 | 0 | 0 |
| Confidence | 0 | 0 | 0 |
| Connected | 0 | 0 | 0 |
| Advisor | 0 | 0 | 0 |
| Structure | 0 | 0 | 0 |
| Engage | 0 | 0 | 0 |
| Exciting | 0 | 0 | 0 |
| Interesting | 0 | 0 | 0 |
| Informative | 0 | 0 | 0 |
| Stressful | 0 | 0 | 0 |
| Beneficial | 0 | 0 | 0 |
| Respectful | 0 | 0 | 0 |
| Disconnect | 0 | 0 | 0 |
| Lonely | 0 | 0 | 0 |
| Isolated | 0 | 0 | 0 |

# Appendix L: Individual Persistence Themes by Program and Seniority Level

Table L1

Doctor of Business Administration (DBA)

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| support | 1 | 0 | 1 |
| slow | 0 | 0 | 0 |
| resources | 0 | 0 | 0 |
| faculty | 1 | 0 | 1 |
| debt | 0 | 0 | 0 |
| residency | 0 | 0 | 0 |
| prepare | 0 | 0 | 0 |

Table L2

Doctor of Education (EdD)

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| support | 0 | 1 | 1 |
| slow | 2 | 0 | 2 |
| resources | 2 | 0 | 2 |
| faculty | 1 | 2 | 3 |
| debt | 1 | 0 | 1 |
| residency | 0 | 1 | 1 |
| prepare | 0 | 1 | 1 |

Table L3

PhD in Education

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| support | 0 | 0 | 0 |
| slow | 0 | 0 | 0 |
| resources | 0 | 0 | 0 |
| faculty | 0 | 1 | 1 |
| debt | 0 | 0 | 0 |
| residency | 0 | 0 | 0 |
| prepare | 0 | 0 | 0 |

Table L4

PhD in Management

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| support | 0 | 0 | 0 |
| slow | 1 | 0 | 1 |
| resources | 0 | 0 | 0 |
| faculty | 0 | 1 | 1 |
| debt | 0 | 0 | 0 |
| residency | 0 | 0 | 0 |
| prepare | 0 | 0 | 0 |

Table L5

PhD in Psychology

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| support | 1 | 0 | 1 |
| slow | 2 | 0 | 2 |
| resources | 0 | 0 | 0 |
| faculty | 4 | 0 | 4 |
| debt | 1 | 0 | 1 |
| residency | 1 | 0 | 1 |
| prepare | 1 | 0 | 1 |

Table L6

PhD in Public Health

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| support | 1 | 1 | 2 |
| slow | 0 | 0 | 0 |
| resources | 1 | 1 | 2 |
| faculty | 0 | 0 | 0 |
| debt | 0 | 0 | 0 |
| residency | 0 | 0 | 0 |
| prepare | 1 | 0 | 1 |

Table L7

PhD in Public Policy

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| support | 1 | 1 | 2 |
| slow | 1 | 0 | 1 |
| resources | 0 | 0 | 0 |
| faculty | 0 | 0 | 0 |
| debt | 0 | 0 | 0 |
| residency | 0 | 0 | 0 |
| prepare | 1 | 0 | 1 |

## Appendix M: Dissertation Preparation Themes by Program and Seniority Level

Table M1

Doctor of Business Administration (DBA)

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| research | 1 | 0 | 1 |
| coursework | 1 | 0 | 1 |
| dissertation | 0 | 0 | 0 |
| motivate | 0 | 0 | 0 |
| prepare | 0 | 0 | 0 |
| faculty | 1 | 0 | 1 |
| writing | 0 | 0 | 0 |
| residency | 0 | 0 | 0 |
| content | 0 | 0 | 0 |
| APA | 0 | 0 | 0 |
| guidance | 0 | 0 | 0 |
| methodology | 0 | 0 | 0 |
| proposal | 0 | 0 | 0 |

Table M2

Doctor of Education (EdD)

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| research | 1 | 1 | 2 |
| coursework | 0 | 1 | 1 |
| dissertation | 1 | 0 | 1 |
| motivate | 0 | 0 | 0 |
| prepare | 1 | 0 | 1 |
| faculty | 0 | 0 | 0 |
| writing | 1 | 0 | 1 |
| residency | 1 | 0 | 1 |
| content | 1 | 1 | 2 |
| APA | 1 | 1 | 2 |
| guidance | 1 | 0 | 1 |
| methodology | 2 | 0 | 2 |
| proposal | 1 | 0 | 1 |

Table M3

PhD in Education

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| research | 0 | 0 | 0 |
| coursework | 0 | 0 | 0 |
| dissertation | 0 | 0 | 0 |
| motivate | 0 | 0 | 0 |
| prepare | 0 | 0 | 0 |
| faculty | 0 | 0 | 0 |
| writing | 0 | 0 | 0 |
| residency | 0 | 0 | 0 |
| content | 0 | 0 | 0 |
| APA | 0 | 0 | 0 |
| guidance | 0 | 0 | 0 |
| methodology | 0 | 0 | 0 |
| proposal | 0 | 0 | 0 |

Table M4

PhD in Management

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| research | 1 | 0 | 1 |
| coursework | 1 | 0 | 1 |
| dissertation | 1 | 1 | 2 |
| motivate | 1 | 0 | 1 |
| prepare | 1 | 1 | 2 |
| faculty | 0 | 1 | 1 |
| writing | 0 | 0 | 0 |
| residency | 0 | 0 | 0 |
| content | 0 | 1 | 1 |
| APA | 0 | 0 | 0 |
| guidance | 0 | 0 | 0 |
| methodology | 0 | 0 | 0 |
| proposal | 0 | 0 | 0 |

Table M5

PhD in Psychology

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| research | 1 | 1 | 2 |
| coursework | 2 | 0 | 2 |
| dissertation | 1 | 1 | 2 |
| motivate | 0 | 0 | 0 |
| prepare | 1 | 1 | 2 |
| faculty | 0 | 0 | 0 |
| writing | 1 | 0 | 1 |
| residency | 2 | 0 | 2 |
| content | 0 | 0 | 0 |
| APA | 0 | 0 | 0 |
| guidance | 0 | 0 | 0 |
| methodology | 0 | 0 | 0 |
| proposal | 1 | 0 | 1 |

Table M6

PhD in Public Health

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| research | 1 | 0 | 1 |
| coursework | 2 | 0 | 2 |
| dissertation | 1 | 0 | 1 |
| motivate | 0 | 0 | 0 |
| prepare | 1 | 0 | 1 |
| faculty | 0 | 0 | 0 |
| writing | 0 | 0 | 0 |
| residency | 1 | 0 | 1 |
| content | 1 | 0 | 1 |
| APA | 0 | 0 | 0 |
| guidance | 1 | 0 | 1 |
| methodology | 0 | 0 | 0 |
| proposal | 1 | 0 | 1 |

Table M7

PhD in Public Policy

| Key Word | Started Prospectus | Pre Prospectus | Total Occurrences |
|---|---|---|---|
| research | 1 | 0 | 1 |
| coursework | 0 | 0 | 0 |
| dissertation | 0 | 0 | 0 |
| motivate | 0 | 0 | 0 |
| prepare | 0 | 0 | 0 |
| faculty | 0 | 0 | 0 |
| writing | 0 | 0 | 0 |
| residency | 0 | 0 | 0 |
| content | 0 | 0 | 0 |
| APA | 0 | 0 | 0 |
| guidance | 0 | 0 | 0 |
| methodology | 0 | 0 | 0 |
| proposal | 0 | 0 | 0 |