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A Funny Thing Happened on the Way to My Ph.D.: Exploring Issues Affecting Attrition and Completion in the Doctoral Program in Instructional Technology at a Major Research University

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ACCEPTANCE

This dissertation, A FUNNY THING HAPPENED ON THE WAY TO MY PH.D.: EXPLORING ISSUES AFFECTING ATTRITION AND COMPLETION IN THE DOCTORAL PROGRAM IN INSTRUCTIONAL TECHNOLOGY AT A MAJOR RESEARCH UNIVERSITY, by CARLA LANE' WILLIAMS, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree Doctor of Philosophy in the College of Education, Georgia State University.

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ABSTRACT

A FUNNY THING HAPPENED ON THE WAY TO MY PH.D.: EXPLORING ISSUES AFFECTING ATTRITION AND COMPLETION IN THE DOCTORAL PROGRAM IN INSTRUCTIONAL TECHNOLOGY AT A MAJOR RESEARCH UNIVERSITY

by

Carla Lanee' Williams

This study sought to understand why some students at Eagle University (pseudo.) complete the doctoral program in instructional technology while others do not. The study explores factors and issues affecting doctoral attrition and completion of the Ph.D. in instructional technology (IT) in the College of Education at Eagle University, a major research university with very high research activity. Participants in the study were eleven former doctoral students from Eagle University (pseudo.), six of whom met the requirements for graduation (completers) and five of whom ended the pursuit of the doctoral degree in instructional technology at EU (non-completers). A qualitative study informed by phenomenology, the purpose of the study was to explore these phenomena from the perspective of the students. Postmodernism served as the theoretical framework. Participants were interviewed using the structured interview guide developed by the researcher.

Two important findings were that only one of the eleven students knew what to expect from the program; and that completers were more likely to report that their primary motivation for pursuing the Ph.D. was for personal satisfaction. Recommendations were made based on student feedback, and included implications for students as well as implications for the university/program. Examples of advice for

students were: 1) contemplate their goal(s) in pursuing the Ph.D. and consider the impact if something happened to alter that goal, and 2) seek out doctoral support groups and begin to establish relationships with current members. Two selected recommendations for the university/program were 1) develop a pre-application seminar or eLearning module to provide potential doctoral students with a realistic understanding of the program, and 2) consider developing a mentoring program that matched more experienced students or non-advisory professors to new students.

Results of the study indicated that multiple factors affected both completers and non-completers; and these factors were often similar. However, among the key factors separating completers from non-completers were the determination of the student and the quality of the advisor relationship.

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AFFECTING ATTRITION AND COMPLETION IN THE DOCTORAL
PROGRAM IN INSTRUCTIONAL TECHNOLOGY AT A
MAJOR RESEARCH UNIVERSITY

by
Carla Lanee' Williams

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Degree of
Doctor of Philosophy
in
Instructional Technology
in
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in
the College of Education
Georgia State University

Atlanta, Georgia
2012

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Last but not least, I would like to dedicate this dissertation to my mother, Carrie Eleanor Young who passed away in October, 2010. She was known to my brother and me as “The Sage” because she was truly the smartest and wisest person we’ve ever known. Though she never completed her Bachelor’s degree, she could out-calculate, out-think and out-smart the academically “best and brightest” in the blink of an eye. Without her unwavering support I would never have made it to this day. And although she’s no longer here physically, I know she has been with me every step of the way.

Mom, this one’s for you!

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ABBREVIATIONS

-C	Completer
-NC	Non-completer
ABD	All But Dissertation
COE	College of Education
EU	Eagle University
ET	Educational Technology
ETD	Elapsed Time to Degree
HRD	Human Resource Development
IT	Instructional Technology
SITs	Students In Instructional Technology
TTD	Time To Degree
VCD	Vocational and Career Development

CHAPTER 1

INTRODUCTION

Ph.D. seekers, I bid you welcome!

The University is a temple and we are here to worship the gods of Research, Scholarship, and Service. This year I am pleased to announce homage to research. We shall employ every device we know in our desire to cultivate your research skills.

Something familiar,
Something peculiar,
Something for everyone -
Scheduling's tight!

Something appealing,
Something appalling,
Something for everyone -
Dissertation fright!

(Shevelove, Gelbart, & Sondheim, 1991)

Adapted from the timeless musical, *A Funny Thing Happened on the Way to the Forum*, this meticulously revised excerpt from the prologue and first two stanzas of the opening song *Comedy Tonight!* has been transformed into an invitation to doctoral study. Sound like a stretch? Try asking a Ph.D. student what this means to them and they might equate “Something familiar” with the familiar coursework expected as part of the program. “Something peculiar” could easily be comprehensive exams, with the special preparation required, and the unique testing environment required for their completion. And “Something for everyone” can certainly describe the scheduling pressures faced by most doctoral students. But what about “Something appealing?” Well, don’t all doctoral students yearn for that DR (Dr.) in front of their names? Of course they do! After all, this

is the final reward for the patience, hard work and endurance demanded by their programs. And finally, “Something appalling.” Oh, the rigors of the dissertation! Did they really know what they were getting into — a two-, maybe three-year stint of reading, researching, writing and editing? Are you kidding?

The title of this dissertation begins: “A Funny Thing Happened on the Way to My Ph.D.” It is a tongue-in-cheek nod to the phenomenon of doctoral student attrition. The title is stated in the first-person, suggesting the viewpoint from which this study was conducted—the perspective of the student. Of course there is nothing funny about doctoral attrition. The “funny thing” referred to in the title implies that at best, doctoral attrition is an unexpected end to a much anticipated achievement. No one enters a doctoral program expecting to drop out (Yeager, 2008); and certainly universities do not admit students with the expectation that they won’t make it. Both students and their respective institutions are motivated toward the goal. Yet attrition rates for doctoral programs have been estimated to average 50% across all disciplines, going back to the 1960’s and even earlier (Bair, 1999; Baird, 1993; Bowen & Rudenstine, 1992; D’Andrea, 2002; Lovitts, 2001; Tinto, 1993; Yeager, 2008). And to help put the problem in perspective, Hanson (1992) refers to all-but-dissertation (ABD) students—those who have completed all of the requirements for the doctorate except the dissertation—as the ‘at risk’ population in higher education.

The rates described previously represent averages across all disciplines. However, it has been found that attrition rates in the humanities and social sciences typically run higher than those in engineering, the physical sciences, and business (*Ph.D. completion and attrition: Analysis of baseline demographic data from the Ph.D. Completion Project*,

2008). Lovitts (2001) says that this discrepancy occurs because departments have cultures and those cultures can affect attrition/completion rates.

Table 1 shows Lovitts' comparison of the cultures of the sciences to that of the humanities in three areas: 1) structure; 2) selection of advisors; and 3) research environment.

Corroboration of parts of Lovitts' analysis can be found in *Graduate Education and Research* as Gumport (2005) contrasts the laboratory research of the sciences—which is usually conducted under the guidance of a faculty member with peers around, and as part of the faculty member's research agenda, with that of the research in the

Table 1

Department Cultures - Sciences vs. Humanities

	Sciences	Humanities
Structure	More highly structured. Students focus on mastering one or a few contemporary theories.	More loosely structured. Students are expected to master a wide range of theories.
Selection of Advisors	Advisors are chosen by the students, or students are chosen by the advisor. Students start working very quickly on projects that will grow into their dissertations. Because these projects are usually funded, the student shares in this funding.	Students don't often have the opportunity to choose their own advisors until they complete their comprehensive exams.
Research Environment	Research for science students is often done as a group rather than alone.	Research in the humanities is usually done alone and in the library, limiting the amount of socialization and support available to them.

Note. Adapted from Lovitts (2001), pp. 47–48

humanities and social sciences—which is often conducted in the library, tends to be more self-directed and conducted in isolation (p. 428).

Continuing with the discussion of completion rates, in their 1992 book *In Pursuit of the Ph.D.*, Bowen and Rudenstine describe Ph.D. completion rates from ten universities and over 13,000 students studied from 1967–1976. Table 2 represents this data.

Table 3 summarizes the ten-year completion rates reported in a more recent study by Wendler et al. (2010) that included doctoral completion rates by field conducted with over 41,000 students in 24 institutions.

Amazingly, the first two 10-year completion rates in the 2010 report are almost identical to those listed in 1992; with the last two relatively close. These similarities exist in spite of a nearly 20-year gap! The 2010 report *The Path Forward: The Future of Graduate Education in the United States* (Wendler et al., 2010) speaks to efforts

Table 2

Completion Rates by Discipline

Discipline(s)	Completion Rate
English and History	50%
Economics and Political Science	55%
Math and Physics	65%

Note. Adapted from Bowen and Rudenstine (1992), p. 124

Table 3

Doctoral Completion Rates by Field

Discipline(s) [this study]	Discipline Equivalents	Completion Rate
Humanities	English and History	49%
Social Sciences	Economics and Political Science	55%
Math and Physical Sciences	Math; Natural Sciences; Life Sciences	58%
Engineering	(Not listed in 1992)	63%

Note. Adapted from Wendler et al. (2010)

to reduce graduate attrition by saying, “Despite the rigorous selection processes used for graduate admissions and the high achievement level of those pursuing a graduate degree, some estimates indicate that the attrition rate in doctoral education is in the range of 40% to 50%” (p. 27).

An interesting bit of punctuation to this discussion is the findings of the Council of Graduate Schools during their seven-year study of Ph.D. completion and attrition (*Ph.D. completion and attrition: Analysis of baseline program data from the Ph.D. Completion Project*, 2008). The council discovered that the life sciences outstrip humanities in completion rates. However by year ten the gap is divided in half, from a difference of 27.5% in year seven, down to 13.6% in year ten (p. 17). And there is evidence indicating that students in the humanities continue to complete their degrees even after year ten, effectively narrowing the ‘completion gap’ even further (p. 63).

Unfortunately, Education students were not a part of the studies described above. Nor were colleges of education prominently represented in most of the studies reviewed. However, the works of some researchers describe completion rates for disciplines in the College of Education to be comparable to those in the Humanities. A case in point is the book (1992), in which Bowen and Rudenstine estimated Ph.D. completion rates within the College of Education to be 50%. This oft-quoted approximation is echoed through numerous research studies, articles and books, though there are few additional studies to corroborate this finding. To add to these dismal estimates of attrition, another statistic often linked to completion rates is time to degree. Bowen and Rudenstine describe an interesting piece of national data in this area; that the median Elapsed Time to Degree (ETD) for College of Education students was reported to be over 10 years—nearly five years more than that of doctoral students in the physical sciences, at 5.89 years (p. 131). Note that they define Elapsed Time to Degree (ETD) as the year of the doctorate minus the year of entry to graduate school. Together these numbers paint a grim picture of doctoral completion rates in Colleges of Education.

Scope of the Study

The scope of this study will be limited to the experiences of Ph.D. students in an instructional technology (IT) program within the College of Education at Eagle University (pseudo.). While several of the resources reviewed explored doctoral degrees in Education, there was no mention of either instructional technology or educational technology (ET) programs in discussing outcomes, although at least one (Stripling, 2004) did include IT as part of the potential population for his study.

In the absence of historical data for IT majors, it might be of interest to note that during the 10-year period from 2001 to 2010 a total of 60 students were admitted and subsequently enrolled in the instructional technology program at Eagle University. During that same time period, 22 students graduated with their doctorate degrees. If one can make a broad assumption of a relatively stable admissions level over the previous 10-year period (1991–2000), the calculated degree completion rate would be 37%. If this number is at all representative of the true completion rate, this is far below even the lowest estimated completion rates reported for Humanities.

Statement of the Problem

Doctoral attrition is a costly problem that affects not only the student, but the university and society as a whole. In addition, the magnitude of the problem is not trivial. Although this issue has been studied from different perspectives in a variety of environments, attention to Colleges of Education has been limited. Studies that include instructional technology programs are virtually missing from the literature as well.

Magnitude of the problem. In the introduction to this study there were several estimates of doctoral completion rates, which by contrast offer a glimpse into attrition. To corroborate the figures presented earlier, numbers from a few additional sources are offered here. For example, Bair (1999) described the doctoral attrition rate as somewhere between 40% and 60%. D'Andrea (2002) contends that across all disciplines the rate of attrition is about 50%, but says there is some evidence that the rate is closer to 85% when the entrances and exits from the program for cohort groups are matched and averaged

(p. 43). Lovitts (1996, p. 1) asserts that studies from the 1960's to 1996 consistently estimate graduate student attrition to be about 50%.

It is worth noting that all of the attrition/completion rates are offered as estimates. There are several possible explanations as to why these figures are not more exact. One is the way a doctoral student is defined. Lovitts (2001) explains that there are variations between colleges and universities when it comes to the definition of a doctoral student. Some schools, referred to by Lovitts (2001) as the "MA-First Model" (p. 7), admit only students with a Master's Degree to doctoral programs, while others admit students directly from undergraduate programs. The affect this has on a discussion of doctoral attrition and completion data is obvious. Data from one school may include students fresh out of undergraduate school who are essentially at the same level in the quest for a doctorate as a student from another school who is beginning a Master's program. A similar issue exists in schools where the Educational Specialist degree (Ed.S.) is offered. This degree, unique to Colleges of Education, is a professional degree focused mainly on K-12 educators, and is offered between the Master's and the doctorate at some institutions. Some who pursue this degree do so with the intention to continue on to a doctorate at some point. Others finish their educational journeys with the Ed.S. as their terminal degree. A determination must be made whether to include data on Ed.S. students when discussing statistics on attrition for doctoral programs. Should all Ed.S. students be considered doctoral students for this purpose? Will they be included if the student has declared his or her intention to continue through to the doctorate, or will attrition data include only students who were formally accepted into the doctoral program? And then there is the question about the German Model. In this scenario, one is not bestowed the

title “Doctoral Student” until he or she has completed all requirements for the degree except the dissertation, and is admitted to candidacy (Lovitts, 2001, p. 7), as compared to the U.S. where one is first a *doctoral student* and then a *doctoral candidate*. The German Model (Lovitts, 2001) mirrors the more widely-used definition of a student who is designated ABD (All But Dissertation); and therefore those students’ dispositions might more appropriately be compared only to the ABD population in other studies.

When reviewing previous studies on completion and attrition, it can also be difficult to isolate this data for doctoral programs. Some publications refer to *graduate completion or attrition* and include both Master’s and Doctorate students together, while others investigate one or the other. Still other studies narrow their scope to ABDs. In reality the results from the study of ABDs might be misleading if taken as a basis for generalizing about doctoral completion and attrition because it represents an isolated group within the population of doctoral students, and therefore does not provide a complete picture of what is occurring with the larger population of doctoral students, including both Doctor of Philosophy (Ph.D.) and Doctor of Education (Ed.D.) degree seekers. As Bair (1999) explains, "Doctoral students who are ABD are, perhaps, at the most visible stage from which to withdraw from doctoral study. However, ABD is not the stage at which the greatest proportion of doctoral students necessarily departs, and as much as two-thirds of doctoral attrition occurs prior to the achievement of ABD status" (p.107). In fact, Bowen and Rudenstine (1992) reported data indicating that 30% of doctoral attrition occurred prior to the dissertation phase, while less than half of that—14%—occurred after the dissertation was begun (p. 112).

Another problem that exacerbates the review of doctoral completion/attrition statistics is that of locating consistent, objective data (Bair, 1999; Nettles and Millett, 2006; Wendler et al., 2010). There is no comprehensive national database that maintains such information and individual schools rarely keep comprehensive data on the phenomenon of graduate attrition (Bowen & Rudenstine, 1992; Lovitts, 2001); and not many universities maintain attrition data at the doctoral level (Bowen & Rudenstine, 1992; Bair, 1999; Pullen, 2003). This has begun to change, most notably when the seven-year project on graduate attrition conducted by the Council of Graduate Schools, began collecting data from member institutions ("The Ph.D. Completion Project - Council of Graduate Schools," 2011). In reporting on her 1999 study, Bair explained that institutions varied widely in how consistently they report attrition as well as in how they each define retention (1999, p. 23). To further complicate matters, the reason a student leaves doctoral study is not often known. As Lovitts (2001) explains,

Not only do departing students trickle out over an extended period of time, but they tend to trickle out silently. Many never discuss their thoughts about leaving or actual attrition decisions with faculty or administrators. They simply leave and make their attrition "known" by failing to register for courses. (p. 10)

Golde (1994) even found that when directly asked the question "Why?" students in his study provided responses that did not reflect the true cause of their departure.

The types of issues just described make it nearly impossible to collect consistent data or even to compare results of studies.

The price of doctoral attrition. The study of attrition in doctoral programs is an important issue because it is costly to the university, to the student, and to society as a whole. When students begin a doctoral program and then fall away, there can be an array

of monetary, emotional and psychological ramifications that take their toll on all of the parties involved. The consequences of doctoral attrition include

- loss of time, money, and other resources invested (student and university);
- lost opportunities, as time and resources invested might have been more constructively used elsewhere;
- diminished reputation and status with peers, coworkers, family, friends, or in the case of the university, other institutions or organizations.
- ability of the college or university to secure funds and attract quality faculty;
- reduction in candidates for professorships as well as corporate and military positions in need of a high level of expertise, research, and analytical skills;
- elimination of doctoral programs considered to be unproductive;
- wasted academic and administrative resources as well as student recruiting costs;
- smaller alumni base available for university fundraising efforts;
- reduction of intellectuals serving in positions outside academe;
- emotional and psychological distress (students);
- reduction in student self-esteem;
- ruined student lives, in some cases; and
- high levels of depression. Some non-completers have reported suicidal tendencies or have even attempted suicide.

Limited study of Colleges of Education and IT. While there has been some attention given to attrition in Colleges of Education, this area is not commonly included in large-scale studies. One reason may be that from the very beginning of the doctoral program, attention has always been focused on the sciences. This fact was clearly delineated by Bernard Berelson in his book, *Graduate Education in the United States* (1960, p. 12). Along the same lines, the 2010 annual report, *The Top American Research Universities*, reflects:

...nations in search of global significance have fastened on the notion that scientific knowledge is one of if not the key differentiator between those nations that dominate world trade and take a leadership in global affairs and those relegated to second tier status. Science and scientific knowledge, produced by major research universities, appear in this narrative as the magical touchstones of progress, prosperity, and power. (Capaldi, Lombardi, Abbey, & Craig, 2010, p. 3)

Another possible reason for overlooking the Colleges of Education is that this doctorate is considered by some as a professional degree rather than a traditional Ph.D. On page 27 of his book, Berelson (1960) describes the doctoral program as being “extended” around the 1920s to 1940s to a number of professional fields, including agriculture, business, **education**, engineering, home economics, journalism librarianship, nursing, and social work. Landmark studies like that of Bowen and Rudenstine (1992) and Wilson (1965) are glaring examples. And even the most recent mega-study performed by The Commission on the Future of Graduate Education in the United States (Wendler et al., 2010, p. 17) excludes the field of Education. Instead, the areas shown in Table 4, which are addressed in this study, are the ones most often found in the literature.

Table 4

Disciplines included in 2010 Study - Commission on the Future of Graduate Education in the United States

Category	Major
Engineering	<ul style="list-style-type: none"> • Biomedical Engineering • Chemical Engineering • Civil Engineering • Electrical and Electronics Engineering • Mechanical Engineering
Life Sciences	<ul style="list-style-type: none"> • Biology • Genetics, Molecular Genetics • Microbiology and Immunology • Molecular and Cellular Biology • Neuroscience
Math & Physical Science	<ul style="list-style-type: none"> • Chemistry • Computer and Information Sciences • Mathematics • Physics and Astronomy
Social Sciences	<ul style="list-style-type: none"> • Anthropology and Archaeology • Communications • Economics • Political Science • Psychology • Sociology
Humanities	<ul style="list-style-type: none"> • English Language and Literature • Foreign Languages and Literatures • History • Philosophy

Note: Adapted from Wendler et al. (2010)

Even when Colleges of Education are targeted, there is no mention of the disciplines of instructional technology (IT) or educational technology (ET). As for instructional technology, these programs tend to contain smaller numbers of students and may not garner the attention of most researchers. In response to these findings, this study sought to add to the body of knowledge related to the field of Education; and will create a new data segment for IT and ET.

Purpose of the Study

The purpose of this study is to explore the phenomena of doctoral student and completion from the perspective of the students. The study seeks to determine why some students complete their doctoral studies in instructional technology at one major research university with very high research activity and others do not. While previous studies on doctoral completion and attrition have sought to describe the phenomena or to identify factors causing it, this research study explored attrition and completion in the context of instructional technology in the College of Education at one major Research University, Eagle University, in an effort to describe how and why attrition occurs, regardless of when it occurs; and the converse, which is why students persist through to completion. Tinto (2007) helps to clarify the importance of asking these two questions separately, as he declares:

It is one thing to understand why students leave; it is another to know what institutions can do to help students stay and succeed. Leaving is not the mirror image of staying. Knowing why students leave does not tell us, at least not directly, why students persist. (p. 6)

In initiating this work, one objective is to assist graduate schools in identifying potential Ph.D. students at risk of non-completion and to provide support and assistance to students facing challenges that may trigger a decision to end the pursuit of the doctorate.

Research Questions

Based on the purpose of this research, this study addressed the following overarching question:

Why do some instructional technology doctoral students at a major research university complete their degree while others do not?

To elicit answers to this question, this study was guided by these sub-questions:

1. *What are the experiences of completers and non-completers in the instructional technology program of a Southeastern research university (aka Eagle University) with very high research activity?*
2. *What drives a student at Eagle University to continue (or discontinue) with the pursuit of their Ph.D. degree in instructional technology?*
3. *What are the defining differences between instructional technology doctoral students who complete their degrees vs. those who do not?*

Theoretical Framework

Cline (2011) explains that a theoretical framework “...establishes a vantage point, a perspective, a set of lenses through which I view the problem.” The theoretical framework for this study is rooted in postmodernism. The value of the theoretical framework selected for this study is that it gives rise to a fresh perspective in analyzing attrition and completion. While prior literature was reviewed before conducting this study, conclusions from prior research were put aside in favor of exploring the

phenomena without regard to past findings and with the goal of allowing new viewpoints to emerge.

Understanding postmodernism. Postmodernism is described by Solomon (2000) as a “philosophical orientation” because it is still under construction in many ways. Because it is still developing, postmodernism is regarded by many as not yet reaching full-fledged theory status. Postmodernism is not a new term, yet it has a reputation for defying definition. However throughout the literature, postmodernism is consistently described as emphasizing contextual construction of meaning, recognizing the complexity inherent in systems, challenging convention, tolerance for ambiguity, and embracing multiple perspectives as opposed to assuming there is an ultimate truth to be found (Beck, 1993; Shank, 2002; Solomon, 2000; Wilson, Teslow and Osman-Jouchoux, 2000). In consideration of these characteristics, the following definition of postmodernism was adopted for this study: “(A) way of thinking which celebrates the multiple, the temporal, and the complex over the modern search for the universal, the stable, and the simple” Hlynka (as cited in Seels & Richey, 1994, p. 132). This definition speaks to the fact that so much of past research in doctoral attrition has looked for *the answer* in the identification of attrition factors. In contrast this study focused on the experience of the participants and their own interpretations of how they experienced it.

Postmodernism and research. Rather than beginning with a pre-defined notion of absolute truth, postmodernism posits that truth is situational and that we all construct knowledge, truth and reality out of our own experience. It follows that if these three concepts (knowledge, truth and reality) are in fact socially constructed, then they will be characterized by a unique perspective for every individual. The data analysis process in

this study recognizes the uniqueness of each individual's experience. Ultimately, the postmodern theoretical framework was a reminder to continually challenge those ideas which have formed the basis of understanding about attrition and completion (through prior research) in the past; and allowed the emergence of new perspectives on doctoral attrition and completion.

Postmodernism and the researcher. Worsfold (2011) describes the link between postmodernism and research in terms of the researcher as he says,

The role of the interpreter becomes more important. The role of the writer, in other words, is crucial.

...researchers are not simply reporters but constructors of the social areas they research. When you write research you are creating meaning: adding to not just reporting about the social world.

In essence, Worsfold described the involvement of the researcher in the area studied as an asset in the research rather than a liability. This does not mean that the importance of objectivity is ignored, but that the researcher brings context to the interpretation of the data.

Embracing multiple perspectives. Perhaps most important is that postmodernism was chosen as the theoretical framework for this study because it embraces multiplicity. Wilson, et al. (2000) points out that constructivism tends to celebrate complexity and multiple perspectives (p. 137). In tandem, Solomon (2000) holds that postmodernism seeks to make sense of a phenomenon in its own environment rather than super-imposing a pre-defined one-size-fits-all theory onto the situation. The concept of multiplicity influenced the research questions in this study as well as the interview questions and data analysis. Completion and attrition in doctoral programs is a

complex phenomenon. It cannot be explained in simplistic terms; but must be examined on a case-by-case basis. The first sub-question, “*What are the experiences of completers and non-completers in the instructional technology program of a Southeastern research university (aka Eagle University) with very high research activity?*” was formulated to understand the participant’s perspective through their eyes rather than those of any third party. This question, along with related interview questions, elicited the unique perspectives of the individual and moved beyond factual data into an exploration of how the participant’s decisions on completion and attrition were affected. The approach to analyzing completion and attrition began without the assumption that a specific issue could be identified, or a clear solution would be found. Instead, the focus was an open-ended journey to explore the factors that influenced students to continue the doctoral program to the finish, or to abandon their pursuit of the Ph.D.

Justification of the Study

A number of past studies and articles have addressed doctoral student completion and attrition, yet there is still a need for further study to articulate the causes of attrition and to move toward effective solutions. This need remains in part because of the continuing omission of data on Colleges of Education, and on instructional technology in particular, and the recurring narrow focus of past research.

Lack of data on COEs and IT. The shortage of research in Colleges of Education and lack of data on instructional technology have already been reviewed in the previous section of this dissertation, *Statement of the Problem*. Placing this study in the context of Colleges of Education and IT programs will illuminate the literature in these

areas and has the potential to add a new dimension to the study of doctoral completion and attrition.

Focus of past research. Much of past research has been characterized by a search for *the* factors that define or at least contribute to doctoral attrition. Earlier research tried to follow the pattern of traditional research by starting with a demographic framework. For instance, research questions centered on such topics as whether attrition occurred more frequently in men or women, or which ethnic group accounted for the greatest attrition levels (Decker, 1973; Dolph, 1983). Enhancements to these more mundane missions added personal and work/ life factors like the effects of support from family and friends, or the contributions of financial aid (or more specifically, the lack thereof) to completion and attrition rates (Ramos, 1994). Then there appeared to be a gradual shift toward the exploration of psychological factors in the 1980s and beyond. And the final category, institutional factors, weighed in to complete the potpourri of contributors to doctoral completion/attrition (DiPierro, 2007; Stricker, 1994; Lovitts, 1996).

Previous research studies have made important contributions to the discussion of doctoral completion and attrition. An excellent summary of these approaches to the study of doctoral completion and attrition was summarized by Chris Golde (1994) in the observation that “Most of the research on doctoral student attrition has focused on individual student characteristics in an effort to determine which students are more likely to complete their degrees” (p. 1). In contrast, this study will bring a new focus to the topic. First, the population for this study includes non-completers who were formally accepted into the Ph.D. program and left at various points in the program, and not just people who are either ABDs or completers. Second, this study introduces data on a field

not previously highlighted in studies of attrition and completion—instructional technology. Tinto (1993) noted that doctoral persistence is related to the field or department rather than the university. This implies that the study of completion and attrition should be in the context of a department. Third, the results of this study challenge the conclusions of the past. From a theoretical perspective, this means adopting a postmodern perspective for the research.

Limitations

Several limitations of this study should be acknowledged. First, the study does not lend itself to generalizability because:

- This study focused on instructional technology, a very specific program within a COE. This particular program began as a service program to other educational majors, and grew out of relationships with corporate sponsors.
- The students who choose the IT major have backgrounds that are different than most disciplines, as they may come with a variety of Master's degree concentrations. They may also have varied professional goals, only one of which is a professorship in higher education.
- The IT faculty is small, and there are few choices for advisors or for the number of committee members who are required to come from the instructional technology area.

In addition to issues of generalizability, there are two more limitations.

- Some students interviewed will have either completed or left the program recently, while others may have been away for several years.

This can affect the student's recollection of their experiences. In spite of this, it is the researcher's belief that the doctoral program experience is a major episode in peoples' lives, and it is unlikely that the principal issues surrounding their completion or attrition will be forgotten.

- The researcher is also a doctoral student in instructional technology.

This could potentially influence interpretation of results. However, every attempt was made to avoid pitfalls of researcher bias. This will be discussed in more detail in Chapter 4: Methodology.

Terms and Definitions

Following are the working definitions for key terms employed in this study.

ABD	<i>All But Dissertation</i> Refers to doctoral students who have completed, at a minimum, the coursework and the comprehensive exam. Some research studies define ABD as also completing residency requirements, the Prospectus, and any other requirements for the doctoral degree except the dissertation itself. However, for purposes of this study, ABD status is considered to begin as soon as the comprehensive exam has been passed. This decision was made because this is actually the point at which the nature of the program changes. This is when the initial chapters of the dissertation (the Prospectus) are started, and the student moves into a less structured phase of the program.
Active Student	Student who is continuing to meet the university requirements to take a minimum of six (6) semester hours in every rolling annual school cycle involving three (3) consecutive semesters to include spring, summer, and fall semesters.
Attrition	The loss of student(s) from a program before they have obtained the degree.

Attrition Rate	The number of students who have left the doctoral program, expressed as a percentage of those who were accepted into the program over a given period of time.
Cohort	A group of students who began their programs of study in the same semester.
Completion	Refers to fulfillment of all requirements for attaining the doctorate degree.
Construct	An image, idea, or theory, esp. a complex one formed from a number of simpler elements.
Educational Technology	Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources. (Seels & Richey, 1994, p. 1)
Full-time student	To be certified as full-time students, graduate students must carry a minimum of nine semester hours fall and spring semesters and a minimum of six hours in the summer semester.
Grounded Theory	The systematic, qualitative procedure used to generate a theory that explains, at a broad conceptual level, a process, an action, or interaction about a substantive topic (Creswell, 2005, p. 396).
In-process	A student who is still pursuing the doctoral degree program, and meets the university requirement of a minimum of 6 hours' course credit for each rolling 3-semester period. (Includes fall, spring and summer sessions.)
Instructional Designer	Someone who applies a systematic methodology based on instructional theory to create content for learning events.
Instructional Technologist	Person who applies research in learning theory, psychology, and emergent technologies to solve instructional and performance problems.
Instructional Technology	The theory and practice of design, development, utilization, management, and evaluation processes and resources for learning (Seels & Richey, 1994, p. 1)
Meta-synthesis	A qualitative method designed to synthesize findings from both qualitative and quantitative studies. It compares and analyzes many studies together in a constructivist way, allowing interpretive themes to emerge from the synthesis. (Bair & Haworth, 1999, p. 3)

Non-completer	<p>Anyone who starts, but does not finish the Ph.D. program, regardless of when they ended their pursuit of the Ph.D. at Eagle University. (Although they may have made a decision to pursue the Ph.D. elsewhere.)</p> <p>And/or</p> <p>A student who does NOT meet the university requirements for being an active student.</p> <p>=====</p> <p>Note: Most studies define non-completers as people who have not completed the program within the university's time guideline—often 7 years. However, in his article <i>In Humanities, 10 years may not be enough to get a Ph.D.</i>, Gravois (2007) suggests that people pursuing a Ph.D. may need more than 10 years to completion; and that just because someone doesn't complete within 7–10 years doesn't mean they won't finish.</p>
Non-graduate	Student who has not yet completed the doctoral degree program but who has not dropped out.
Persistence	Continued effort; tenacity
Ph.D.	Doctor of Philosophy. Note that the term Ph.D. when used in conjunction with a discussion of attrition, is used interchangeably with the term 'doctorate' and is therefore assumed to include students seeking the Ed.D. degree
Postmodernism	(A) way of thinking which celebrates the multiple, the temporal, and the complex over the modern search for the universal, the stable, and the simple (Hlynka, as cited in Seels & Richey, 1994, p. 132).
Retention	Retention studies track continued registration in the original doctoral program of choice.

Summary

In summary, the objective of this study was to explore doctoral completion and attrition in instructional technology at a major Southeastern research university. The underlying framework for the study is postmodernism, that lays the groundwork for using

a new lens through which prior assumptions and results are not taken for granted, meaning is gleaned from participants' interpretations of their own experiences, and the complexity of the decisions to complete or leave the program are highlighted.

The purpose of the next chapter (Chapter 2) is to present a review of literature addressing issues related to doctoral completion and attrition.

CHAPTER 2

LITERATURE REVIEW

If you steal from one author, it's plagiarism; if you steal from many, it's research.

Wilson Mizner (1876–1933)

Introduction

This literature review represents a compilation of factors that potentially affect attrition in doctoral programs. Of course, the intent is not to ‘steal’ from the ideas and conclusions of others, but to honor their efforts and expertise by examining their resulting literature for foundational principles and common threads to support this new research study.

This chapter begins with a historical overview of the doctoral degree and speaks specifically to the goals and structure of doctoral programs in the United States. This is followed by an overview of instructional technology programs with a focus on the uniqueness of these programs and how this might relate to attrition in the field. Next is an introduction to the broad categories of factors that influence doctoral completion and attrition, and finally the review of the literature. This review describes a number of prior studies and articles that are representative of past research on this topic. The goal is to paint a picture of the array of investigations previously completed, the direction this type of research has taken over time, and the general conclusions reached.

Goals and Structure of the Doctoral Program

The term ‘doctor’ was in use from medieval times to connote distinction in fields of teaching and learning. The modern doctorate, however, in the form of the Ph.D., dates from the early nineteenth century in Germany, from where it spread to the United States, and then, in the early twentieth century, to Britain. (Parry, 2007, p. 15)

In order to understand attrition, it is important to first understand the doctoral studies environment. That is, the composition and framework of the doctoral program itself. This topic will offer a brief history of the doctorate in America and identify several elements of doctoral programs that could potentially influence completion and attrition in the instructional technology program at Eagle University.

The Birth of the Doctorate. In her book chapter *Graduate Education and Research*, Patricia Gumport (2005) provides an excellent overview of the beginnings of doctoral education in the United States. The first doctorate in the United States was awarded in 1861 by Yale's Sheffield Scientific School. The second was awarded by the University of Pennsylvania in 1871 and the third by Harvard in 1872. However, the founding of Johns Hopkins University in 1876 is often singled out as the pivotal event in the establishment of graduate education as a prestigious academic goal (Berelson, 1960; Gumport, 2005; Spurr, 1970). Johns Hopkins was organized with the specific mission of graduate education and incorporated research as a major university function. Fellowships were provided for deserving students, which allowed them to study and conduct research on a full-time basis. It is interesting to note that prior to this time, research was not automatically embraced as a function of the university; and the concept of scientific research, which is thought of as a distinctly German influence on the American

university, was actually a concept misunderstood by most Americans. In his book *The Emergence of the American University* (1965), Laurence Veysey chronicles the German connection with research. He explains that the 10th century German university espoused three primary principles:

...first, on the value of non-utilitarian learning, freely pursued without regard to the immediate needs of the surrounding society (hence “pure” learning, protected by *Lehrfreiheit*); second, on the value of *Wissenschaft*, or investigation and writing in a general sense, as opposed to teaching (*Wissenschaft* did not necessarily connote empirical research; it could just as easily comprehend Hegelian philosophy); finally, on their epistemological side, German statements of academic aim continued to run toward some form of all-encompassing idealism. (p. 126)

The concept of painstaking investigative research was evident on a less “official” level in German universities from 1850 to about 1880. And while Americans somehow associated this with science, Veysey explains that, “This method had no intrinsic connection with the manner in which most German professors still talked about academic purpose.” Veysey continues by saying:

Aspiring Americans who visited Germany and returned with the phrase “scientific research” on their lips compounded this phrase from elements of German theory and practice which had had very different contexts in their original habitat. The German ideal of “pure” learning, largely unaffected by utilitarian demands, became for many Americans the notion of “pure science,” with methodological connotations which the conception had often lacked in Germany. The larger, almost contemplative implications of *Wissenschaft* were missed by the Americans, who seem almost always to have assumed that “investigation” meant something specifically scientific. (p. 127)

Thus in the United States, the use of “scientific research” gradually grew to be a part of the doctoral experience. As Gumpert (2005) explains:

After initial resistance to the German idea of studying science for its own sake, and after conflicts between self-identified pure and applied scientists, scientific research gradually gained more acceptance. (p. 430)

And as graduate programs grew, many professors who had initially opposed the idea embraced scientific research as a legitimate and laudable activity:

Science became an increasingly specialized activity that professors could pursue autonomously, yet with the security of support, personal advancement, and even prominence within an academic institution. (Gumport, 2005, p. 430)

In his book *Graduate Education in the United States*, Bernard Berelson (1960) summarizes this well as he says, “It is always well to remember that the graduate school came into being under the pressures of science and that it has lived its whole life in an increasingly scientific and technological age” (p. 12).

Everyone who championed graduate education did not support the role of research in graduate study. But when Harvard reorganized the structure of the university in 1890, a clear distinction was made between undergraduate and graduate study—with research being the clear winner as the focus of graduate education (Berelson, 1960, p. 12).

Soon other schools followed Johns Hopkins’ (and Harvard’s) model, including the research component. By 1900, there were 14 Ph.D.- granting universities in the United States who conferred about 250 legitimately earned Ph.D. degrees. These schools all included research as a central component of their programs:

The end of the nineteenth century saw the research university emerge as a new kind of social institution devoted to scientific research as well as to graduate education. The extent of institutional ambition was so pervasive that developing universities imitated one another....Across the country, homogeneity in the proliferation of graduate programs and faculty positions suggests that universities sought to acquire not only intellectual legitimacy but a new kind of economic and political legitimacy as well. (Gumport, 2005, p. 433)

Yet conflicting viewpoints remained after the birth of the doctorate. When William James referred to it as “The Ph.D. Octopus” in 1903, he shared his concerns that the true spirit of learning could be crushed by this beast:

America is thus a nation rapidly drifting toward a state of things in which no man of science or letters will be accounted respectable unless some kind of badge or diploma is stamped upon him, and in which mere personality will be a mark of outcast estate. (as cited in Berelson, 1960, p. 22)

Thus began doctoral education in the United States. And that early research focus is still a fundamental part of doctoral programs today.

Structure of Doctoral Programs. Although there are many variations and nuances, the core structure of doctoral education has remained consistent.

...a few years of prescribed courses, followed by examinations for advancement to degree candidacy, culminating in a dissertation that reflects original research conducted by the student under the guidance of a faculty committee. (Gumport, 2005, p. 428)

Clark (as cited in Gumport, 2005) expands on Gumport’s description by saying:

The ideal, dating back to Humboldt, has been for students to engage in advanced study along with research training. Arrangements for research training have reflected distinct disciplinary patterns; in the sciences, where research is laboratory-intensive, a graduate student may work under faculty supervision, with the dissertation as a piece of a faculty member's research project, while in the humanities, where research is library-intensive, a student may work independently, with little or no faculty or peer contact unless they initiate it, often for months at a time. (Clark, as cited in Gumport, 2005, p. 428)

As doctoral programs were added to universities, they became another layer of the related individual department. This structure, which is still standard today, allowed the same faculty members to oversee both undergraduate and graduate programs. Within those programs, the areas of specialization in a department were a reflection of the interests of its professors. As Gumport (2005) elaborates, “This was especially apparent

in the newly established natural and social science departments, whose very existence was justified on the basis of specialized research” (p. 432).

Soon after the end of WWII a new organizational structure for research flourished. It was termed the Organized Research Unit (ORU) (Gumport, 2005, pp. 446–7). This new unit did not correspond to existing instructional units or departments, but usually grew out of grants for specific types of research. This new structure had some benefits. For example, it helped universities move into more inter-disciplinary research and provided a bridge that allowed universities to address real-world needs and problems. In addition, ORUs regularly provided dissertation support and stipends for graduate students and often made state-of-the-art facilities and equipment available to researchers and students. However, there were also some drawbacks. ORUs were sometimes at cross-purposes to university departments, with faculty loyalties becoming divided and periodic conflicts with non-faculty research personnel who supervised graduate students.

Concentration of Doctoral Degrees. The doctorate grew out of an emphasis on science. As a result, early doctoral degrees were focused primarily in this area. By 1965 and into the 1980’s, the predominance of science was still evident:

Physical sciences, life sciences, and engineering accounted for close to half the doctorates awarded in 1965; two decades later they still predominated, although life sciences remained fairly constant at about 20 percent; humanities dropped from 20 to 10 percent; and education increased from about 15 percent to 25 percent. (Gumport, 2005, p. 445)

Today, the doctorate is awarded in the United States in the life sciences, the social sciences, education, physical sciences, mathematics and engineering, humanities, and business. The doctorate is also awarded in other professional fields such as public health, social work, architecture, etc.; and according to the National Center for Educational

Statistics, the number of doctorates awarded in 2009 was 67,716 (U.S. Department of Education, 2010).

The Training of Professors. In their book *The Doctorate Worldwide* (2007), Powell and Green describe two basic types of doctorate degrees. The widely known Doctor of Philosophy degree, or Ph.D., is the research doctorate and is considered a requirement for becoming a professor. A second degree is termed the professional doctorate, which generally prepares students for employment outside of academia. There are over 20 professional degrees considered to be doctorates. Examples include the medical doctorate (MD), the Doctor of Fine Arts (DFA) and the Doctor of Education, which goes by the moniker Ed.D. The choice of degrees awarded by a university clearly creates a specific focus in the programs offered. For example, the awarding of the Ed.D. Degree indicates a focus on practicing educators, often K–12, as opposed to a pure research focus that might prepare degree holders for careers in the professorate. First conferred in 1921, the Ed.D. emerged during a period in U.S. history when many other professions acquired their own special doctorate degrees (Archbald, 2011). It is important to note that many of the studies discussed in this chapter that involve education doctorates include either the Ph.D. or the Ed.D. or both. However, the audience for this study is limited to Ph.D. students, as Eagle University does not offer an Ed.D.

There have always been disagreements about the nature of the Ph.D. and its goal of preparing students for professorships. From its inception, there were those who favored the research focus, and those who did not. The research focus represented a deviation from the American approach to education, having its roots traced to the German educational model. Some of the opposition reflected an ever-present resistance to change,

while some people were concerned that “Man and his works might be investigated in the same unsettling and particularistic fashion that was now being applied to natural processes” (Veysey, 1965). And as the needs of society move toward application of knowledge rather than knowledge for knowledge’s sake, the debate still rages. Few if any would argue that the Ph.D. degree should be stripped of its research focus. The real debate centers on whether someone with a research focus has a place in the work world beyond the traditional professorship. Based purely on numbers, Lovitts (2001) states that the majority of Ph.D.s do not work in, or even seek to work in academia; and Wendler (2010) says that higher education can only absorb about 50% of Ph.D.s produced, while the remaining Ph.D.s move into professional positions, business and industry, or government work.

Funding the Ph.D. Graduate education has always relied primarily on funding from outside sources. As early as the 1870’s private philanthropists made generous donations to their preferred institutions. As graduate programs expanded, so did the variety of funding available. Foundations like John D. Rockefeller and Andrew Carnegie were instrumental in providing grants for research. And by the early 20th century, the federal government became a major player in financing research and therefore indirectly, in financing graduate education. When federal funding first began in the late 1800’s, it had to pass through the states. However, this changed in the 20th century, and federal funding was able to pass directly to the institutions themselves (Gladieux, King, & Corrigan, 2005, p. 168). By the end of World War II, the federal government became the largest consumer of academic research and therefore the greatest supporter of graduate

education. Essentially the government sponsored research they felt would further the current U.S. agenda, primarily through grants to academic institutions.

When Sputnik launched in 1957, the federal government poured even more money into scientific research, which in turn was a major benefit to research universities and to doctoral students. Table 5 summarizes the type of support received by doctoral students in the United States, as presented in Berelson's book *Graduate Education in the United States* (1960).

The second and third categories were those that would be affected by research funding. It is most interesting to note that Education was on the bottom of the list in terms of the amount of support students received. Even more interesting is the fact that when it comes to time to degree, as we will see later, the highest funded disciplines have the lowest time to degree and vice-versa. The lower the funding levels, the higher the attrition. And in analyzing the application of this funding to the length of time in school, Berelson observes

When all forms of support are summated, students in the natural sciences and engineering receive stipends over an average of four years, those in social sciences and humanities an average of three and a half, and those in education for about two and a half. When these figures are compared with the duration of doctoral study, in elapsed time from start to finish, it turns out that the sciences and engineering have such support for virtually the entire time, the social sciences and humanities for about 60% of the time, and education for about half the time. (p. 149)

By the early 1970's the heyday of federal research funding began to fade. The economic crises of that decade had a corresponding effect on funding, which created a shortfall in the ability of the universities to fund students (Gumport, 2005, p. 442). School research budgets began to nosedive, and both schools and students were

Table 5

Support received by doctoral students by type and field

Support, by type and field				
	<i>Support, outside my own family, requiring no work from me (e.g. a Fellowship)</i>	<i>Support requiring work that contributed greatly to my degree, e.g., a research assistantship used for dissertation</i>	<i>Support requiring work that did not contribute directly to the degree, e.g., a teaching assistantship</i>	<i>Any of these</i>
Physical Sciences	51%	53%	75%	97%
Biological Sciences	45	47	62	97
Social Sciences	45	28	64	87
Humanities	53	7	63	83
Engineering	48	52	62	95
Education	28	13	48	72
Total Arts & Sciences	48	37	67	92
Total Professional Fields	35	27	51	80
Grand total	35	33	61	88

Note: From "Graduate Education in the United States," by B. Berelson, 1960, New York: McGraw-Hill. Copyright 1960 by the McGraw-Hill Book Company, Inc.

scrambling to find alternative sources of funding. One avenue that schools turned to was internal funding, which meant offering positions like teaching assistantships in exchange for graduate program tuition or using funds from endowments, tuition, or state funding to bolster graduate education. More and more students turned to self-funding and to student

loans, which increased from 15% of the student population in 1974 to 44% in 1984 (Gumport, 2005, p. 443). But even with the tightening of federal funding, federal aid for research in 2003 weighed in at almost \$23 million (Gladieux et al., p. 169). In terms of distribution, the ratios of funding for various departments still reflects national priorities in science in engineering, with over 80% of all federal funding for research going to life sciences (54%), engineering (16%), and physical sciences (11%) (Gumport, 2005, p. 445).

The involvement of the federal government in university funding has had a tremendous effect on the university world in the United States in more ways than one. Research grants have been awarded disproportionately to the 'top' research universities in the U.S. As Gumport explains:

Federal support of academic research has been concentrated in the top one hundred research universities, which comprise less than 3 percent of American higher education institutions. These top one hundred universities were awarded 80 percent of federal research and development (R&D) expenditures in 2000, and they produced nearly 50 percent of all doctoral degrees and nearly 25 percent of all master's degrees in that year. (National Science Foundation, as cited in Gumport, 2005, p. 429)

This has created not only competition to be in that top tier group; but also "...created imbalances, leading the universities to emphasize research over teaching, graduate work over undergraduate work, and the sciences over social science and the humanities" (Gladieux et al., 2005, p. 170).

Cuts in funding in turn had effects on doctoral student attrition. When funding for graduate education is scarce, universities experience more pressure to look for additional sources to fund graduate students. Funding challenges have also been linked to increased time to degree. Between the 1970's to the 1990's, doctoral completion time increased,

with the humanities averaging 8.9 years and the physical sciences averaging 6.8 years (Gumport, 2005, p. 450). In addition lower levels of outside funding, particularly for universities who are not in the top 100 universities who receive the lions' share of federal funding, also affect the ways doctoral students finance their studies. The result is that more and more students must self-fund, requiring them to work while attending school. This situation has been shown to increase time to degree, and may contribute to a student giving up their studies altogether. Bowen and Rudenstine (1992) found completion rates as low as 14.2% at one institution for students relying on their own support to 41.8% for students receiving institutional support.

Some students turn to educational loans, which is a growing trend for graduate students. However, there has been increased concern about the amount of debt students amass as they try to fund graduate study. Growing loan debt can delay or even end a student's quest for the doctorate, as the need for employment becomes more and more pressing. One effort undertaken by some schools (like the University of Chicago, in 1982) is to speed up entry into the dissertation phase by reducing coursework. This approach also helps reduce time to degree, indirectly decreasing potential student debt (Gumport, 2005, p. 451).

Summary. Graduate education in the United States has been a burgeoning enterprise since the late 1800's. Fueled by the investments in research made by the federal government as well as private enterprises, graduate education grew tremendously through the 1960's. However, when the economy waned, so did the level of investment available for graduate schools, thus causing schools to compete vigorously for the limited

research dollars available and students to scramble to put together funding for their educations.

The structure of doctoral programs has remained consistent since their beginnings at Johns Hopkins and other major institutions in the mid- to late- nineteenth century. Doctoral programs continue to emphasize research with a generous mix of coursework and the traditional dissertation capstone. Writing a dissertation has always been a mainstay of doctoral education in the United States, though the dissertation phase of the doctorate is a trying time for most doctoral students. The structure and pressures of a long, complicated research and writing process have been considered to be a clear contributor to doctoral student attrition. This fact is evidenced by the statistics on ABDs (All But Dissertation) and the fact that approximately 1/3 of doctoral students who abandon their quest do so during this phase of the program (Bair, 1999, p.107). Some universities have shifted away from the dissertation in favor of shorter, more practical research papers and/or publications. As Gumport (2005) explains, “the need for the dissertation may be revised...where shorter publishable articles are more valuable currency for launching a career than a long treatise” (Gumport, 2005, p. 454). These types of revisions to graduate education can only enhance its appeal to budding scholars, and will hopefully begin to affect the uncontrolled attrition from doctoral programs across the country.

Instructional Technology Programs and Attrition

Chapter 1 included a brief discussion of completion rates for instructional technology (IT) Students at Eagle University. Based on available data, this rate was guesstimated to be 37%, falling below completion rates reported by other majors in the

Humanities, which is generally considered to have the lowest completion rate of all disciplines studies. An obvious question is, “What is different about the field of instructional technology that might account for such a large discrepancy?” This section will explore the nature of instructional technology programs and describe possible issues that might differentiate instructional technology from other disciplines.

Instructional technology defined. So what exactly is instructional technology? In the book *Instructional Technology: Past, Present, and Future* (1995, p. 5), Cass Gentry offers definitions of IT from several sources. Gentry quotes one rather comprehensive definition from The Commission on Instructional Technology that defines instructional technology in two ways: (1) the media born of the communications revolution which can be used for instructional purposes alongside the teacher, textbook, and blackboard; and (2) a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives, based on research in human learning and communications, and employing a combination of human and nonhuman resources to bring about more effective instruction. A more recent definition developed by the Association for Educational Communications and Technology (2007) uses the term “educational technology (ET),” which they describe as “... the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources” (as cited in Januszewski & Persichitte, 2007, p. 280).

Most professionals in the field use the term educational technology interchangeably with instructional technology (Seels & Richey, 1994, p. 5). However, there remain some academics and practitioners who feel there is a distinct difference

between the two. Some argue that the term ‘instructional technology’ is more inclusive because it takes place in all settings and for all ages, while ‘educational technology’ implies a formal school setting. On the other side, there are those who feel that educational technology is a more appropriate term because it connotes learning initiated by either an instructor or a learner, while the term ‘instruction’ implies a one-way process initiated by the teacher (Januszewski, 2007a, p. 345). In any event, this study will assume the two terms are synonymous for purposes of investigation and reporting.

Focus of IT programs. Regardless of the terminology used, descriptions of instructional technology and educational technology programs in university materials tend to be characterized by both an “instructional” focus that addresses the design of instruction and a “technology” focus which alludes to the use of various mechanical, electronic, or software components such as computers, video equipment, or interactive whiteboards that aid learning. The catalogs for such programs describe preparation of students for careers in K–12, higher education, and corporate settings in positions that include Instructional Technologists, Instructional Designers, e-Learning Specialists, and Professors. In essence, IT, ET, and similar programs prepare students for careers in teaching, research, and those requiring the practical application of these new skills and knowledge in real-world settings, though different programs may have different goals. For example an instructional technology program at University A may focus on the preparation of teachers to assist colleagues with technology integration in the classroom, while the objective of University B’s educational technology program may be to prepare students for the professorate. A cursory review of instructional technology programs offered by various universities reveals two striking features that garner attention: (1) they

are almost exclusively available at the graduate level; and (2) they are offered as interdisciplinary programs.

Graduate-level bias. Unlike other programs in the College of Education or even in other colleges within universities, instructional technology is rarely offered at the undergraduate level. Although other countries have successfully established undergraduate programs in IT recently, the United States lags behind. For example, programs in Australia, Korea, Taiwan, and Europe have indicated that they are achieving a high degree of acceptance and rapid growth (Gustafson, 2010). In contrast, August, 2011 data from the U.S. Department of Education (DOE) listed 169 advanced degree programs in educational/instructional technology (DoEdSearch(a), 2011). These programs included the Master's, Specialist (if offered) and the Ph.D. or Ed.D. Degrees. In comparison, there were only 10 bachelor's degree programs in the US (DoEdSearch(b), 2011).

Gustafson says there are several reasons for the low number of undergraduate programs in the U.S., including a lack of certification for working in schools, the assertion that business and industry prefers graduate degrees, and a resistance to undergraduate programs by faculty and administrators in higher education. This resistance has also taken the form of a variety of claims and assumptions, including lack of physical and teaching resources, lack of incentives to teach undergraduates, assumed low enrollment in such a program, and concerns about the extra work generated by adding another level to existing programs.

Another possible explanation for the low number of undergraduate programs in the U.S. lies in the way instructional technology programs developed within universities.

At its inception instructional technology was viewed as a support area for mainstream teaching positions within a school system. In his article on the study of instructional technology, Robert Heinich (1995) explains that most academic instructional technology departments grew out of media departments in the School of Education. Historically, media was used to enhance teacher performance (p. 61). As a result, it was generally thought that the path to instructional technology was always through teaching; and that IT skills were an add-on skill to the basic role of teaching. But in spite of these issues, Rowley (2010, p. 1) suggests that market demand for Instructional Designers will eventually create pressure on American universities to offer an undergraduate degree or an equivalent certification in instructional technology.

An inter-disciplinary program. McGee and Wickersham (2010) describe instructional technology as both multi-disciplinary and inter-disciplinary, noting that Instructional Technologists may have a wide range of educational backgrounds and professional experience (p. 2469). Similarly, IT programs themselves tend to be interdisciplinary—allowing students the flexibility to tailor their programs to their own career goals and objectives. Larson (as cited in McGee & Wickersham, 2010, p. 2469) found in his research on instructional technology programs that the more flexible a program was in terms of course selection, the more likely it would prepare students for their chosen professions. One additional point of interest is that in their review of graduate programs in the United States, McGee and Wickersham found that 75% of IT programs were most often housed in colleges or schools of education, contrary to the roots of the field in industry and military training (p. 2475) and contrary to the demand for Instructional Technologists in areas outside of the traditional education system.

Trends of interest. A trend in the demographics of graduate students is that they tend to be older (with a rapid increase in students age 40 and older), have more family responsibilities, work full time, and therefore pursue the doctoral degree on a part-time basis (Isaac, Pruitt-Logan & Upcraft as cited in D'Andrea, 2002; Wendler et al., 2010). This trend implies a shift in the status of more graduate students toward part-time study rather than the full-time engagement assumed in the past.

A second trend is shifting career goals. Doctoral students in general and instructional technology majors in particular are finding more and more opportunities to apply their Ph.D.s in areas other than higher education. Lovitts (2001) insists that large percentages of Ph.D.s do not seek or end up in academic positions, and they never have (p. 4). Aside from this assertion, it has been projected that higher education can only reasonably absorb about half of all new Ph.D.s (Wendler et al., 2010, p. 17). The Commission on the Future of Graduate Education in the United States has also found that available tenure track positions are being reduced as more and more teaching positions are filled by non-tenured and adjunct faculty. Imagine what that will mean if Ph.D. production is increased. It appears eminent that doctoral students must consider other avenues for utilizing their degrees. It is also logical that the schools producing those students need to recognize paths to careers that do not match the traditional assumptions made in preparation for university professorships.

Potential to affect doctoral student completion rates. In review, there are several characteristics of IT programs that might affect the experiences and potentially the degree completion rates of doctoral students. Table 6 lists the issues discussed in this

Table 6

IT program characteristics and potential effects on completion and attrition.

Characteristic	Possible Implications Regarding Completion and Attrition
Graduate-level bias	Without an undergraduate foundation in the field, new doctoral students are often being introduced to the foundations of instructional technology for the first time. This is a very different position from the majority of doctoral majors that require a Master's and possibly even an undergraduate degree in the same discipline. 'Beginning at the beginning' could feel daunting and sometimes overwhelming—especially considering that by the end of the program, the student is expected to be an expert in the field. This could contribute to a student's decision to abandon the quest for the Ph.D.
Multi-disciplinary nature of IT programs	Students have varied academic and professional backgrounds, all of which must 'fit' into the structure of the IT doctoral program, whatever that is. Any program dealing with such a wide breath of skills and experience must help students find a common starting point; and then identify the appropriate building blocks to assist the student in preparing for his or her career objectives. This daunting task has the potential to go awry as students make their way through the rigors of a doctoral program.
Inter-disciplinary nature of IT programs	Even after identifying his or her starting point, students must determine what and how to combine a plethora of coursework choices to create the developmental experiences needed to prepare for individual career goals. This expedition requires a higher level of support and advice from faculty than a major that is already structured from beginning to end. Once again, the uncertainty this causes along with the burden of program creation may consequently derail some students.
Shifting demographics	With a student pool moving up in age and family and financial obligations, the need to attend school part-time is not aligned with the academic ideal of the full-time dedicated doctoral student with limited distractions. If demands on the student's time create conflicts with established life patterns, this may result in attrition. And for students whose studies are not fully funded, this issue is intensified, creating a lose-lose situation for the student.
Shift in career goals	With 50% of those earning doctoral degrees headed for the Professorate, the other 50% pursue careers in the private or military sector. This presents a stark contrast to the assumption that all doctoral students are looking toward becoming professors—an assumption made by the very nature of the Ph.D. program at most major universities. This disconnect may cause attrition in matriculating students if the expectations for performance in the doctoral program runs contrary to the student's needs or expectations relative to his/her career goals.

section and offers possible implications concerning their effects on doctoral student completion and attrition.

Factors Influencing Completion

There have been a number of studies done on factors affecting completion of the doctorate. However, the focus is often on students who are ABD (All But Dissertation). ABDs are students who have completed of all degree requirements for the doctorate except the dissertation. In some cases ABD status describes students who have already defended a dissertation proposal, while in other cases, ABD means the completion of coursework and a comprehensive exam, but not the prospectus and dissertation. In contrast, some studies concentrate on doctoral attrition, targeting any students who have discontinued their doctoral studies. But regardless of the audience studied, the goal of much of the prior research has been to identify the factors that cause attrition or support completion in doctoral candidates. Those factors generally fall into six basic categories as described in Table 7. It is important to note that these are categories of convenience, created by the author for the primary purpose of facilitating discussion about findings from the literature. They are not intended to be a perfect match for the categories of every past study that will be reviewed here. The literature review that follows will discuss the findings from the literature in the context of these six categories.

Analyzing Demographic Factors

One of the most often explored areas of attrition and completion is demographics. The term demographics as used in this study is described as

Table 7

Potential Influences on Attrition or Completion of the Ph.D. in Instructional Technology

Categories of Factors	Sample Factors	Category Definition
Demographics	<ul style="list-style-type: none"> • Age • Gender • Race / Ethnicity • Marital Status • Number of children • Entrance exam scores (MAT or GRE) • Employment status (e.g. P/T vs. F/T) 	Student-centered statistics, characteristics or academic measures that can be identified prior to entry into the doctoral program
Academic Issues	<ul style="list-style-type: none"> • Research topic issues • Methods issues • Identifiable skills / abilities (e.g. Time Management; organizational skills) • Doctoral program GPA • Time to Degree 	Learning- and program performance-related issues attributable to the student and directly related to the pursuit of the doctorate. This data corresponds to the period during which the student is enrolled in the doctoral program
Personal Life/Work Life Factors	<ul style="list-style-type: none"> • Job-related issues • Financial issues / Ability to Finance the program • Health problems (Student or family) 	Situational and financial stressors and relationship issues that could impact completion
Psychological Factors	<ul style="list-style-type: none"> • Perfectionism • Procrastination • Fear of success / failure • Locus of Control • Self-directedness 	Personality traits, mental, or emotional issues
Socialization	<ul style="list-style-type: none"> • Integration into academic culture of doctoral study • Students' ability to adapt to these cultures 	Ways in which students learn how to operate within the culture of the academic community, the school, the department and the discipline
Institutional Factors	<ul style="list-style-type: none"> • Admissions criteria • Doctoral program design • Relationship with Advisor / Committee • Financial support provided by the school 	University-, department-, or program-related factors that are under the control of the institution and are directly related to the pursuit of the doctorate

student-centered statistics, characteristics or academic measures that can be identified prior to entry into the doctoral program. Examples of demographics include age, gender, ethnicity, and marital status. Also included are things like

scores on graduate entrance exams and previous GPAs for undergraduate or Master's programs. As such, demographics can be thought of as student characteristics or academic measures that were pre-existing at the time of entry into the doctoral program. This distinction helps to separate them from statistics like GPA earned during the doctoral program, which is classified as an Academic issue.

Prior studies. Early research on doctoral program completion often asked the question, “Are there differences between completers and non-completers based on ‘X’, where ‘X’ is a specific demographic factor. Leading a study by examining demographic factors had been the traditional approach to conducting research in other areas, so it seemed to make sense to apply this approach to completion of the doctorate. A discussion of several studies that address demographics follows.

An early landmark study on doctoral attrition was published in 1960 by Bernard Berelson. His book describing the study, *Graduate Education in the United States*, began as Berelson's doctoral dissertation. Though attrition was not a primary focus of his book, Berelson surveyed faculty members and deans about attrition. He also analyzed and reported demographic information about doctoral students who completed their degrees. Berelson reported the following:

- Only 25% of completers get their degrees in the same states where they got their high school diploma; 40% in the same region (p. 131).
- Only 10–15% of completers attend the same school where they completed their undergraduate degrees (p. 130).

- The majority of doctoral candidates come from universities as opposed to even the most elite liberal arts colleges (p. 131).
- Only 11% of those receiving the doctorate in 1959 were women—an increase of only 1% since 1910. Berelson attributed this disparity to the reluctance of women to work within the first five years of completion; the reluctance of academic employers to hire women; and rules against joint husband-wife employment. Interestingly, he did not see this changing any time soon, and in his words, "...it is hard to see much that can be done about it" (p. 135). However, since that time, this figure has changed dramatically. The demographics collected by the Council of Graduate Schools for the 1992–3 through 1997–8 entering graduate students from 22 participating universities showed that after 10 years, 35.3% of those receiving doctoral degrees were women while 64.7% were men (Ph.D. completion and attrition: analysis of baseline program data from the Ph.D. Completion Project, 2008).
- 26% of the fathers of completers had completed a college education or higher, while 45% did not finish high school. He interpreted this to mean that students saw the value of graduate school in upward mobility.
- His statistics described 69% of the fathers in professional, business, sales, or service careers as opposed to 31% in agricultural or labor positions.

Although this was not discussed in terms of attrition, Berelson did ask graduate deans and faculty to rate how well students' undergraduate programs prepared them for graduate school in specific areas (p. 140). Table 8 shows the responses received.

Table 8

Faculty Perceptions of Student Preparation for Graduate School

	<i>Percentage "satisfactory" (‘Can’t says’ omitted)</i>	
	<i>Graduate Dean</i>	<i>Graduate Faculty</i>
Foreign languages	12%	21%
Writing and organizing ability	20	22
General background of liberal education	42	46
Ability to work on their own	50	59
Preparation in related fields	78	56
Preparation in major subject fields	96	84

Note: From “Graduate Education in the United States,” by B. Berelson, 1960, New York: McGraw-Hill. Copyright 1960 by the McGraw-Hill Book Company, Inc.

Based on this data and responses from his interviews, Berelson concluded that it was desirable to have more background in writing and organizing (in English) and more of a liberal education than additional knowledge in the major subject areas.

In terms of causes of attrition, Berelson found that graduate deans and faculty did not see attrition to be the fault of the school, but rather an issue related to two other demographics: financial support or candidate’s capabilities.

In 1972, Stephen Traw examined the predictive validity of selection criteria in doctoral programs. In his study, he found a significant increase in non-completers after age 40, with the highest rates of non-completion between ages 40–45. He also found the GPA in the Ph.D. program and GRE scores in advanced education as well as quantitative ability scores to be significant factors in predicting completion of the doctorate. Perhaps as important as where significance was found, is the list of demographics for which there was no significance found. These factors included Undergraduate GPA, GRE-verbal

score; whether or not the Master's and/or Bachelor's degrees were earned at the same university as doctoral study; and the time that elapsed between earning the Bachelor's and Master's degrees. An examination of these factors did not appear to differentiate between completers and non-completers.

One of the hypotheses set forth by Toby Hobish in his 1979 study of attrition was that there would be a significant overall relationship between independence, level of masculinity, and level of socialization, in combination with sex and degree status. In terms of sex (gender), this hypothesis was supported by his findings. (Note that the other variables mentioned will be discussed in the section reviewing psychological factors.)

Robert Frank Dolph's 1983 study of doctoral students in the Department of Educational Administration at a major university found a relationship between successful completion and financial aid, time in full-time study, relationships with faculty, time spent with their dissertation chairperson, and scores on the comprehensive examination. However, he found no significance related to the following demographic factors: age, marital status, number of children, number of years between the B.A. and enrollment into the Ph.D. program, undergraduate GPA, and entrance exam scores (MAT or GRE).

In 1992, Bowen and Rudenstine conducted a study considered to be a follow-up to Berelson's 1960 study. Many of the demographics discussed in this study were university-level or program-level factors like number of doctoral programs, average size, and courses offered, etc. However, the study also explored individual completion outcomes related to gender. The findings showed that men were far more likely to complete doctoral study than women.

Lawrence Stricker's 1994 study of institutional factors reported significance in correlating demographics to time to degree—a statistic often shown to be related to completion. Those demographics were defined as the percentages of certain groups enrolled in the doctoral program. For example, the higher the percentage of women, the longer the time to degree. The converse of this relationship (the higher the percentage, the lower the time to degree) was noted for percentages of college-educated fathers, students with competitive fellowships, and students who did NOT transfer from another graduate program.

A momentous study in doctoral attrition and persistence was the meta-synthesis of 118 studies published in 1999 by Carolyn Bair and Jennifer Haworth. The studies included in this research were conducted between 1970 and 1998. Bair and Haworth described meta-synthesis in this way:

Meta-synthesis is a new qualitative method designed to synthesize findings from both qualitative and quantitative studies. It compares and analyzes many studies together in a constructivist way, allowing interpretive themes to emerge from the synthesis. (p. 3)

In summarizing the findings of these 118 studies relative to demographics, Bair and Haworth indicated that age, marital status, race/ethnicity, children, and gender were not generally found to be significant; and were not considered to be accurate predictors of doctoral attrition. They also posited that the longer a doctoral student spends in the process of earning the doctorate, the less likely he or she will complete the degree; and that employment and financial factors are poor indicators of persistence. These findings were in keeping with the findings of Berelson (1960), Dolph (1983), Stricker (1994), and Traw (1972). Coincidentally these four studies were included in the 118 synthesized by

Bair and Haworth; but it is impactful to note that they foretell the overall conclusions reached in Bair and Haworth's meta-synthesis. In 2004 Stripling also concurred by showing that there was no correlation found based on student status/employment status in relation to non-completion.

Since 1999, the trend has been for studies to utilize demographics to summarize descriptive statistics. More recent studies still utilize demographics in analyzing causes of attrition. But rather than talking about demographics as answers to the question of completion, they are used to describe other factors identified as potential causes of attrition.

Livia D'Andrea (2002) describes gender distributions across groups as not significant (p. 47). She also talks about the demographic variables that related to the new profile of graduate students that are associated with increased time to degree and higher attrition. She described graduate students as tending to be older, fully employed, and have families and other responsibilities, which she equated to being more likely to be part-time rather than full-time students (p. 43). It is interesting to note the similarities between D'Andrea's findings and those of Berelson (1960), over 40 years earlier. In his book on graduate education he specifically states that most graduate students then were married and therefore required more support from graduate schools, led more normal social lives, and shunned the "austere dedication to studies" that had existed in the past (p. 134).

Another example is the 2003 study by Frances Pullen. The purpose of their study was to explore the relationship between perfectionism, procrastination, and the amount of time doctoral students spend in ABD status. With a maximum of 112 respondents to each question, Pullen examined differences in reported barriers to completion based on gender

and ethnicity. Little was found in terms of gender differences, except that there were five men but no women who had a report of “no barriers.” Pullen also noted that few ethnic differences were found concerning reported barriers to completion; and there were not significant differences between men and women in their responses to the perfectionism survey or the procrastination survey used in the study.

In 2004, Lee Stripling studied students who were ABD non-completers. This category was defined as students who had either completed all requirements for the doctorate except the dissertation and declared their intent not to finish, or had been dropped from the program; or had not been enrolled for at least two credit hours in the last 12-month period. Participants came from the college of education at the University of South Florida. The focus of their study was an investigation of perceived emotional and institutional variables affecting attrition. The population sample was divided into groups based on gender and whether or not the student was pursuing a Ph.D. or an Ed.D. Degree. Stripling discovered that the average age of participants in the study was 48. No correlation was found based on gender, race, ethnicity, GRE scores, or student status/employment status in relation to non-completion. Stripling explained that, “The potential for contribution or causation by any demographic component (e.g., gender, race/ethnicity, GRE score, and/or GPA) to ABD non-completion was not implied...” Instead, he uses demographics purely to describe the groups in the study.

Susan Gardner (2008) studied socialization into the doctoral program and how the socialization process can facilitate or impede successful completion of the doctorate. She reported that:

- Five groups: women, students of color, older students, students with children, and part-time students— all reported negative interactions with others, structural impediments to success, and general feelings of “differentness” that affected their overall satisfaction and integration in their degree programs (p. 130).
- Of the 12 students who discussed leaving, who used anti-depressants in coping with the program, or who had to seek professional help to assist them through their degree programs, all were women except one.

Conclusion. Findings from research studies have been mixed in looking at demographics and their relationship to attrition and completion. Some studies found significance between demographic factors (e.g. males vs. females) while others did not. Some studies described differences between program outcomes for various ethnic groups, while others did not find any significance. And as studies have evolved, demographics have been a vehicle for descriptive statistics and presented as a prelude to study analyses and conclusions. So although demographics have shown some promise in terms of describing attrition / completion, it is difficult to point to specific demographics as defining factors in attrition. This leads back to the conclusion drawn by Bair and Haworth (1999), that demographics are not accurate predictors of success.

Another way to look at demographics is that these characteristics may *describe* the phenomenon of doctoral attrition in demographic terms; but it doesn't necessarily *explain* it. Perhaps the more important questions are “Why does attrition occur,” or “What are the issues underlying demographics that cause one group to have higher attrition than another?” Questions like these are the underpinnings for exploring the five

categories of factors that follow: Academic Issues, Personal/Work Life Factors, Psychological Factors, Socialization, and Institutional Factors.

Examining Academic Issues

The Academic Issues category describes factors that are part of the university setting and could potentially influence completion or attrition. They are considered to be learning- and program-related issues attributable to the student and directly related to the pursuit of the doctorate. Examples of academic issues are problems identifying a research topic, data interpretation challenges, GPA during doctoral study, and ultimate time to degree. Another type of factor included in academic issues is skills that affect academic achievement, like time management skills and organizational skills. Generally speaking, factors included in this category will emerge while enrolled in the doctoral program.

Prior studies. Berelson's 1960 study highlights a major topic that falls into the category of academic issues category ... time to degree. Time to degree can be an elusive concept. Berelson aptly points out that comparing figures published on time to degree is very difficult because there are multiple ways of measuring it:

1. Time elapsed between receiving the Bachelor's degree and receiving the doctorate.
2. Time elapsed between entering graduate study and receiving the doctorate, or
3. Actual time spent in doing the work for the degree, which does not count time away from the program. (pp. 156–7)

Based on the second definition, Berelson's book presented average time to degree for study participants as five years. However, the Council of Graduate Schools reported

the time to degree for doctoral students in Education to be 12.7 years (The Ph.D. Completion Project – Council of Graduate Schools, 2011).

Arguably, a fourth method used by some institutions measures elapsed time from the time doctoral work is begun to the time the degree is conferred. An added problem with this method is in identifying the beginning of doctoral work. Some students are considered to be in pursuit of the doctorate as soon as they enter graduate work. Others are classified as doctoral students only after attaining the Master's degree. Still others may not declare their status as a doctoral student until they have earned an Ed.S. Degree and re-started their education. And in one extreme case, the German model does not consider students to be doctoral students until they have completed all requirements except the dissertation and are admitted to candidacy (Lovitts, 2001, p. 7).

Regardless of the method of measurement, deans and graduate faculty have shown concern for the time to degree. Berelson speculated that this concern translated to one of two issues: 1) a concern that doctoral students with longer times to degree were entering the workforce very late in life; and 2) the desire to turn out academic practitioners more quickly. However, in his study the average age of doctoral grads was 32 – with a range of 29 to 36—quite a bit younger than later studies by Traw (1972) that listed average age as 40–45, and Stripling (2004) whose participants averaged 48. Yet this confirms the trend summarized in Table 6 that the age of doctoral students has been shifting upward.

Berelson also submits that the average candidate spent the majority of his or her time during the program performing academic work of one type or another (p. 164), concluding that

Even if the candidate did finish in a shorter period of elapsed time but with the same actual time spent on the degree, there would be little gain for the system – only a redistribution of academic talent institutionally and at a higher rate of pay. (p. 165)

Issues identified by Berelson (based on the perspective of university faculty and deans) as prolonging time to degree included the desire of some candidates to remain in the academic learning environment and culture; difficulty meeting degree requirements; being held back by faculty in order to provide cheap labor for teaching; difficulty completing the dissertation. Following this list, Berelson considered the major reason students did not finish sooner to be lack of financial support, which led to the need to work and thus prevented full-time study (p. 163). Issues related to completing the dissertation (e.g. length of the dissertation; faculty support) were described as second only to money in the cause of elapsed time to the doctorate (nearly 30% of all non-completers (p. 179).

Traw (1972) focused on selection criteria and its ability to predict success in the doctoral program in the College of Education at the University of Wyoming. The variables tested were scores from the Miller Analogies Test, Comprehensive Education Test, Cooperative English Test, the GRE, and Advanced Education tests. Aside from the GRE scores in Advanced Education, he did not find significant differences between graduates and non-graduates related to these variables. Rather than stating that admissions criteria did not effectively predict success, he concluded, “those criteria which can effectively predict a student’s success at the doctoral level had not yet been determined” (p. 71). In short, the study was not able to identify selection criteria to predict success. His conclusions relative to selection criteria can be summarized into a

recommendation that additional studies are needed to identify selection factors that can effectively predict success in the doctoral program (p. 77–8). Yet in 2001, Lovitts seems to contradict this recommendation by saying:

By all accounts, completers and non-completers are equally academically able...Yet, when they find themselves unable to get through their programs, they confront failure for the first times in their lives. This "failure" can be devastating. Indeed, non-completers describe the experience of deciding to leave as "gut-wrenching," and the feel "really shaken up," "horrible," "shell-shocked," "disappointed," and "depressed" by it. Some leave feeling suicidal, some attempt it, and some appear to succeed. (p. 6)

Darla Germeroth's 1991 study identified barriers to dissertation completion for speech communication majors. One major finding was that carving out time to work on the dissertation turned out to be the second greatest barrier to dissertation completion. Other significant academic barriers that emerged were data collection and choosing a topic; although the latter was a greater problem for qualitative researchers than for their quantitative counterparts.

Bowen and Rudenstine's 1992 study drew attention to elapsed time to degree (TTD), defined as the elapsed time from entry into graduate study to completion of the doctorate. Results showed TTD of 10.32 years for the doctorate in Education vs. a low of 5.89 years for the doctorate in Physical Science. These findings confirmed an inverse relationship between time to degree and completion rates in two ways:

1. When there were time periods where students had higher TTD, there were lower completion rates.
2. Disciplines with lower TTD had higher completion rates; and those with higher TTDs had lower completion rates.

The findings were consistent with the hypothesis presented, and highlight the important relationship between time to degree and completion, although the findings were mixed—a link that would continue to be examined in future studies.

Green and Kluever (1997) studied barriers to completion by using their Dissertation Barriers scale, developed specifically for this study. In examining barriers related to academic issues, they discovered that time management was one of the two greatest barriers to completion. A second important barrier identified covered issues related to the dissertation topic. This echoed the findings of Darla Germeroth in 1991 around choosing a dissertation topic.

The academic factor described in the meta-synthesis of Bair and Haworth (1999) was student status. In other words, how did a student's status—being full time or part time—affect his or her completion of the doctoral degree? One might assume that being part time would automatically increase elapsed time to degree and therefore completion. Remember that TTD was identified by Green and Kluever (1997) as affecting completion of the doctorate. However, Bair and Haworth reported mixed results on this issue. In fact, some studies in the meta-synthesis did not find significance related to completion because of the student's status. This was in keeping with the findings of Berelson (1960), Traw (1972), Dolph (1983), Bowen and Rudenstine (1992), and Stricker (1994), and Stripling (2004). In the end, the resulting conclusion reached by Bair (1999) was that "The weight of the research evidence suggests rather convincingly that traditional academic indicators are not reliable predictors of persistence to the doctoral degree" (p. 88).

In 2001, Rita Brause examined the preparation of students for the dissertation process. She was interested in determining why so many people have difficulty writing

the dissertation, which in turn can translate into non-completion of the doctoral degree. Brause discovered that many candidates approach the dissertation without an accurate picture of exactly what it entails. And in fact, most students thought the dissertation was like a term paper, only longer. This speaks to the misinformation many doctoral students have upon entry to the program, and the resulting unrealistic expectations they may have of the process. If not corrected, these misconceptions can certainly translate into early attrition or even non-completion after achieving candidacy, if those assumptions are not corrected. It also has implications for the importance of a comprehensive orientation of doctoral students before they progress too far into the program.

D'Andrea (2002) surveyed 215 professors in 42 states to solicit their opinions about barriers to completion of the doctoral degree. Professors who participated felt that a major barrier to completion of the dissertation, and therefore of the doctoral degree, was ineffective/inadequate writing skills. They reported that many students had difficulty writing the proposal, due in part to poor writing skills and in part to an inability to conceptualize, organize, and plan (p. 51). All of these skills are clearly critical to the completion of an acceptable proposal. These findings might also make a good case for early indoctrination / socialization into the requirements of the program, like beginning the writing process early in the doctoral program.

Pullen's 2003 discussion of self-reported barriers to completing the dissertation examined a number of academic factors, including time in the doctoral program, when the comprehensive exam was passed, and whether or not the dissertation was qualitative or quantitative. Findings showed that 30.7% of respondents had problems with dissertation-specific issues like organizing the dissertation, being unprepared for the

process, conducting research, and writing skills. This supports the writing concerns mentioned by professors in the D'Andrea study (2002). Over 35% had difficulty managing their time. Preparation, writing and time management have been mentioned before in earlier studies summarized. However, a new issue has emerged—conducting research.

Bradley Yeager (2008) investigated factors that inhibited or enabled completion of the dissertation. His subjects were six non-traditional age male students, three ABDs and three completers. Participants indicated that the selection of the dissertation topic was the most important yet challenging task cited by participants. This lends credibility to the results described by Germeroth (1991) and Green and Kluever (1997).

Conclusion. Academic issues had mixed results in terms of their significance related to successful completion of the doctoral program. There were also inconclusive findings on selection criteria and their influence on completion. At the same time, several clear themes emerged as recurring barriers to success. They include dissertation issues like preparation for the process, topic selection, and writing skills. It is also clear that elapsed time to degree is an important issue to watch and if possible to minimize.

Identifying Personal Life/Work Life Factors

Personal life and work life factors can be situational or financial stressors and relationship issues, and span a number of factors, including financial support, family issues, job-related challenges and health problems. Any or all of these factors can converge to support completion or create barriers to completion for doctoral students.

Prior studies. When Dolph wrote *Factors Relating to Success or Failure in Obtaining the Doctorate* in 1983, his hypothesis on finances was: “There is no significant difference between groups concerning finances” (p. 68). The “groups” he spoke of were those who completed the doctorate and those who were officially admitted to the program, but left before completion. He was right. He explained that 51.2% of the students who did not earn the doctorate reported that finances were not an issue. In fact, they had more than adequate finances to complete the degree. The percentage of students who completed the degree was nearly the same, with 52.3% reporting adequate finances for the degree. He concluded that finances were not a factor in doctoral degree success or failure, a result that would be challenged by future research.

In 1991, Germeroth reported that job-related pressures and demands of employment were the greatest barriers to completion of the doctorate for participants in his study. He also reported that women were much more likely than men to experience role conflict as a barrier to completion. This issue relates to the struggle women face as they attempt to fulfill roles as defined by society, while trying to maintain their focus on doctoral studies. In a related study, Hobish (1979) found that success requires traits like assertiveness and dominance, which were typically considered masculine traits. It appears that Germeroth’s finding is certainly plausible, particularly for the time during which the study was conducted. In fact, Hobish sums up the issue quite well as he observes, “Clearly, (completing the doctorate) is a style of achievement that is antithetical to stereotypic femininity in our society” (p. 12). However, there is one caution about the results of Germeroth’s study. Participants in the study were all successful. That is, they had already earned their Ph.D. or Ed.D. in communication. In asking this group about

barriers, one is most assuredly asking ‘What barriers were you able to overcome?’—since they clearly did not let any barriers stand in the way of completion.

As Bowen and Rudenstine (1992) explored factors related to the student’s personal/work life, they discovered that students who were self-funded (as opposed to receiving financial aid) had higher attrition rates and an estimated 10–20% longer time to degree. The latter figure translated to a full year longer than students receiving institutional support. At the same time, students with teaching assistantships had slightly higher rates of completion and shorter times to degree. The researchers attributed this statistic to a higher level of interaction between teaching assistants and faculty and other students, which was expected.

External pressures were identified as one of the two greatest barriers to completion by Green and Kluever (1997). These pressures included financial issues as well as family/relationship issues.

In their meta-synthesis, Bair and Haworth (1999) described employment and financial factors in the personal/work life category, reporting that these findings were mixed. For example, Bair and Haworth noted that students who worked throughout their doctoral programs and did not complete the degree cited job responsibilities as a major issue affecting completion of the degree. At the same time, students who worked and completed their degrees felt that the job experience gained was a contributor to their progress in the program. Bair and Haworth explain this apparent contradiction this way: “The implication is that the responsibilities of employment can work either way depending upon the circumstances, they can either enhance or impede progress toward the degree” (p. 89).

Other aspects of personal/work life described by Bair and Haworth as barriers to completion included financial pressures and insufficient finances. They summarize this issue by saying:

Financial problems and pressures and insufficient finances were cited as situational barriers to completion in several studies. However, although financial difficulties were widespread among students represented in this meta-synthesis, they were not always found to be significant as actual impediments to persistence. (p. 90)

It is certainly interesting to note the magnitude of the potential impact of these issues, whether positive or negative. This is particularly curious in light of the “no significance” finding reported by Dolph in 1983 when discussing the impact of finances.

D’Andrea (2002) confirmed situational stressors described by Bair and Haworth in listing demands of outside employment, stressful personal relationships and pressing financial demands as significant factors in degree completion (p. 53). Keeping in mind that respondents in this study were professors and not students, outside employment was rated as the most frequent obstacle in the ‘Life situations as obstacles’ category across all respondents.

Barbara Lovitts (2001) studied 816 students—511 completers and 305 non-completers. The group consisted of students from one rural university and one urban university. Based on surveys and interviews with the students and interviews with the directors of graduate study from each department, Lovitts described statistics related to financial support.

Completers were twice as likely as non-completers to receive a TA (Teaching Assistant); and three times more likely to receive an RA (Research Assistant). This may suggest that students who get involved in

research projects are more positively influenced to progress toward the degree.

Non-completers are six times more likely to have received no financial support than completers. (p. 95)

This appears to bear out Bowen and Rudenstine's findings that students who are self-funded have higher attrition rates and lower completion rates; while at the same time contradicting Dolph's 1983 finding that finances had no significant effect on completion.

Continuing with the findings of Pullen (2003) concerning self-reported barriers to completing the doctorate, he indicated that 26.9% reported problems with their personal lives that were seen as barriers to completion—the fourth most frequently cited barrier. These included things like jobs, money issues, divorce, parenting responsibilities, taking care of elderly parent.

Yeager's 2008 study comparing ABDs to completers discovered that professional advancement was reported as an inhibiting factor because increases in job responsibilities required more time and attention, thus detracting from available time for doctoral studies. In a similar vein, Willis and Carmichael (2011) discovered that full-time employment was used by five of six non-completers in the field of Counseling Education as a refuge when they encountered challenges during doctoral study. As a result, the job encroached upon the time needed for study and subsequently became a barrier to completion.

Conclusion. Some personal/work life factors have been shown to act as barriers for some while serving as enhancements to completion for others. And as with the Demographic and Academic categories, some studies have found significance in these types of factors in terms of their impact on attrition or completion. Yet other studies find no significance. The more consistent findings report a relationship between types of

financial support and completion, indicating that those who receive institutional funding are more likely to complete. Situational stressors which may vary by students, such as personal issues or family pressures, are also seen as barriers to successful completion of the doctorate.

Exploring Psychological Factors

Psychological factors are personality traits, mental, or emotional issues. Examples of psychological factors affecting attrition or completion of the doctoral degree are perfectionism, procrastination, locus of control and self-directedness. Research in this area was not plentiful in early studies on doctoral attrition and completion, but began to surface more and more in the 1990's, and beyond. This may be due to a greater focus on demographics and academic issues in early research, as well as the later emergence of assessment tools that helped identify levels of psychological traits like perfectionism and procrastination.

Psychological factors may be difficult to measure and are certainly even harder to change. However, they can impact attrition and completion, as demonstrated by the studies that follow.

Prior studies. An older study involved psychological traits centered around a demographic: gender. In an attempt to examine differences between male and female attrition, Hobish (1979) submits that women drop out in disproportionate numbers during the dissertation stage. These findings were similar to those of Berelson (1960), Bowen and Rudenstine (1992) and Stricker (1994). Hobish also describes the dissertation process as “a psychological experience most critically related to the contextual research tasks

embedded in the dissertation requirement” (p. 2). His study, then, looks at personality issues related to sex (gender), that might affect this disparity. Hobish identified level of masculinity (defined as independence and dominance/assertiveness) as the primary psychological characteristic to be investigated, hypothesizing that the two corresponding variables, in connection with sex (gender), would be significantly different for ABDs and SDCs (Successful Degree Candidates). Level of masculinity and independence were measured by the Bem Sex Role Inventory (BSRI; Bem, 1974) and subsequently by the new two-factor masculinity scales (dominant/assertiveness and independence). The results of this study concerning independence showed that independence did not yield significance in differentiating ABDs from SDCs in relation to sex. Hobish surmises that this factor may actually be more closely related to maturity than to sex or degree status (p. 12). However, there was significance found for dominance/assertiveness. Hobish speculated that this result demonstrated that regardless of gender, the successful doctoral student needed to be able to aggressively defend his or her study, which might account for this finding.

In her 1991 study on completion of the dissertation, Germeroth reported that perfectionism was the third greatest barrier to completion for participants. Perfectionism was also found to be a greater barrier for women than for men as well as for qualitative (as opposed to quantitative) researchers. Although Germeroth’s study does not delve into the reasons for higher levels of perfectionism in women, she offers several possible explanations for this finding. One is that women may have felt a need to overcome prior stereotypes and discrimination by proving their legitimacy (p. 71). In other words, the perfectionist tendency arises out of an effort to be ‘better’ than male counterparts, and

therefore above reproach. A second conjecture is that women have a fear of fulfilling another stereotype—that they will waste their training by getting married and raising children instead of putting their credentials to use (p. 70).

When Kluever, Green, and Katz (1997) presented a paper on psychosocial variables to the annual meeting of the American Educational Research Association in 1997, they contended that the literature was lacking in the discussion of personality characteristics of doctoral students. Their study was an attempt to begin to fill that gap (p. 3), and described not just barriers but also motivators for completion. Included in the personality characteristics explored was persistence, described by participants as a major contributor in attrition / completion of the dissertation. Those who had finished the degree named interest and curiosity about their topic as motivators toward success. They also indicated that they would not have gotten through without a strong determination to finish.

In her 1999 meta-synthesis, Carolyn Bair indicated that personal and psychological variables were a relatively new area of study concerning doctoral student attrition and persistence. However, four key psychological factors were uncovered in the study: 1) student motivation; 2) self-concept; 3) goal directedness and 4) well-being (p. 91). Motivation (or lack of motivation) was found to be a significant factor in a number of studies in the meta-synthesis; and students with a “never give up” attitude are much more likely to complete the program (p. 92). Results were mixed regarding self-concept. Although positive self-concept appeared to relate to completion, negative self-concept was more closely related to withdrawal from the program (p. 94). And though few studies reviewed dealt with well-being, there were some indications that stress is a

significant factor in attrition. A limited number of studies reviewed by Bair linked other psychological factors to attrition, including fear of success, need for achievement, locus of control, and perfectionism.

D'Andrea's 2002 study presented the professors' perspective on obstacles to completing the Doctorate in Education and addressed a number of psychological factors. Procrastination was the highest-rated factor in terms of obstacles to completion, with loss of motivation being the second highest. D'Andrea felt that procrastination was a natural result of students not being sure of what they are doing. The study also pointed to dependency on professors as an obstacle. This, they felt was most likely caused by anxiety and the desire to survive. And finally unrealistic thinking was highlighted, with the author explaining that uninformed students tend to misjudge the amount of work involved in obtaining the doctorate (p. 52).

Pullen's 2003 study turned a spotlight on the psychological traits of perfectionism and procrastination. Pullen's findings supported the idea that perfectionism is a multi-dimensional construct that can be a motivator to some or an inhibitor to others. She found a significant positive correlation between procrastination and what she called discrepancy perfectionism. However, there was no significant positive correlation between time spent in ABD status and overall measure of Procrastination. Pullen also described responses of participants to questions concerning emotional issues. In fact, over 19% of participants cited feelings and emotions as barriers to completing the dissertation (e.g. lack of confidence, perfectionism, anxiety, depression, fears, stress, and burnout) (p. 68). In addition:

- Role conflicts were reported by several respondents (p. 68).

- 58.9% of respondents reported experiencing general negative feelings about the dissertation process (e.g. stress, anger, bitterness, depression, hopelessness, confusion, etc.) (p. 58). Yet 45% described feeling positive feelings (e.g. anticipation, eagerness, enjoyment, determination, relief, satisfaction, etc.) (p. 64)
- 14.2% described having negative feelings about self (e.g. angst, guilt, shame, embarrassment, and self-doubt) (p. 65).

Yeager's 2008 study of completion vs. attrition showed that two of the three ABDs leaned heavily toward procrastination, and were moderately concerned about perfectionism.

Conclusion. Though Stripling (2004) felt that studies on procrastination and perfectionism did not provide meaningful results (p. 41), the most consistent findings concerning psychological factors seem to point to procrastination and perfectionism as barriers in completion of the dissertation and hence the doctoral degree. Perhaps this difference in opinion again highlights the divergent opinions on the role played by individual factors in identifying reasons for doctoral attrition. In any event, a powerful motivator that emerged to counteract multiple barriers to completion was persistence, which has been credited by multiple candidates with helping them push through to successful completion of the degree.

Factoring in Socialization

Socialization can be thought of as ways in which students learn how to operate within the culture of the academic community, the school, the department and the discipline. Socialization encompasses integration into the academic culture of doctoral study and the students' ability to adapt to these cultures.

Prior studies. One of two potential predictors of attrition explored by Hobish in 1979 was level of masculinity, which was discussed in the previous section on psychological factors. The second potential predictor was socialization. Using the California Psychological Inventory to assess socialization, Hobish found that although lower scores on this inventory may have affected the initial enrollment of women in doctoral programs, it did not distinguish between female ABDs (All But Dissertation) and SDCs (Successful Degree Candidates). Hobish offered the idea that women might be required to give up some of their traditional socialization in order to be successful doctoral candidates, especially since success factors were distinctly defined as male traits. This led Hobish to speculate that socialization for females might be more complex than it is for males.

Dolph (1983) singled out the issue of social isolation to investigate as part of his study on factors contributing to success and failure in pursuing the doctorate. His study concluded that there was no significant difference between completers and non-completers based on feelings of being socially isolated. In fact, his statistics showed that nearly 75% of successful students (completers) felt socially isolated from fellow doctoral

students either all or most of the time; while only 30 percent of unsuccessful students had the same response (p. 71). One might speculate that his discrepancy in statistics could have occurred because completers, as opposed to non-completers, would have experienced the entire dissertation process, which is often described as the loneliest period in doctoral study.

Tinto's 1993 book on causes and cures of student attrition focuses primarily on undergraduate attrition, and introduces the idea that socialization plays a role in undergraduate attrition. However, in Chapter 6 (Conclusions) Tinto extends his discussion to the topic of graduate attrition and suggests that this phenomenon is best understood as an interaction between the student and the university. Here he describes what he terms *integration*, believing that student retention is "directly related to its ability to reach out and make contact with students and integrate them into the social and intellectual fabric of institutional life" (p. 204). In terms of doctoral study, Tinto points out that this "may involve a specific relationship between the candidate and one faculty member who takes on the role of dissertation advisor and with several faculty who comprise the dissertation committee: and consequently, persistence at this stage may be highly idiosyncratic in that it may hinge largely if not entirely upon the behavior of a specific faculty member" (p. 237). This observation may turn out to be key in assessing the institutional factor of advisor function. This issue will be discussed in the next section of this chapter, *Institutional Factors*. Tinto also believed that the presence of a model or theory could provide the necessary framework for doctoral student persistence research. His resulting model (pp. 238–240) outlined the role played by two types of integration: academic and social. This model became a starting point for several future researchers

like Girves and Wemmerus (1988) and Tuckman, Coyle and Baye (1990) who would begin to offer variations of Tinto's model to describe doctoral attrition.

In Lovitts' 1996 study titled *Who Is Responsible for Graduate Student Attrition-- The Individual or the Institution? Toward an Explanation of the High and Persistent Rate of Attrition*, Lovitts begins by challenging prior assumptions that the student is the source of issues causing attrition. She does this by pointing out the "if graduate students are responsible for their own departure, then there should be no discernible pattern in their attrition" (p. 3). But the fact is that there ARE discernible patterns in attrition, evidenced by consistent patterns of attrition over time and by discipline (p. 3). After ruling out academic ability (i.e. undergraduate GPA) as a substantial differentiator in attrition, Lovitts posed an interesting question: "If entering academic ability does not account for differences in attrition outcomes, then perhaps prior socialization to the academic profession as an undergraduate does" (p. 2). Lovitts goes on to develop a powerful link between socialization and attrition. She suggests that attrition can result from a psychological phenomenon in which the student, who may have developed feelings of inadequacy, begins to retaliate against the real or perceived perpetrator by turning his or her anger inward—thus blaming himself or herself for the problem, as Lovitts contends that "students who are having trouble with the system wallow in their ignorance and blame themselves for their 'failings'" (p. 14). And as if that weren't enough, some students ultimately end up "seek(ing) solace in the act of self-destruction" (aka attrition) (Durkheim, as cited in Lovitts, 1996, p. 8).

Lovitts initiates her study by investigating participants' experiences as undergraduates. The results of this research indicated that non-completers outscored

completers in this area, which ruled out prior socialization experience as impacting graduate attrition. Continuing with her research, Lovitts found that her original hypothesis that the greatest factor in attrition is not what students bring to graduate school, but the experiences they have after they arrive, is supported. This in turn prompts her recommendation that universities should shift their attention away from individual factors to issues that are under the control of the institution.

Lovitts' conclusion is supported by the findings of Bair and Haworth (1999) who assert that all but two researchers who studied socialization factors found them to be significant variables in attrition/completion (p. 11). Lovitts' book *Leaving the Ivory Tower* reinforces her convictions about the role of integration into the academic/departmental community as she enumerates factors that contribute or detract from integration. This list includes events like lunches, social hours, and colloquia; and even extends to the physical spaces used by students, such as graduate lounges and meeting areas. All of these and many others, Lovitts contends, can affect the socialization experiences of graduate students, and by extension, persistence.

Susan Gardner's 2008 study of socialization was conducted with 40 doctoral students in chemistry and history at two research institutions. This study uncovered disparities in the socialization experiences for students who do not fit the profile of the traditional graduate student: women, students of color, students with families, part-time students, and older students. They reported negative experiences related to interactions with others, structural barriers, and general feelings of being different, which in turn had an effect on their socialization in their programs (p. 130). A number of the women in the study made unsolicited comments about their male-dominated environment and the effect

it had on them. They also described what they referred to as the “Old Boys’ Club” as well as hiring practices that demonstrated that the more desirable faculty candidates were young white males (p. 131). Other students who did not fit the traditional profile of a graduate student echoed similar issues, particularly those related to structural issues that impeded integration. One example was the schedule required by chemistry students. One student, who was also a mother, did not feel that she could pursue the ‘experimentation’ track because of the excessive time demands. It is important to note that these disparities did not necessarily equate to discriminatory practices; but they did have the potential to adversely impact these groups, nonetheless.

In their article on facilitating the completion of the dissertation, Liechty, Liao, and Schull (2009) champion the importance of meaningful learning activities alongside expert mentors. This, they say, would allow students to learn the *tools of the culture*, which would be gradually transmitted through the interactions with the expert. They suggest that this type of relating is an important way to foster learning and would aid students’ successful completion of the dissertation.

Conclusion. Socialization is a topic that has been studied more in recent years and has uncovered significant differences between completers and non-completers. Though some studies (See Hobish, 1979 and Dolph, 1983) yielded conflicting results, there still appears to be substantial support for including socialization as part of any discussion of doctoral completion and attrition.

Acknowledging Institutional Factors

Institutional factors are university, department, or program-related factors that are under the control of the institution and are directly related to the pursuit of the doctorate. It includes factors like the admissions criteria, the student's relationship with his/her advisor or committee, and issues related to financial support provided by the school. The common thread is that all of these are factors are under the control of the university, department, or program rather than the student.

Prior studies. As discussed in the Demographics section of this chapter, Berelson (1960) reported that graduate deans and faculty considered attrition to be related to financial support or the capabilities of the student rather than anything under the control of the school. The widespread belief in this assessment was evidenced by the absence of institutional factors in most early research. As Golde (1994) observed:

The role of institutional or structural barriers to success have been minimized, in favor of research on individual attributes. One reason for this individualistic focus is that many studies have focused on student persistence and success, rather than looking at student attrition. The persistence perspective puts the onus for achievement on the student, and obscures institutional or structural barriers to success. Easy access to data from student records may also explain this emphasis. (p. 2)

As studies began to look at how things related to the institution might affect attrition, it became apparent that differences in faculty at any given point in time as well as variations in committee make-up can produce very different experiences for an individual in the program. As explained by Tinto (1993):

...the experiences of students within a department, though tied by field of study and departmental norms, can vary considerably if the behaviors of the faculty also vary considerably. In this manner, the experience of any particular doctoral student, regardless of field, will always be somewhat idiosyncratic. (p. 232)

When Dolph (1983) compared completers to non-completers, he found a significant difference in four institutional factors. They were: 1) how well the faculty was acquainted with them; 2) relationship with committee members; 3) relationship with chairperson; and 4) financial support received from the school (scholarships, fellowships, and assistantships). In other words, successful students were known by more faculty members, perceived that they had better relationships with their committee, reported that they spent more time with their dissertation chairperson than unsuccessful students, and were more likely to have received financial aid in the form of scholarships, fellowships, and assistantships. Despite the significance found in these and a few other factors, Dolph was quick to point out that significance did not ensure causality. There could be overarching factors like persistence that would in turn yield similar results. He also noted that all of the factors showing significance were things that occurred during the doctoral program, rather than attributes that were present when the student entered the program. Dolph concluded that attrition is extremely complex and that future studies should avoid focusing on demographics.

Bowen and Rudenstine (1992) observed that when a program had smaller cohorts, the rates of completion were higher and time to degree was shorter. They also noted that students who held teaching assistantships had higher completion rates and shorter time to degree. However, they speculated that this might be due to increased interactions with faculty and students.

Golde (1994) expressed concern that prior research had focused primarily on student persistence and success (completion) as opposed to institutional factors, thus minimizing the role of the institution in attrition. Golde's study examined the experiences

of three students who discontinued their doctoral studies, and uncovered several issues related to institutional factors. One theme that surfaced was that students entered the program expecting a caring advisor and nurturing community. Everything was great when these expectations were met, but students were left feeling alienated and deprived if their expectations were not met (p. 19). This lack of caring does not necessarily translate into altercations with faculty and administrators, though this does happen. The more important learning is that lack of caring—indifference—registers as the opposite of caring. Non-involvement with a student on the part of faculty is also detrimental to the student's well-being and progress.

Another theme related to institutional issues that emerged was that institutional structure and agency (taking action) played a large role in their decision to leave the program. One such structure is the admissions process, which some students felt lured them in only to be victimized by the 'weeding out' process that some faculty and administrators feel is a natural part of the doctoral program. A second relates to agency. Two of the three of the students profiled made decisions to leave their doctoral programs on the basis that they would be equally or even more successful if they moved on to a career opportunity that was immediately available. The third student took action by transferring to another university that she felt was more engaged with the students and better suited her needs.

Another interesting point made by Golde is that there is a case for reassessing what is considered to be "success" and "failure" in doctoral programs. The narrow definition of success as completion may be outdated, as at least one of the three students profiled felt the doctoral program experience was both intellectually stimulating and

rewarding in terms of contributions to her chosen career, and therefore worth the time and effort spent.

The relationship between institutional factors and time to the doctoral was the focus of Stricker's 1994 study. He concluded that only a small number of institutional variables identified were associated with time to doctorate, and these factors varied by discipline. For example in Chemistry, only Research and Development (R&D) expenditures were found to have a significant correlation to time to degree. For English, the ratio of current periodicals to students; undergraduate students to faculty; the number of graduate students in the university, and the percentage of graduate students were correlated to time to degree. It is interesting to note that most of the factors tested are not necessarily what one would think of when looking at institutional factors; but it is certainly logical that something like the ratio of current periodicals to students would affect the progress of doctoral students in English. In contrast, variables that were not shown to affect time to the doctorate included selectivity, requirements, faculty quality, and financial assistance. The fact that financial assistance did not affect time to degree appears to contradict several previous studies that showed a relationship between financial assistance and completion.

Kluever, Green, and Katz (1997) offer insights into the dissertation process itself. They point out that the lack of structure in the process and the fact that it is so different from the structure and requirements of coursework can make this phase of the program an insurmountable barrier to completion of the degree.

Bair and Haworth (1999) reported relationship with one's advisor and other faculty as a major issue in completion. In fact, they describe it as the "most

frequently-occurring finding in this meta-synthesis,” explaining that positive relationships with the advisor and other faculty meant that students were significantly more likely to complete the program (p. 9). This is consistent with the findings of Dolph (1983) and Golde (1994), and continues to be mentioned by later studies. One such study was the qualitative study conducted by Willis and Carmichael, in which they interviewed six non-completers. Of those six, five terminated the program because of negative experiences that they felt prohibited them from completing. All five of those people reported problematic relationships with their advisors (2011).

From a positive perspective, in the 2011 article *Exploring Effective Support Practices for Doctoral Students' Degree Completion*, two of three major sources of support named by the students surveyed were institutional factors. Included were the dissertation chair and the Doctoral Support Center (DSC) at the university (West and Nmacr).

Another institutional factor reported as a theme in this meta-synthesis is the variation and award of financial assistance to doctoral students. Bair (1999) noted that students who receive teaching assistantships, research assistantships or fellowships have higher completion rates than any other categories of students. She also reported that holding a graduate assistantship has a very strong correlation to graduation (p. 78). This may be true because these students work on campus and are integrated into academic life through involvement with both faculty and other students. This connection is cited as the likely link to persistence.

Similar to Kluever, Green and Katz (1991), Bair and Haworth point to the dissertation phase of the doctoral program as being fraught with characteristics that can

hinder completion of the degree. Those that would be classified as institutional factors include the lack of structure in the dissertation phase, poor advisor or committee, isolation from faculty, and changes in academic formation. All of these are under the control of the university, and may have potential for improvement with the right structure or timely interventions.

Lovitts (2001) concurred with the importance of a positive advisor-advisee relationship. To underscore the importance of this relationship, Lovitts' findings indicated that 93% of completers and only 57% of non-completers either selected or were selected by their advisors (p. 134). In addition to this overall picture, a new finding presented is that there was no significant relationship between changing advisors and non-completion of the doctoral program. In fact, completers were more likely than non-completers to make a change in favor of a better fit (p. 132). However, of the students questioned in Lovitts' study, most were unaware that they even had this option.

Nettles and Millett (2006) studied relationships and interactions as part of a doctoral study. They found distinct differences between students in different disciplines when it came to relationships with faculty and with advisors. For example, students in engineering, humanities and education gave high ratings to their interactions with faculty; but students in math, sciences and social sciences rated these relationships as low. From the standpoint of gender, Nettles and Millett expected that women might report more positive relationships with faculty in fields where faculty had a higher concentration of women. What they found, however, was mixed. In the fields of engineering and education, they found definite differences in perceived faculty relationships for men vs. women, with men rating those relationships higher than did women. However, in the

areas of humanities, sciences and math, there were no differences found between men and women in their perceptions of academic interactions with faculty (p. 94). In looking at relationships with advisors, the findings were consistent with those relating to relationships with faculty. Men rated their interactions with their advisors more positively than women in the fields of engineering and education. Nettles and Millett also looked at levels of peer interaction for doctoral students in each field. They found that in all fields except education, women had a higher level of peer interaction than men. This led them to conclude that minority status was not a factor in peer relationships (p. 93). From the standpoint of ethnicity, African-American students in engineering, science and math showed significant lower ratings for academic faculty interactions than were those of Asian-American, White, or International students. Relationships with peers did not show a significant difference with other ethnic groups, and relationships with advisors were not discussed. These findings are evidence that the environments within a department can have a great influence on the relationships of students. Results also pointed to some evidence, at least in the case of African-Americans, that the representation of minority groups on university faculty can have an effect on the students' experience with faculty and advisors.

Conclusion. Previous studies have identified several categories of institutional factors that have had significant impact on doctoral attrition and completion. The most common of these is the relationship with the Advisor and other faculty, the type of financial assistance offered the student by the university (e.g. teaching assistantships, research assistantships, and fellowships), and the unique characteristics of the dissertation phase of the doctoral program. Yet within each of these categories, there can be

differences in results depending on the discipline studied. In short, the environment of the department also plays a role in student experiences in each of the areas identified.

Finally, an important point from all of this discussion is the recognition that because institutional factors are by definition under the control of the university, this category of factors offers numerous opportunities for interventions or program revisions to impact doctoral program attrition.

Summary

After reviewing so many possible inhibitors and support factors of doctoral completion, the question is, “Why isn’t examination of individual factors enough?” The fact is that most early studies attempted to examine individual factors and determine which ones were most influential in the decision to complete or abandon the pursuit of the Ph.D. degree (Green and Kluever, 1997). Based on a review of this research, it is easy to see that studies are often limited in scope and/or contradictory. Continued focus on “the factors” that cause attrition is unproductive unless there is an overarching model that can describe or define the manner in which these factors interact to result in attrition. Yet the study of graduate student attrition by Lovitts (1996) demonstrates that “...at the time of admission, students who complete their degrees are virtually indistinguishable from those who do not, and...non-completers may, in fact, have more of the characteristics thought to predict success than do completers” (pp. 1–2). This now presents an interesting dilemma. If Lovitts’ statement is true, what is the next step in exploring doctoral completion and attrition? The answer may lie in the complexity of the issue. Bair (1999) says that, “The circumstance surrounding both attrition and persistence are highly

complex. No single variable explains doctoral student attrition or persistence; rather, several variables are at play. Seeking to understand the interplay of these variables (and which ones may be more ‘central’ to retention than others) is a very difficult task” (pp. 124–5). Hobish (1979) describes the doctoral education process as “a developmental process, consisting of a series of critical pressure points, each of which is critically related to attrition” (p. 2).

It is clear that it is nearly impossible to point to one cause of doctoral attrition. The issue is much more complex than that, and research reflects this trend by beginning to move away from individual characteristics and their effect on attrition toward a comprehensive theory or model that might predict or explain attrition or completion. Tinto was an early standard bearer for this concept (1993). Others followed suit in looking at creating models. (e.g. Girves & Wemmerus, 1988; Tuckman, Coyle and Baye, 1990; Baird, 1993).

Finally, the conclusion of the study conducted by Stripling (2004) offered a theory that there is not just one factor, but an aggregation of factors that causes attrition. That study examined only people who chose not to continue, but the author assumed that these same factors were also present in completers and possessed the potential to affect their persistence in varying or lesser degrees. This study went a step farther, by including both completers *and* non-completers and addressing factors that contribute to each. But before describing the study, Chapter 3 will create context for the study by providing insight into the history of Eagle University and of the instructional technology program.

CHAPTER 3
THE HISTORY AND HERITAGE OF EAGLE UNIVERSITY AND THE
INSTRUCTIONAL TECHNOLOGY PROGRAM

- History
1. *the past events of a period in time or in the life or development of a people, an institution, or a place*
 2. *an interesting or colorful past*
- Heritage
1. *the status, conditions, or character acquired by being born into a particular family or social class*
 2. *something that passes from one generation to the next in a social group, e.g. a way of life or traditional culture*

Introduction

The setting for this study is Eagle University (EU) (pseudo), a major Southeastern research university with a rich and interesting history. This chapter provides a look into the inception and development of EU as well as the instructional technology (IT) program itself. The purpose of examining the history and heritage of these entities is to develop a deeper understanding of the educational environment of doctoral students in the instructional technology program. This climate is evidenced not only by past historical events and administrative decisions, but also by the documented vision, mission and purpose statements and the formal strategic plans published by the university.

The first part of the chapter describes the birth and development of EU, while the latter part of this chapter tells the story of the instructional technology program at EU and uncovers several parallels between its development and the history of the university

itself. Incorporated into this story of Eagle University will be an examination of the themes that emerged throughout its history. Appendix B contains an overview and the available purpose statements and mission statements from the inception of EU, which will also help build a foundation for understanding the environment and perspectives of the students, faculty, and Eagle University concerning completion of the doctoral degree in instructional technology.

Eagle University: A Journey Through the Past

As a prelude to discussing the history of Eagle University, it would be helpful to understand the varied templates that make up the quilt-like pattern of American universities. In his 2005 dissertation, David Smith, Jr. describes the origins of universities in America. He asserts that these origins can be discussed as six defined stages or categories of schools. Those categories are denominational institutions, land-grant institutions, normal schools, teacher colleges, state colleges, and urban colleges and universities. Table 9 summarizes the origin and purpose(s) of each.

As we discuss the beginnings of Eagle University, it will be clear that the school falls into two of these categories: state colleges and universities and urban colleges and universities. The following characteristics from the chart above clearly apply to the early development of EU:

- Drew students primarily from the city's public schools
- Listed a primary purpose as the education of those who could not avail themselves of a traditional college education, primarily due to lack of money
- Grew hand-to-mouth, with very little aid from the state initially

Table 9

Origins of Universities in America

Stage	First Appeared (Predominant Time Frame)	Description
Denominational Institutions	1636 (Through early 1800's)	<ul style="list-style-type: none"> • Grew out of Puritanism • Emphasized development of the mental and moral faculties, focusing, intellectually on mental discipline • Relevance to later life was ignored, with the exception of being relevant to a future minister • <i>Examples:</i> Harvard (1636); Williams and Mary (1653); Collegiate School at New Haven—now Yale University (1701); the College of New Jersey, now Princeton University (1754)
Land-grant institutions	1857 (Predominantly Mid/late 1800's)	<ul style="list-style-type: none"> • Based on the concept of real life vs. the life of the mind • Utility was the principal idea behind the land-grant movement • Grew out of fields like agriculture and engineering • Original mission was to teach agriculture, military tactics, and the mechanic arts as well as classical studies so that members of the working classes could obtain a liberal, practical education • Most were designated by the state's legislature or congress to receive the benefits of the Morrill Acts of 1862 and 1890 • <i>Examples:</i> Agricultural College of the State of Michigan—now Michigan State University (1855); Farmers' High School of Pennsylvania—now Pennsylvania State University (1855)
Normal schools	1823 (Predominantly early 1800's to early 1900's)	<ul style="list-style-type: none"> • Purpose was to train students targeting teaching as their career choice • Name grew out of the concept of teaching standards or norms • Some evolved into teachers' colleges or Union of State Universities • <i>Examples:</i> The Columbian School (1823); Framingham State University (1839); Illinois State Normal University—now Illinois State University (1857)

Stage	First Appeared (Predominant Time Frame)	Description
Teacher colleges	1903 (Predominantly 1900's)	<ul style="list-style-type: none"> • Evolved as normal schools evolved into higher-level institutions • Many were formed by adding a third and fourth year to the original Normal schools
State colleges and universities	1804 (Predominantly 1800's–present)	<ul style="list-style-type: none"> • One of the fastest growing segments in higher education • Some were established when their territory was admitted to the Union. Some were established by act of the state legislature • Drew students primarily from the public school system • Organization of instruction reflects methods developed in the public elementary and secondary schools. The classroom instructor or the lecturer was the final judge of the student's competence • <i>Examples:</i> University of North Carolina at Chapel Hill (Chartered in 1789 and began operation in 1795); Ohio University (1804)
Urban colleges and universities	1819 (Predominantly late 1900's)	<ul style="list-style-type: none"> • Variation of the land-grant strain whose aim was to educate the city's poor or provide professional men for the growing urban centers • Similar to land-grant colleges, these schools represented a response to the thrust for upward mobility by immigrant and other poorer groups • Grew largely out of the skills and determination of local entrepreneurs • Term often used to refer to public institutions with large part-time and commuter student bodies • Most urban colleges and universities came into existence in the last half of the 20th century • <i>Examples:</i> University of Cincinnati (1819); New York University (1831), University of Chicago (1892), Eagle University (1913)

Note. Adapted from David Smith (2005)

- Owed a huge debt of gratitude to the good will of local businessmen who believed in the school and its mission

In the beginning. The year was 1913, and a large, prestigious university (“Big University 1”) in Progressive City was considering a new concept. Big University 1 had already earned a reputation for educating promising engineers and others in technical fields. But after graduation, many alumni realized that there was something missing. That something was a practical business education to complement the technical skills they had acquired. In addition, there were many business people who had need of the “technical” skills to enhance their jobs, but had not been privileged to be able to attend college full time. With the encouragement of a group of alumni from Big University 1, the Night School of Big University 1 the academic seed for the school that will be referred to as Eagle University—was born. Its stated purpose was “...to give the BUSINESS MAN a college training...and the ENGINEERING STUDENT a business training” (Reed, 2009, p.1).

Smith (2005) explained that although business classes were held for engineering students during the day at Big University 1, the Night School—with an initial enrollment of 47—accommodated business men who worked in the downtown area of a major Southeastern city, which will be referred to as “Progressive City”. The Night School’s first Director (“Director-1”) had three main objectives:

1. To interest businessmen in Progressive City in an evening school where young men and women of the city could study

2. To give himself a more thorough business training in order to raise the standards of the school
3. To eventually make the school co-educational. (Flanders, 1955, p. 20)

In the first year, many of the evening students—most of whom worked downtown in Progressive City—had trouble making it to class because of the distance of the campus from downtown and problems with transportation to the Big University 1 campus. A search soon began for a downtown building, which the evening school occupied the following year.

Growth and expansion of Eagle University. Throughout its history, the Night School continued to experience phenomenal growth in peace-times as well as in war-times. In 1914 enrollment at the Night School nearly doubled, from 44 to 86; then climbed to 114 in 1916; and in 1917, the Night School admitted its first female students. In fact, thirty of the 158 students that year were women, true to the vision of Director-1. And when in 1920 the state legislature passed a law that only permitted coeducation at Eagle University, allowing Big University 1 to continue to bar women; but the doors at EU remained open to women.

In terms of faculty, the Night School was originally made up primarily of part-time instructors who were local businessmen. This early faculty was not chosen based on their academic backgrounds, but they were considered to be experts in their fields and provided the much-needed practical side of business. And although it was sometimes difficult to recruit high-level faculty with the low levels of funding afforded by the state,

both the numbers of faculty and the number of Ph.D.s continued to grow and expand with the school.

During World War II when other schools were floundering and their enrollment was slipping, EU enjoyed a period of steady growth that helped maintain the school's enrollment in the subsequent peace-time. This was due at least in part to the foresight of President-1 (previously Director-4), who quickly established a rifle range with skilled instructors and expanded the school's curriculum to embrace all audiences who were affected by the war. In fact, the school added a number of service-related courses to the curriculum, including things like chemical warfare, French, Russian, German, (Reed, 2009), Military Mathematics, National Defense Through Physical Sciences, Diplomacy and Propaganda, and Nautical Astronomy, to name a few (Blake, as cited in Flanders, 1955). What's more, the Night School's purpose statement published in the Progressive City Journal in 1941 described a revised purpose, "...to serve the potential draftee, those who would take his place in the business world, the Government worker preparing for the defense program, those who seek commissions in the armed forces, and the patriotic civilian" (Blake, as cited in Flanders, 1955). In 1942, the college was designated by the Army, Navy and Marine corps as "...a fully accredited center for specialized training for military service" (Flanders, 1955, p. 38).

In the post-war period, the school experienced a tremendous loss of both students and faculty. Smith (2005) explained that this decline was due primarily to a drop in Korean War-era veterans. The enrollment dropped from 2,825 students in 1955-56 to

only 754 in 1960–61. The faculty declined from 272 in 1955–56 to 135 in the 1960–61 school year. However, the school survived and moved into a period of expansion for programs in both the School of Business Administration and the School of Arts and Sciences; and enrollment rose sharply to 4,583 in 1961–62, climbing to a total of 14,489 students in 1968–69. Dollars committed to research also ballooned from \$120,593 in 1961–62 to \$1,083,707 in 1968–69. As a final capstone to all of this expansion, the school was renamed and reclassified in 1966 by the state legislature and confirmed in 1969 by the state’s board of higher education (referred to throughout this paper as “The Higher Ed Board”). No longer was Eagle a fledgling college, fighting to fly on its own; it was finally a university!

By 1969, EU had become a major center of graduate studies, “...devoting thirty to forty percent of its resources to that pursuit” (Reed, 2009, p. 256). Student enrollment slowed through the 1970’s and 1980’s, although the College of Education flourished during this period. This boon in enrollment for the College of Education could have been attributed in part to the need for teachers in local communities, increased access to both undergraduate and graduate degrees, or even the salary increase afforded teachers who attained advanced degrees.

By 1990 total enrollment was 23,386. Faculty kept pace with student growth, with a total of 886 faculty members in 1989–90, 705 of who held Ph.D. degrees. Enrollment picked up again through the 1990’s and 2000’s (Smith, 2005), with an official student enrollment of 30,431 reported for the 2009–10 school year. Of that number, 22,834 were

undergraduates and 8,047 were graduate students (“Eagle University,” 2010 Common Data Set).

In tracing the academic growth and development of EU the Night School began by offering a 3-year Bachelor of Science in Commerce (B.C.S.). Although Director-4 had an immediate vision of the school offering 4-year Business and Liberal Arts degrees as well as graduate studies, this dream was deferred for a number of years. In 1935, a daytime junior college was added, leading to a certificate for students who completed the prescribed course of study (Smith, 2005). The junior college continued awarding degrees until 1948. EU also offered a number of certificate courses for teachers, CPAs and employees in the Insurance industry.

The first graduate program at EU led to a Master of Business Administration, and began in September, 1952. A School of General Studies was also inaugurated that year, although it did not officially become a college until 1964.

During the late 1950’s through the 1980’s, there was tremendous expansion of academic programs in the Arts and Sciences. A variety of majors were added in both schools and in the Colleges of Education, Urban Life, Allied Health Sciences, and General Studies were created. In later years, Allied Health Sciences changed its name to the College of Health Sciences, and the Colleges of General Studies and Urban Life were combined to form the College of Public and Urban Affairs. The last college to be added was the College of Law (History of the University, 2006). Today the six colleges that

make up Eagle University are the colleges of Business, Education, Law, Arts and Sciences, Health and Human Sciences, and the School of Policy Studies.

A look at degree completion shows that the Night School graduated its first class in 1916, conferring the three-year B.C.S. degree on seven students, all of whom carried full-time jobs (Reed, 2009). In 1919, the Night School graduated six students, one of which was its first woman graduate. Over the next two decades (1920s through 1930's) nearly four hundred graduates completed their studies at EU. Also offered were 2-year certificates from the junior college daytime division, and diplomas for 22 other programs. By 1961, over 400 degrees were awarded in that year alone, including the first graduate degrees (Smith, 2005); and the number of degrees soared to 1,390 in 1969, with the first doctorate conferred in 1965. As student enrollment continued to climb, so did the number of degrees. As of the close of the 2010 school year, Eagle University awarded a total of 6,307 degrees in that year alone ("Eagle University (I. Research, Trans.)," 2010).

A summary of the growth of enrollment, degrees awarded by Eagle University, and the number of faculty members with earned doctorates, are shown in Appendix A. This information has been condensed by decade; but the phenomenal growth of the school is very clear.

A student-focused institution. In its early years, Director-4 (later to become President-1) and his administrators fought to keep the school's focus on working adults; and continually reminded stakeholders that the school was unlike any other in the state. President-1 was determined to keep the life styles and needs of this unique student body

uppermost in everyone's minds and found ways to address student issues, which focused on several issues. First, students had few resources available for tuition. Many students were family men, and could not afford the high tuitions of other schools in the state. In June, 1937, Eagle University opened the first credit union in the world that was organized by and for students (Flanders, 1955). The primary function of the credit union was to provide financial assistance for students who needed additional funds for school. Some students who wanted to attend school had no jobs. In 1949, the (Eagle University) placement office guaranteed employment in a (Progressive City) business for every interested student (Flanders, 1955).

The primary focus of the school was to provide an education that would help students excel in the business world. And because many students had families, they were not good candidates for living on-campus. This meant that having a school near their jobs allowed them to remain in the city and still get an education. With most students working full-time, they could only attend school part-time, and rarely during traditional daytime hours. With all of this in mind, there needed to be mechanisms to support these considerations. For example, tuition was kept low; and classes were scheduled after 4:00 in the afternoon. As for jobs, President-1 worked with contacts in the business community to find employment for students who had the strong desire for an education and qualified to attend the school.

A hurdle confronted many universities in the 1960's integration. Eagle University was integrated in 1962, and quietly built a large minority student population. In 1989 the

Academic Affairs Minority Programs (AAMP) was established to address the needs of minority students (Smith, 2005).

Another student concern related to time limits for degree completion. In negotiating the eventual 1947 merger with another major university in a nearby town (“Big University 2”), there was much disagreement over time limits for completing a degree. The Resident Dean at EU did not favor time limits for degree completion, recognizing that part-time family-based students did not have the luxury of attending school without working (Reed, 2009).

President-1 continued his tireless efforts to address the needs of working students throughout his leadership of Eagle University. This contrasted with the opinions of prominent citizens like one Cedric Beauchamp (pseudo.), an attorney in Progressive City who made it clear that he did not feel it was the university system’s responsibility to provide an education for everyone in the state. In 1949, Beauchamp’s position was that some people deserved a college education more than others. He felt that students just out of high school were at the top of the list, while people who were unable to attend a traditional college were a secondary audience; and people who moved to the city to achieve better economic status—some with families—were a secondary concern (Reed, 1996).

Many of these issues addressed the first commitment in the school’s mission, “...to give to the young men and women of Great State who through unfortunate circumstances are unable to attend college during the day, a high standard of collegiate

training in commerce...” as stated in the 1914–15 Bulletin from Big University 1 (Smith, 2005, p. 186). It was eloquently summed up by author Bertram Flanders in his book *New Frontiers in Education*, when he said, “(Eagle University) has as a foundation stone the needs of its students, and its general policy, like the foundation, is adjusted to those same needs” (p. 109).

Close relationship with the business community. One of the things that allowed many of EU’s early students to attend college was the strong relationship the school had with businesses in the city. This relationship was forged from the very beginning of the Night School. For example, when the president of Big University 1 decided to offer commerce courses, support came from 80 downtown businessmen, many of them Big University 1 alumni who considered new engineering graduates from Big University 1 to be “babes in the woods,” and who needed business science to supplement their technical education (Reed, 2009, pp. 3–4). Examples of the school’s early relationship with Progressive City businesses also included the following:

- The Night School used businessmen as lecturers in the school, which began early in the school’s life (Reed, 2009). This practice followed the school well into its development, becoming both an asset and a liability in later years. The experience of the businessmen was invaluable in integrating real-life experience into lectures. However, the school’s credibility and legitimacy were often challenged, with some pointing to the use of part-time instructors

as evidence that the school was not a candidate for accreditation or that it should not be considered on par with other colleges in the state.

- Two business “friends” of the school offered \$100 scholarships for EU students.
- In 1921 the Underwriters’ Association and other downtown groups authorized a course in life insurance salesmanship.
- For ladies who might inherit financial responsibilities, a course in finance was offered (circa 1921).
- Beginning in the early 1920’s EU offered a course in business English to local business stenographers.
- During the administration of the school’s second director (“Director-2”), the school conducted marketing surveys for area businesses.
- Around 1930 two individuals gave \$2,000 and \$1,000 each to EU, but a pledge of \$10,000 from a prominent businessman outmatched them all. And after paying off the school’s \$14,000 mortgage five years later, the contributions of that same businessman were estimated at \$40,000.
- In 1943 in collaboration with three local hospitals, a nursing program was set up at Eagle University. Although it did not lead to a degree, it provided two terms of basic work to nurses, at a minimum cost.
- In 1949 EU initiated the first “School of the Air” (first radio, and then TV) in order to broadcast business panel discussions on business and finance-related

topics, as well as other presentations that might be of interest to the community (Flanders, 1955).

- In 1970, Eagle University built an Urban Life Center. The center emphasized community service as well as academics, and included student internships at a number of city agencies.

The struggle for identity. When Eagle University began, the vision for it was somewhat limited. Although EU's early goals spoke about educating men and women who were not favored with the opportunity to go away to college full-time, Progressive City's vision did not foretell EU's growth into a major university. Beginning as a two-faceted initiative (one servicing traditional students in engineering, and the other serving working businessmen), the Night School was but a small operation under Big University 1. Then in 1932, the Night School became an independent entity, reporting directly to the newly formed university board of the state—The Higher Ed Board.

The fourth Director ("Director-4"), who became EU's first president ("President-1"), always knew what he wanted for the school, even though others didn't always agree. His vision was to expand the school "...into a four-year state college with graduate programs" (Reed, 2009), and he never retreated in pushing for his goals. In fact on the dawn of EU's independence from Big University 1, Director-4 went so far as to make a request to the current Chancellor of The Higher Ed Board. He asked that the school be allowed to offer three 4-year degrees: an A.B. and B.S. in Arts and Sciences, and a B.S. in Business. He also asked that EU be allowed to offer graduate work in

business (Reed, 2009). Although this request was initially approved by the lame-duck Chancellor, the proposal was eventually rejected by The Higher Ed Board. The truth was that EU had very limited experience as a school and no experience in graduate studies to suggest that this level of expansion was prudent. After all, EU hadn't even offered a 4-year degree prior to this proposal. In addition, the current parent school (Big University 1) didn't even offer graduate work in business; and EU didn't have enough students for a regular college division. This would weaken enrollment at the two major institutions in the state, Big University 1 and Big University 2. And last, but not least, standards and quality were a concern. When the accrediting association got wind of the proposal, they became very disturbed (Reed, 2009).

In spite of the unwavering vision of Director-4, EU went through several identity changes before growing into the university he envisioned. As an independent entity reporting to The Higher Ed Board, accreditation issues threatened the status of EU as well as the status of the entire university system in the state. The accreditation agency had concerns about the level of funding provided to EU by the state, and there were also those lingering questions about standards and quality. To address the accreditation problem EU was repositioned as simply a Division under yet another established university, Big University 2. This university had very specific limitations in mind for the scope and direction of EU. Then finally after a nearly 50-year struggle, not unlike a moth emerging from a cocoon, in 1966 Eagle University became an independent entity. During this transition, limitations imposed at the request of the current president of Big University 2

again stifled the school's growth temporarily. He demanded that the name of the school be changed to identify it as a business school, which put off some potential liberal arts students. However, on the insistence of both the community and the accreditation board, the school was finally released and allowed to grow into the multi-faceted university it has become.

Of course, at the juncture at which the school became a university, EU was still evolving. In comparing the development of the mission statements in Appendix B, it is easy to see that while the school still recognizes its roots in the local community, it has taken on a much more global dimension; and the quest for becoming an independent university has been replaced with a drive toward being a top-tier, nationally recognized urban research university (University Strategic Plans, 2011–2016, accessed 9-25-2012).

The fight for independence. It should be clear by now that Eagle University did not begin as an independent institution. It was launched as the Night School for Big University 1 (1913–1933). After a 14-year period of independence, EU was once again subordinated to another school—Big University 2 (1947–1955). It was in 1955 that EU became an independent institution permanently and subsequently earned accreditation on its own.

In its early years, many people fought to keep EU appended to other universities. There were several reasons that its independence was challenged by others. First of all, there was a fear that EU would compete with Big University 1 for students if allowed to offer similar coursework. This resulted in several moves to restrict both course offerings

and degrees offered by EU. There were also concerns that EU did not have the experience needed to be independent. For example, Eagle University was not yet offering a 4-year degree when Director-4 suggested the school be allowed to offer a graduate degree in business. And still another recurring question was the quality of the faculty and the curriculum. Although none of these concerns were ever substantiated by an independent evaluator or review board, it remained a question posed again and again by EU's detractors.

Another nagging issue in Eagle University's independence was the question of accreditation. While part of Big University 1 or 2, Eagle University's programs enjoyed accreditation based on the strength of the 'parent' school. However when EU was separated from these two universities, it had to stand on its own merits to gain accreditation. Two consistent issues that prevented EU from gaining accreditation earlier were:

- 1) The state provided very little funding for EU, and there was a continuing failure to meet the minimum per-student standard required by the accreditation board, and
- 2) There were a large number of part-time instructors. This was initially due to the fact that EU operated only in the evenings, and also that many of the lecturers from the business community were used as instructors. However, Director-4 was partial to the part-time business instructors and was slow to move toward a staff of more full-time people.

Adding to the hindrances for independence, Big University 2 carried on a seemingly endless battle to prevent EU from becoming an independent university. In 1947, Big University 2 pushed to have EU become a part of their school. Because they felt threatened by EU, they worked to ensure that EU would never be independent. This position was revealed by the president of Big University 2 when he said that if Eagle University ever achieved independence, "...it will be impossible to prevent it from growing into a full-fledged university" (Reed, 1996, p. 585).

An example of the roadblocks created by Big University 2 was its refusal to allow EU to graduate 4-year students. Instead, any student desiring a 4-year degree was required to complete at least one year in residence at Big University 2 (Reed, 2009). Another example is Big University 2's reluctance to approve new course offerings for Eagle University. When EU requested approval of 21 new courses in 1951, Big University 2 approved only eight. Their rationale was that they had investigated the needs and found that the other 13 courses requested were not warranted (Reed, 1996). Big University 2 even went as far as to restrict EU's public service offerings to the geographic area of Progressive City. Then in the 1950's, even after Eagle became independent, Big University 2 fought against allowing EU to offer graduate courses; and was successful in blocking a proposal for Eagle University to offer graduate work in Progressive City.

Perhaps one of the most significant factors driving EU's expansion in the 1940's and 1950's was the continuous flow of requests for both traditional courses and training

that came from the business community. They pressed for courses in radio and TV, sanitation degrees (which were different from the sanitation engineering degree offered by Big University 2), hotel management programs, and hospital administration, to name a few. Letters from local businesses to The Higher Ed Board also pushed for graduate programs and liberal arts degrees. Many of these letters had a familiar tone, like the one from a small town newspaper in the state. The letter praised seven local young people who completed their degrees at EU; but also lamented, “Unfortunately those enrolled in a liberal arts program must spend a year (at Big University 2) which would be financially impossible.” (Reed, 1996, p. 582).

A question of funding. Eagle University was initially self-sufficient, operating entirely on funds raised by tuition payments, veterans’ benefits, and contributions from the Progressive City business community. However, by the end of its second decade, EU began to suffer from the lack of state funding. As Reed (2009, p. 19) explains, “Plagued by miserly state support, (EU), by early 1930, felt the financial strain...” Reed continued by saying, “...(Director-4) grew increasingly alarmed as conditions deteriorated. After paying the first quarter bills, he came up \$600 short, partly because hard-pressed students had been slow to pay off their notes” (p. 23).

To add insult to injury, after the Night School left the watchful eye of Big University 1 and became an independent unit under The Higher Ed Board in 1933, the current chairman of The Higher Ed Board refused to allow Director-4 to pay instructors unless there was money available. As a result, most of the instructors taught for some

time without pay; and Director-4 borrowed money against his personal life insurance policy to cover expenses like utilities (Reed, 2009). Flanders (1955, p. 29) summarized the situation well by saying, “Financially the (Night School) was little better off from being made an independent unit in the...System, for the (Higher Ed Board) made no appropriation for its maintenance, either in 1933 or for a number of years afterward. It still depended mainly for support on student tuition and fees.”

Funding issues would come back again and again to haunt EU as the level of funding from the state improved little. The biggest impact was on accreditation. Although Director-4 was extremely resourceful and the business community continued to be generous, the accreditation board made a 1941 ruling that required a minimum state funding level of \$150 per student for 4-year schools and a little less for junior colleges. EU had received only \$21,000 from the state the year before; and the accreditation board demanded \$58,000 more. This level of funding was not to come. And by the end of 1948, as Reed (1996, p. 571) explains, “Because the state had failed to provide necessary funding, (Eagle University) still remained only provisionally accredited.” Reed went on to say, “...(Eagle University) faced cutbacks so drastic that the (accrediting board) would approve only a two-year, off-campus program administered by (Big University 2), stressing non-credit adult education.” Thankfully The Higher Ed Board approved an emergency measure that temporarily rescued EU from losing the ability to confer degrees.

For years to come, EU continued to be chronically underfunded when compared with other schools in the state. This underfunding could generally be traced at least in part to attitudes about the limited scope the university should have; and concerns that other more established universities should get the level of funding they needed first. Even into the 1950's equitable funding was still a problem. For example, in 1952 EU received \$163 per student, which was less than half the next lowest appropriation. In contrast, Big University 2 received \$448.30 per student, and Big University 1 received \$469.46 per student (Reed, 2009).

Yet another example of inequitable funding was the promise of funding from the state to replace a gymnasium that was condemned in 1957. But instead of the grant promised to EU, a \$48,000,000 capital improvement allocation was shared between Big University 1 and Big University 2 (Reed, 2009).

There was no doubt that financial issues plagued Eagle in its first nearly 50-year struggle for survival. Lack of funding and broken promises hindered EU's growth and development for some time; but the vision and tenacity of its first president helped Eagle University emerge as a thriving, respected university that today stands on its own merits and has taken its place as one of only four research universities in the state.

A spotlight on the vision and mission of Eagle University. The growth and development of Eagle University was not accidental. As has already been mentioned, the school began with a simple goal, "...to give the BUSINESS MAN a college training...and the ENGINEERING STUDENT a business training" (Reed, 2009, p.1).

This vision was quickly realized; and continuing throughout its history, EU's mission and purpose have evolved as a constant beacon for its future. Appendix B charts the themes embodied by the Eagle University mission and purpose statements that were located and studied. Following these charts are the actual statements from which the themes were gleaned.

In reviewing these purpose and mission statements, it is interesting that there are several themes that have been relatively constant. They repeat themselves in many of the mission and purpose statements, and might be thought of as “guiding principles” for EU. These themes include a) service to underserved populations, b) high standards, c) commitment to the educational needs of the community, d) a blend of theoretical and applied learning, e) a commitment to local regional, national, f) global communities, and g) an increasing commitment to research and a push for national prominence.

Service to underserved population. From the very beginning, this vision included both men and women who were not able to attend a traditional college. Eagle University also made it a practice to admit all applicants who satisfied the school's admission standards, and to serve all students—whether traditional or non-traditional—at both the undergraduate and graduate levels.

In later years EU, though reluctant at first, was among the first in the Southeast to welcome minority students. In fact, the integration of EU was accomplished with virtually no incidents or fanfare. As Reed (2009, p. 212) explains, “...the ease with which

Eagle University moved into integration was accompanied by virtually no fanfare or adverse student reaction.”

High standards. These standards included both academic and non-academic standards. For example, several mission statements describe the education of the whole man and the development of critical reasoning, decision-making, and appreciation for diversity. High standards were also held in the area of instruction. Mission statements spoke of instructional excellence, responsible teaching, assistance to promote academic achievement, and heightened environments for scholarship and learning.

Commitment to the educational needs of the community. There are numerous examples of the school rising to meet the needs of the community. Examples include the very first purpose statement that described the need to provide business courses to engineers, and to provide technical skills to businesspeople. This came about as a response to alumni from Big University 1 who recognized a need for engineering graduates as well as businesspeople who had not attended college. Another example was the revision of the school’s mission statement in 1941 to offer war-related courses; the push to offer liberal arts courses; the agreement with three city hospitals to provide nursing courses; and the implementation of the radio and TV community outreach program called “School of the Air.”

In 1996, the mission statement also included the sharing of information and other resources to enhance programs and services available to the citizens of the state. One might wonder if this could have been an indirect jab at Big University 2 for its seeming

reluctance to cooperate with or “share” anything with Eagle University—whether or not it was good for the citizens of the state.

Blend of theoretical and applied learning. The use of professionals as instructors and guest lecturers in business and later in other areas, demonstrated the commitment Eagle University had to this principle. Mission statements in the early 1970’s, 1996, and 2011 speak specifically to this theme.

Commitment to local, regional, national, and global communities. Early mission statements identified citizenship, high codes of moral and business ethics, and responsible leadership as important outcomes from the learning experience at EU. In addition, serving the needs of society were both explicitly and implicitly indicated, with emphasis on the contributions of the school on the local, regional, national, and global levels.

National prominence / research focus. Achieving the status of a front-ranking university in an urban setting on the national level entered the mission statements in 1996 and has continued since then. References to expansion of knowledge through research appeared during the period from 1961–1969 as well as in the 1970 mission statement. The specific goal of becoming a premiere research university was first evidenced in 1996. Concerns for advancement of knowledge and the pursuit of truth also speak to the research track.

Growing into tomorrow. This topic addresses the future of Eagle University. As implied in the pseudonym, Eagle University has always been on a path to what it wanted

to be. This is reflected in the purpose and mission statements published by the school. It began with the school's inception, and the early desire for the school to provide college training for business people and business training for engineering students. The vision progressed through time to paint a picture of a school that was moving into independence; growing from a single-minded entity (business school) into a four-year business, then liberal arts institution. And finally, the school became a full-service university, adding a nursing program, a college of education, an Urban Life center, and a law school. Yet the majors and focuses of the school continue to grow and develop as the needs of the community expand.

One of the standout goals of Eagle University within the last two decades is that of becoming a premiere research university in an urban setting. When one takes a second look at the chart in Appendix B that summarizes EU's purpose and mission statements, research is an area that is curiously missing from early declarations. One reason for this might be that the emphasis on research has grown in importance when looking at the role of a major university. According to Smith (2005) the emphasis on research emerged in the 19th century as American universities began to adopt the German model of higher education. Initially appearing at schools like Johns Hopkins University, Cornell University, the University of Chicago, and the Wharton School, more and more U.S. schools began to add a research focus as they matured through the 20th century.

Summary. Looking back through the eventful past of Eagle University, there are a number of significant points that can be extracted from its heritage:

- EU had its roots in an established school (Big University 1), that saw value in the audience served by EU. This student segment was not easily served by the traditional structure of Big University 1 or Big University 2.
- Use of respected business leaders as lecturers began at the school's inception—as much out of necessity as design; and continues today as numerous leaders from around the world, the likes of the Honorable Justice Sandra Day O' Connor, U.S. Supreme Court justice, and F.W. de Klerk, the former South African president who led the dismantling of apartheid and release of Nelson Mandela, offer their experience and insights to an eager student body at EU.
- EU fought to maintain its focus on serving a unique student segment; and at least one long-term president insisted that The Higher Ed Board respect the importance of addressing the special needs of the student body at EU.
- EU struggled to be recognized as an independent institution capable of standing on its own feet. Some of these struggles came from outside the school, while others were of EU's own making. Some of the opposition faced by EU grew out of a fear that they would in fact grow to the point of being a threat to the viability of other institutions in the state.

- EU was chronically underfunded by the state throughout its developmental years (through the 50's). State grants, compared to those of other schools, were woefully lacking. At one point a study described EU's funding as being significantly lower than the lowest junior college in the system.
- The study of the history of Eagle University showed a determination that often bordered on defiance, as the Director, President, and faculty acted in the spirit of "get it done and ask forgiveness later" on numerous occasions; while pushing through to an oft unstated goal of independence and expansion for the school.
- The phenomenal growth of EU speaks of both its commitment and value to the local and regional communities it serves.
- EU has emerged as a major state university, and one of only four research universities in the state.
- EU continues to strive to become a nationally recognized, top-tier research university.

The Evolution of the Instructional Technology Program at Eagle University

- Evolution
1. *Theory of development from earlier forms*
 2. *Developmental process*
 3. *Gradual development*

This study focused on students pursuing the Ph.D. degree in instructional technology (IT) at Eagle University (EU). The instructional technology program at EU is currently housed within the Educational Media and Technology (pseudo.) department in the College of Education, and offers a Master of Science Degree, a Master of Science (online) degree, and the Ph.D. It is interesting to note that a degree in instructional technology is rarely offered at the undergraduate level. Most universities see this degree as an add-on to foundational degrees in other disciplines. For example, the website of Kent State University describes the Master's degree offered in instructional technology this way:

...a general Master's Degree in Education in Instructional Technology, an appropriate degree for school teachers, corporate trainers, and others interested in effectively using information and communications technologies to enhance instruction (Kent State University – Instructional Technology, 2011).

The field of instructional technology has been defined in a variety of ways. However, in their book *Trends and Issues in Instructional Design and Technology*, Reiser and Dempsey (2002) present a functional description of instructional technology when they say, "...over the years, two practices—the use of systematic instructional design

procedures (often simply called instructional design) and the use of media for instructional purposes—have formed the core of the field of instructional design and technology (p. 28). Consistent with the description by Reiser and Dempsey, instructional technology at Eagle University encompasses the design of instruction as well as effective delivery systems (technology and methodology) for that instruction. The university website describes the Ph.D. in instructional technology as follows:

The Ph.D. major in Instructional Technology provides specialization for individuals in the following areas: Instructional Design, Alternative Instructional Delivery Systems, Library Media Technology, Research, Management, and Consulting. The program is designed for highly competent individuals who are working in the instructional technology field in a wide variety of educational, training, and development areas such as those found in schools, higher education, business, industry, and government agencies. (“Eagle University,” 2010)

As with many programs in a growing university, IT was not always part of the landscape at EU. Nor did the instructional technology program always offer degrees. The next section of this paper discusses the evolution and direction of the instructional technology program and its related degrees.

Content sources for this section include interviews with one College of Education administrator, administrators and faculty directly connected with instructional technology (IT) and Vocational and Career Development (VCD) programs, one former faculty member considered to be the founder of the graduate programs in instructional technology, and information publicly available through the university website.

In the beginning. The instructional technology program began as a service program in the College of Education. The year was 1973, and Dr. I.T. Founder joined the

faculty of EU as its first instructional technology professor. A new course called Instructional Systems Development was offered as part of the curriculum for graduate students in the College of Education. Its purpose was to round out the students' program with information on the design and delivery of instruction. Curiously, the advent of instructional technology at EU in this manner is indeed reminiscent of the early days in the history of EU, when the decision was made to offer business courses for engineering students at Big University 1.

The Instructional Systems Development course was initially offered by the Educational Administration department in the College of Education, but unfortunately, the professor who was teaching this course left the university. As a result Dr. I.T. Founder suggested the course be shifted under his current department, Curriculum and Instruction, which became the first *home* of the instructional technology program. The course itself had an instructional design orientation, yet it focused on a higher-level framework that addressed both curriculum and instruction.

A similar course focused on the use of technology in the K–12 classroom. A few years after this course was introduced, the state began to mandate that students focusing on Early Childhood Education, Elementary, and Middle School Education were required to pass a technology test. The purpose of this test was to measure a future teacher's ability to use basic Audio-visual equipment and to integrate technology into their lesson plans. Eagle University was able to gain approval by the state to substitute successful completion of the technology course for the testing requirement. Eventually the state

stopped requiring this exam, but the course continues to be an important part of the education program at EU.

Students who initially took the two courses described above were pre-service educators majoring in traditional areas of education, like English, Math, and Social Studies. The Curriculum and Instruction department also offered an Educational Communication degree targeted for the non-traditional student. This included students who were interested in becoming school specialists with a focus on media or technology in K–12 or higher education, current or aspiring school administrators, those involved in various aspects of leadership in English education, and those whose backgrounds were in a corporate setting. Thus were the humble beginnings of the instructional technology program under the Curriculum and Instruction department.

Growth of the instructional technology program. Early faculty consisted of a circle of one, Dr. I.T. Founder. From 1973 until the early 1990's, Dr. Founder taught Instructional Systems Design, Media, and Technology courses. In the meantime in order to move the program forward, Dr. Founder put together a core of people he called "Friends of IT." These were professors who came from other areas of the University in order to meet the varied needs of IT students. For example, a course called Adult Learning Theory was taught by one of these "Friends." This arrangement continued until an NCATE (National Association for the Accreditation of Teacher Education) review questioned the one-person department and additional IT staff was hired. The staff has

gradually increased, and as of the 2011–12 school year the department stood at a total of five full time instructional technology professors.

During the early years there were very few courses offered in instructional technology. For students whose concentration was in IT, the faculty would look through the curriculum of other colleges in search of courses that might complement available instructional technology courses. The faculty would then contact students to make course recommendations. This practice was a precursor to the interdisciplinary focus that instructional technology has continued today.

In the late 1980's, the Department of Curriculum and Instruction became Educational Media and Technology (pseudo.). The landscape in the mid/late 1990's had no undergraduate major in IT, and at the undergraduate level instructional technology continued to be a support for other College of Education majors. The focus for the IT program became the Master's and Doctoral programs. At this time there were also two "sister" programs to IT in the College of Education. They were: (a) HRD (Human Resource Development); and (b) VCD (Vocational and Career Development).

HRD was not thought to support the university's vision regarding education, and in the late 1990's it was moved to Urban Policy Studies and then to the College of Business. Today there is no longer a HRD degree. In its place there is a MBA degree with a concentration in Human Resource Management and a Ph.D. in Managerial Science with a concentration in Organization Behavior/Human Resource Management.

The Vocational and Career Development (VCD) program began as a vocational teacher education program and was offered at the undergraduate, Master's and Doctoral levels. It was originally funded by the state at a 50% level. However this funding was discontinued in 2006, which had a negative effect on the viability of the program. VCD was eventually terminated in the College of Education because of declining applications, admissions and credit hours generated while the program was operating. There was also a lack of job opportunities in the area and a lack of funding for faculty.

After the turn of the century a new undergraduate service course was created. This course was called Computer Skills for the Information Age. It provided students throughout the university with computer skills in word processing, spreadsheets, databases, presentations, simple web page design, and the efficient use of Internet sources. On average, 250 undergraduate students register for this course every semester. Then in 2006, IT started an online program leading to an endorsement certificate.

As of Spring, 2011 there were 24 instructional technology courses described in the university catalog, the majority of which are taught on at least an annual basis. Seven of these courses are undergraduate level, and 17 are graduate level. (See Appendix C for Course Listing.)

The graduate programs in IT. The beginnings of the graduate program for Master's and Ph.D. students grew out of a strong relationship with business. This is another point reminiscent of the history of Eagle University and its close relationship with the business community. Because corporations often have better access to funding to

implement new technology than schools or school systems, Dr. Founder was always looking for opportunities to get corporate people involved in the program. Some of these initiatives included:

- Corporate consulting
- Providing medical school faculty at a local government health organization with teaching and facilitation skills
- Development of a course called “Comparative Analysis of Technology Centers” (Now called “Analysis of Education, Training, and Performance Support Centers”), which included both educational and business centers
- Providing companies with interns from EU’s graduate program
- A role for Dr. I. T. Founder in the late 80’s as Executive Director of a large corporate user group for educators
- Creation and delivery of the CBT Institute for that same corporation

Perhaps the most impactful of the endeavors listed the above was the Author Training Institute for Computer-based Training. This program was a 12-week course funded by a corporate grant administered by Eagle University. The program involved about 60 experienced Instructional Designers who attended the program in groups of 15. Through this program participants earned 15 quarter hours of university credit. All participants were required to be formally admitted to Eagle University; and several of them went on to earn a Bachelor’s, Master’s, and even one Ph.D. degree. This

relationship effectively launched these graduate programs in IT. And because of the corporate “roots” of the program, the graduate programs had a decidedly corporate focus.

In 1984 the fledgling instructional technology department was combined with Library Media and reported directly to the Dean of the College of Education. Two years later the Dean and the Chairperson recognized the importance of having an IT degree separate from either the Library Media degree or the Communications degree. They also recognized the potential for that degree to attract more students. Subsequently, the Master’s and Ph.D. programs in instructional technology at EU were formally approved by The Higher Ed Board in the late 1980s.

In 2006 a decision was made by the state that posed a threat to the IT program. That decision was that K–12 teachers would not be able to use IT graduate degrees to advance their positions or salaries. EU experienced a drop in the number of Master’s students, as did Big University 2. But in spite of the change, the Ph.D. program grew. As of the 2009–2010 school year there were 48 students enrolled in the doctoral program in IT. Of those, 16 were part time students (carrying less than nine credit hours per semester) and 32 were full time students (carrying nine or more credit hours per semester).

The mission of the instructional technology program. When Dr. I. T. Founder began his tenure with Eagle University, the purpose of instructional technology was to support the traditional education program already in place. There was no IT major available and students interested in an instructional technology focus majored in

Educational Communications. For 16 years, the IT program had only one full-time faculty member credentialed in instructional technology. Yet interest in instructional technology grew; and in the coming years the program weathered differing perspectives concerning its role within in the College of Education. In the 1980s and early 1990s, the focus of the IT program shifted toward a corporate focus as relationships with businesses were forged. After the Master's and Ph.D. in instructional technology were approved by The Higher Ed Board, the program enjoyed strong support from Department Chairs, possibly due to its success in the business community. However, in the late 1990's the Dean felt that everything offered in the College of Education should support K-12 and the program's perspective shifted back toward the educational environment.

As the program continued to evolve it became clear that there was an important audience in both the educational and corporate arenas. In their book *Instructional Technology: The Definition and Domains of the Field*, Seels and Richey (1994, p. 67) articulated this issue well:

Perhaps one of the most profound changes in Instructional Technology has come in the expansion of the arenas in which it is typically practiced. Although it began in elementary and secondary education, the field was later influenced by military training, adult education, and post-secondary education, and much of today's activity is in the area of private sector employee training.

Today the IT program welcomes practitioners in every learning-related segment, serving students with K-12 educational and corporate backgrounds.

Two formal mission statements were located that would apply to the IT department (See Appendix D). The first was dated 2003 and was specific to the instructional technology program (*2003 IT Vision & Mission*, 2003). This mission statement stressed the importance of strengthening the reputations of the department and the faculty as well as a commitment to improving education locally, contributing to the body of knowledge in IT and increasing the number of contributing IT professionals in the field. These goals clearly support the ongoing goals of the university to increase its stature and to make a contribution locally, regionally, nationally, and internationally.

More recently, a mission statement developed for the department was printed in the 2010 handbook for new graduate students (Ariail, 2010). This statement takes a broader perspective, as it points out the department's commitment to research, teaching and service in urban environments with people from diverse populations. Through this goal the mission statement qualifies the department's role as operating within the urban environment; working with diverse populations; and collaborating with other people and organizations, all of which were elements of the university's mission statements. Both of the IT mission statements include a vision of a world with "...equal access to learning opportunities and opportunity to apply skills and knowledge for the greater good," although there is no specific discussion of the department's role in implementing this vision. Research is also mentioned in both mission statements, which demonstrates its importance in supporting the university's emphasis on becoming a top tier research institution.

The Doctoral program. Candidates for the doctoral program in instructional technology complete a comprehensive application and submit previous college transcripts, professional/academic references, goals statements, a resume, a writing samples, and recent graduate (GRE) admissions test scores. After careful review of applications that meet the criteria, a personal interview is arranged during which the prospective student meets several members of the IT faculty. The purpose of this interview, among other things, is to evaluate the candidate's personal goals as they relate to the program goals, commitment to the program, and to assess potential fit for a temporary advisor among the faculty.

Once accepted, a new doctoral student is assigned a temporary advisor. By the time the student has completed either one year or 27 hours of coursework (whichever comes first), he or she is expected to select a permanent advisor and identify two or three more faculty members with earned doctorates who will then form his or her Advisory committee. The committee chair is also the major advisor, and must be a full-time, tenure-track faculty member whose primary appointment is in the College of Education. This individual will have worked in the same department where the student has been admitted for at least one year. The second committee member must be a full-time faculty member in the College of Education, while the third committee member will represent a major outside that of the student.

The role of this committee is to assist the student in program planning, completion of non-coursework requirements (e.g. residency requirements) and preparation for the

comprehensive examination. This committee must also approve the student's program of study and will also develop and assess the results of the comprehensive exam (Graduate Catalog 2010–11, 2010).

In terms of course requirements, the instructional technology program has always been an interdisciplinary program. Students take courses in areas outside instructional technology to round out the skills and knowledge needed for their identified areas of specialization. This provides both flexibility and challenges for students in the program. Though this has changed this year, previous IT students had basic course requirements (18 hours each in the Core area, the Major area, and the Cognate area), but much of the course selection was left to the discretion of the student and the approval of his or her Advisory Committee. For example, based on the 2010–11 Graduate Catalog (2010), a doctoral student in instructional technology was required to take a total of 66 hours, including nine hours of dissertation credit. The 57 hours of actual coursework included six courses of core courses; seven courses in the major area; and six in the cognate area. Throughout the program of 19 courses, only six are specifically required. Others may either be selected from a list of approved courses in some areas or they may be electives in other departments. However, the entire program of study must be approved by the student's Advisory Committee. The caveat is that the student needs to have a possible dissertation topic selected fairly early in the program in order to effectively select courses that will support their topic. If this is not done, there may be additional courses like research methods courses required, once a topic is selected. Recent changes in the

program of study will be described later in this chapter under the topic *Moving into the future*.

The culmination of the coursework phase of the program is a comprehensive exam consisting of essay questions, created by the students' Advisory Committee. The written exam is then followed by an oral exam conducted by the Advisory Committee.

After the student has successfully completed the comprehensive exam he or she has the option of adding one more person to his or her committee or reconfiguring the committee, which now becomes the Dissertation Advisory Committee. This committee assists the student in the development of the dissertation prospectus and the dissertation itself. The committee also reviews and approves both the written documents and the oral defense of each.

The above descriptions summarize the major milestones in the IT program. Critical to success in the program is an understanding of what is expected of the doctoral student and support mechanisms available to aid the student during each phase of the program. One component of this support is a mandatory course called Seminar in Teaching and Learning, and the general advising session held once each semester. This seminar reviews the basic requirements of the doctoral program and helps the student prepare for the journey toward the dissertation. In addition to these classes, there is a research course called Critique of Education Research that helps students flesh out ideas for the dissertation; and another course, the Research Seminar, that addresses the planning and development of research projects—particularly the prospectus. With the

combination of these three courses and the Advisor, Advisory Committee, and Dissertation Advisory committee, the student has a core of support within the department. However, additional resources are also available to the doctoral student. These resources include the Education Office of Academic Assistance that assists in all things procedural; the Instructional Technology Center that provides learning spaces, technology workshops, student computer access, and specialized educational technology resources; directed readings courses with the major advisor, and the University Research Services and Administration office that helps students prepare to conduct research with human subjects, to name a few. This same group also evaluates and approves student research proposals.

In terms of research experience in preparation for the dissertation, students have previously relied on random opportunities to work with professors. Otherwise they used research skills to complete class papers or projects and sometimes developed their own projects, particularly if they worked in an environment where research was needed and the student could blend work with needed research experience. As of 2010, professors in IT are required to have their own research agendas and work to secure grants in order to open up opportunities to work more closely with doctoral students. This should open up more opportunities for student involvement.

Moving into the future. As the instructional technology program at Eagle University moves forward, there are several initiatives that are currently being implemented or are on the horizon. Note that some of the program changes discussed in

this section have already been implemented, but would not affect those students who participated in this study.

Focus on research. The commitment to the research agenda has been strengthening in recent years and the way in which students become involved in research is changing also. For example when the graduate programs in IT began, faculty members were expected to support the research agendas of the students rather than expecting students to adopt the research interests of a faculty member. Today the program is moving in the direction of matching students with a faculty member with similar interests and having the student work with the research agenda of that faculty member. Coupled with this approach is a push to increase the amount of research being done by students, replacing some of the currently required coursework with active research hours.

To enhance the research focus, the program of study has been revised. The first group of students entering under these new requirements is the Fall, 2012 cohort. The new program structure reduces the number of hours required to complete the Ph.D. from 66 hours to 60 hours. Within those 60 hours, some of the coursework hours previously required will be replaced with active research hours. Students are required to complete 45 hours of coursework (reduced from 57 hours) and 15 hours of dissertation research credit (up from 9 hours). This change reflects a shift in emphasis to a research focus, and expects students to become involved in research with their major advisor as soon as basic coursework is completed.

In addition, three new courses are being offered to support the Ph.D. student and specifically bolster their research skills. The first is a 3-hour course focusing on scholarly writing. The second is a new research seminar, which will be taught on a rotating basis by IT staff. Doctoral students must enroll in this course each semester until they pass the Prospectus defense. The seminar carries flexible credit hours (1–3) and selected research topics will vary with each instructor. The third offering is a research seminar supervised by the student’s advisor. Students can sign up for this course on a repeat basis, conducting research alongside or with the aid of the faculty advisor. This encourages the movement into a mentor-mentee relationship between advisors and students rather than a course-driven mindset.

Finally, the College of Education plans to bring on board a new Dean of Graduate Studies and Research. In addition to oversight of graduate programs and an emphasis on research, this position will likely include a focus on data related to graduate studies.

Refocusing the Master’s program. While the doctoral program builds on its research focus, the Master’s degree program will concentrate on serving students from the corporate training environment. The growing need for corporate training professionals is expected to provide a solid student pool for this program.

Change in admissions perspective. One approach to improving completion rates at EU is to change the structure of the IT program to mirror that of those in the hard sciences. This includes a focus on admitting more full time students or focusing on young people who have stayed on an academic track since undergraduate school. This does not

mean elimination of part-time students, but it does mean favoring full-time students in the admissions process. This is one possible factor this study will examine.

In fact, admissions to the doctoral program have already begun to favor full-time students. However, funding levels for doctoral study in the past has not kept pace with the amount of support needed for students to choose full-time study. This points to another initiative that is being addressed by the College of Education for all disciplines. Emphasis is being placed on finding grant money for research projects, which will in turn help fund doctoral students. For example, the Dean has established Dean's fellowships that provide a sizable stipend over multiple program years, plus an additional stipend for research. The College of Education advertises funding opportunities to faculty and students using multiple media channels to ensure these funds are distributed to eligible students on a timely basis.

Establishment of IT cohorts. Another initiative that could improve doctoral completion rates is to establish cohorts to reduce chances that classes will be cancelled because of low enrollment. Cohorts can also serve to increase camaraderie among the students. The IT program has been limited in the number of students admitted in the past, in part because there was a rule limiting the number of doctoral students to six per faculty member. This rule has been modified so that a faculty member can have six students in the writing phase of the program. So while admissions were previously limited to 1–2 students per year, this change allows IT to admit as many as 15 students in a single year.

As of January 2011, the doctoral program admissions process was changed. Ph.D. admission now takes place annually rather than semi-annually. The selection process now begins in January of each year, for the cohort to begin in the fall. Annual admissions also increase the number of students starting at one time and thus facilitates the establishment of cohorts. A cohort will be able to progress through many of the core courses together, which will help them form important bonds with peers to support them throughout the doctoral program.

A change in structure. Within the College of Education at Eagle University, Instructional technology is currently linked with another discipline and considered part of that department. IT is now in the process of gaining approval to become a separate division. Although it still has a small complement of faculty, the IT administrator interviewed feels that becoming a distinct division will create a distinct identity for IT and support growth of the new division by establishing policies, procedures and increase student funding to serve its unique needs. Another benefit will be the ability to appoint faculty fellows in the division.

Summary. The ideas presented above are certainly not a comprehensive inventory of goals and solutions for the IT department at EU, but it is a starting point to enhance doctoral completion rates in IT and to continue to build on the rich heritage of the IT program in serving the needs of students, businesses, and the educational community surrounding Eagle University.

Implications of This Journey Through History

The intention of this chapter was to paint a picture of the history and heritage of Eagle University and of the instructional technology program. The objective was to create a sense of the values, commitments, visions and goals; the path the university has taken to get to where they are, and plans and directions to move into the future. In review, there are components that stand out as beacons of the past and foundations for the future direction of EU. They include:

- Determination to build a first-class urban research university recognized locally, regionally, nationally, and internationally
- Commitment to the needs of the students
- Ongoing endeavors to serve and contribute to the local community as well as the global community
- Maintenance of strong ties to the local business community

This background frames the environment in which doctoral students in instructional technology at Eagle University matriculate. It is therefore the context, or foundation, for students participating in this study. As the data from this study are introduced, it will be important to take note of how elements from Eagle University's historical tradition were manifested. Things like EU's commitment to serve working students and other underserved populations; concern for course offerings that educate the 'whole man' with critical reasoning and decision-making skills; commitment to graduate

studies; and efforts to create support structures for students all influenced the experiences related by participants in the study. For example, similar to students who attended EU early in its development, most of the study participants were married working adults. Another example is the appreciation expressed by students for the printed and online materials provided to support their quest for the Ph.D.

The next chapter describes the methods and procedures used to conduct the study. It will be followed by the results of the study (Chapter 5) and conclusions and recommendations (Chapter 6).

CHAPTER 4

METHODOLOGY

Research is to see what everybody else has seen, and to think what nobody else has thought.

Albert Szent-Gyorgyi

Introduction

The purpose of this study was to explore the phenomena of doctoral student attrition and completion in instructional technology at Eagle University (pseudo.), a major research university with very high research activity. The study sought to determine why some students complete their doctoral studies and others do not. This was a qualitative study informed by phenomenology.

Chapter 1 introduced the rationale for the study and detailed the research questions, the purpose for the study, and the importance of the theoretical framework chosen to anchor the study. Chapter 2 presented a review of the literature related to doctoral program completion and attrition. The focus of past studies has progressed over time from an emphasis on individual factors hypothesized to affect completion and attrition, to psychological factors, socialization factors, and institutional factors. This information created a springboard from which this study examined the phenomena of completion and attrition from the participants' perspectives. Chapter 3 offered context for the study by recounting the history of Eagle University and of the instructional

technology program. This chapter, Chapter 4, details the methodology used in this study by discussing: 1) the pilot study; 2) chosen research methods and design; 3) the selection of participants 4) data collection procedures; 5) data analysis; 6) research ethics; 7) the researcher's role and potential for bias; and 8) trustworthiness.

Pilot Study

A pilot study served to identify factors that could potentially influence completion of the Ph.D. in instructional technology at Eagle University and to screen questions included in the interview questionnaire so that it could be modified as needed for use in the dissertation research study. The pilot consisted of semi-structured interviews, which ranged from 75 to 90 minutes each.

Four participants were selected for the pilot study. The goal was to have each proposed category of participant represented: completers, non-completers, and students-in-progress. Participants selected represented a convenience sample, with one of the participants having completed the Ph.D. program, two non-completers, and one in-progress.

A semi-structured interview questionnaire was developed for the pilot study. (See Appendix F). The content of the interview questionnaire was based on a review of the literature and on questionnaires used in similar studies found in the literature. The interview questionnaire covered as many potential attrition-related issues and contributors to completion as possible. The objective was to use the pilot data to build an

interview experience for the final research project that would yield ample data for analysis of the phenomena of completion and attrition.

The pilot study was a valuable undertaking whose results provided several important benefits. One decision made was *not* to include students considered to be “in-progress” as part of the final research study. Because the objectives of the study were to explore issues surrounding completion and attrition, the in-progress group would not provide relevant data here. Only those who had completed or left the program were deemed relevant to the final study.

The pilot identified a number of issues that might potentially influence the completion or non-completion of the Ph.D. Those issues were further categorized as demographics, family/life factors, psychological/personality traits, advisor/committee factors, and program/university issues. Combining these issues from the pilot with categories emerging from the literature review, six categories were identified to facilitate the study. Those categories were demographics, academic issues, personal life/work life factors, psychological factors, socialization, and institutional factors. These categories are further described in Chapter 2, Table 7: *Potential Influences on Attrition or Completion of the Ph.D. in Instructional Technology*.

The pilot study suggested that simple demographics would be unlikely to yield insights into what influences attrition and completion. The pilot study participants all reported an array of issues that supported their journey to completion or the path to attrition, and there did not appear to be a connection to demographics. This could mean

that the root of attrition or completion of the Ph.D. might be influenced by multiple factors. It was clear that attrition and completion are complex phenomena and no one factor or category of factors would be sufficient to explain them. This served as a warning to the researcher to guard against the temptation to grasp at simplistic solutions to the problem. It also led to further investigation as to the appropriate theoretical framework to be adopted for the larger study. It was important to look beyond the research paths that had been taken before, and the decision was made that postmodernism, with its emphasis on looking beyond the obvious, was the best framework on which to base this study.

In effect, the pilot study identified categories of factors that could affect attrition or completion of the Ph.D. in instructional technology at Eagle University. And by drawing attention to the complexity of attrition and the possibility that there could be multiple factors involved that might interact to impact attrition or completion, the pilot study results led to the selection of post-modernism as a theoretical framework for the study. The decision was also made to drop the category, “In Progress Students” from participants interviewed for the study. And finally, revisions were made to the interview questionnaire based on learnings from the pilot.

Postmodernism. The theoretical framework chosen for this study is Postmodernism. Challenging the tenets of prior assumptions is a primary characteristic of postmodernism. The term itself implies a stand in opposition to modernism. As Clarke (2005) explains,

If modernism emphasized universality, generalization, simplification, permanence, stability, wholeness, rationality, regularity, homogeneity, and sufficiency, then postmodernism has shifted emphases to partialities, positionalities, complications, tenuousness, instabilities, irregularities, contradictions, heterogeneities, situatedness, and fragmentation—complexities. (p. xxiv)

An important keyword in this passage is *complexities*. A principle alluded to in this description of postmodernism is the need to maintain a respect for the complexity inherent in analyzing attrition and completion and of searching for a central theme to unify each phenomenon. This in turn suggested the use of phenomenology to inform the research design.

Research Design

This study sought to describe the phenomena of doctoral student attrition and completion from the perspective of the students, leading to the identification of central themes underlying the phenomena. This objective lends itself to qualitative methodology, as Denizen and Lincoln (2011) define qualitative research as “...a situated activity that locates the observer in the world.” and “...consists of a set of interpretive, material practices that make the world visible.” This study focuses on students’ experiences in the context of the world of doctoral study in instructional technology at Eagle University, a world in which they each lived for a number of years. Frederick Erickson elaborates further on qualitative research, explaining that qualitative research “...seeks to discover and to describe in narrative reporting what particular people do in their everyday lives

and what their actions mean to them” (Erickson, 2011). The end result of this study was in fact this dissertation, which reports on the perspectives of the students and the meaning they made out of their own doctoral experiences.

In practice, the qualitative research design for this study is informed by phenomenology. Phenomenology investigates individual or group experiences about a concept or phenomenon as they lived them and describes the meaning of those experiences (Creswell, 1998). In the phenomenological search for ‘truth’, the researcher looks for the central underlying meaning of the experience, recognizing that the reality of the experience is that which is perceived by the individual. In short, the primary focus is to understand the experiences studied from the perspective of those being interviewed. The goal is then to synthesize the resulting data, reducing these experiences to a central meaning or the “essence” of the experience (Creswell, 1998). These guiding principles were central in the development of this study, which sought to investigate the phenomena of doctoral student completion and attrition through the eyes of the students who experienced them. The synthesis of the data, which will be discussed in more detail later, was an effort to reduce individual experiences into central themes, which have reported in Chapter 5 of this dissertation.

Participants

The population from which the sample was selected included students who had been enrolled in the doctoral program in instructional technology at Eagle University at

some point beginning with the 2000–2001 school year through fall of 2011. The study was limited to this time frame for two reasons. First, students enrolled during or prior to this 11-year period had a full ten years to complete the doctorate, the last three of which were allotted to the dissertation. This provided a good pool of participants who completed as well as a reasonable opportunity for those students to have determined if they would persist. The second reason for limiting the study to this time frame is the recognition that the longer students have been away from the program, the more difficult it would be to accurately report what they experienced during the program.

From the population described, two groups were interviewed: 1) Students who successfully completed the program, and 2) Students who left the instructional technology program at Eagle University. For purposes of this study, successful completion is defined as the successful defense of the dissertation and submission of the final draft, though the student may not have had the diploma in hand. This definition allowed the inclusion of students who completed all of the requirements for the Ph.D. most recently. The category of students who left the IT program describes students who have made the decision to abandon pursuit of the doctorate in instructional technology at Eagle University.

Privacy issues prevented the researcher from obtaining a list of students who might be candidates for the study from the university. To compensate for this limitation, a database of potential interviewees was generated by beginning with a list of current and former students known to the researcher and continuing by using snowball sampling. In

snowball sampling, initial participants in a study are asked to recommend others to participate in the study (Creswell, 2005). The initial list created for this study was expanded with references received from people on the initial list and from current or former students who themselves were not eligible to participate in the study. From this database participants were contacted to request interviews until six completers and six non-completers were scheduled. This number is closely aligned to the number of interviews generally found in phenomenological studies (usually 3–10), and allowed in-depth interviews with each person while providing enough participants in each category (completers and non-completers) to draw meaningful conclusions about the data. The final group of eleven interviewees was arrived at based on convenience sampling—those who were willing and available for the study (Creswell, 2005). The twelfth interviewee originally selected was dropped from the sample after determining that his area of concentration was not actually instructional technology. Also noteworthy is the fact that two non-completers who were asked to participate declined. Both submitted that personal circumstances and prior commitments conflicted with the timing of the interviews.

Data Collection

Interviewing was the method used for data collection for this study and is the principal method of data collection for many forms of qualitative research, including phenomenology. Interviews have the capacity to facilitate the collection of rich data—data that is detailed, focused, and full. Interviews were conducted with eleven research

participants and three College of Education administrators associated with Eagle University.

Student interviews. The purpose of the student interviews was to gain a deep understanding of the factors affecting attrition and completion and the experiences and processes that contributed to either completion or a decision to leave the program. Because each person's experience with attrition or completion had unique elements, it was important to have the flexibility of exploring individual experiences while maintaining a level of consistency in questioning to facilitate data analysis.

Administrator interviews. Two current administrators and one former administrator from Eagle University were interviewed in order to: (1) build information on the history of instructional technology, which was reported in Chapter 3 of this dissertation; and (2) gain an understanding of the efforts that have been made by Eagle University to address attrition in the instructional technology program. Two of these administrators were selected based on input from the department chair. The third was a former administrator who was considered the founder of graduate studies in instructional technology. In addition to a historical perspective, current administrators also provided a glimpse into the future plans of the University that are expected to have an impact completion and attrition. This data was also reported as part of the History chapter of this dissertation, Chapter 3.

Constructing the interview. In-depth interviews, which are essentially semi-structured, contain primarily open-ended questions to encourage each participant to

reconstruct his or her experience with the phenomenon and describe the meaning those experiences had for them (Seidman, 2006, pp. 15–16). Interview questionnaires for this study were developed following this guideline. Also observed was Creswell's (1998) suggestion that the interview begin with a very general question and continue in such a way as to "...peel away like the layers of an onion to get to the essence of the experience." This was done in this study by: 1) structuring the interview questions in an exploratory manner; and 2) asking follow-up questions during the interview to get to the heart, or "essence" of the participant's experience.

The interview process. One in-depth interview session was conducted with each student participating in the dissertation research study. These semi-structured interviews lasted from 60 to 90 minutes each, which is in line with the expected time frame described by Creswell (1998) for phenomenological interviews. The time frame for the interviews facilitated rich, thick description of the issues and allowed time to explore individualized experiences as needed. Interviews were conducted in person at a location convenient for the interviewee or by phone for those who lived out of town.

After the initial interview, follow-up was needed for some interviewees to clarify minor details of their experiences. Although there were provisions made for follow-up interviews if needed, the follow-up questions required did not necessitate additional interviews. Instead, brief emails were sent to study participants for whom follow-up was needed. These emails were transmitted within thirty days of the initial interview.

An audio recording was made of each interview. These audiotapes were transcribed for data analysis. After the transcriptions were complete they were returned to the interviewee for verification before beginning analysis.

The interview questionnaires used for the pilot and the final research study can be found in Appendix F and G of this document.

Data Analysis

Data analysis followed the process summarized by Creswell for phenomenological studies (1998, pp. 54–55). Five components of this process are 1) Epoche or bracketing, where the researcher sets aside his or her own experiences in an effort to focus on the experiences of the study participants; 2) Horizontalization, in which protocols are divided into statements relative to the topic are identified and given equal value; 3) Clusters of meanings, where themes are identified through clustering of related statements; 4) Textural description, in which the researcher writes about what the participant experienced; and 5) Structural description, where the researcher writes about the phenomenon. Specifically, data analysis for this study is illustrated in Figure 1, and proceeded as follows:

1. Researcher reviewed transcripts.

Interview transcripts were read by the researcher with the intention of identifying potential codes to develop a code book.

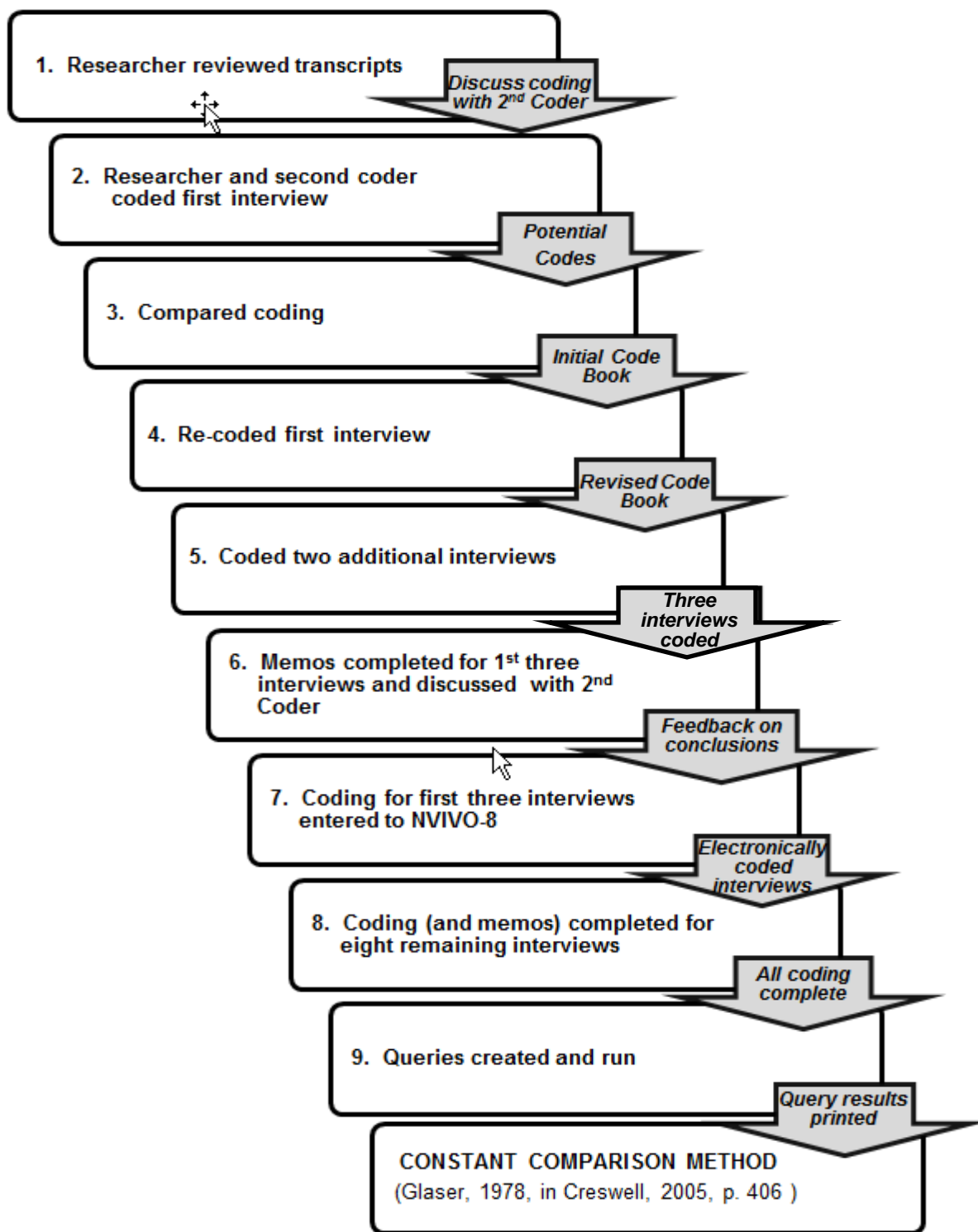


Figure 1. Data Analysis Process. Each step used in the data analysis process is shown. Test in an arrow represents the outcome of the step above it.

2. *Researcher and second coder coded first interview.*

An individual who agreed to assist with coding was briefed on the purpose and content of the study and asked to hand-code one interview and create a set of codes for the study. The researcher did the same.

3. *Compared coding.*

A discussion was held to discuss the consistency of the codes and to agree on a set of codes and corresponding definitions before moving forward.

4. *Re-coded first interview.*

The same interview was re-coded by both the volunteer and the researcher using the revised code book. Coding was compared and the code book revised as needed.

5. *Coded two additional interviews.*

Two more interviews were coded by both parties and codes compared. It was found that codes were 85% consistent. Where different, codes were sometimes coded at a higher level but within the same coding hierarchy.

6. *Memos completed for first three interviews and discussed with second coder.*

The researcher completed memos on the three interviews coded and shared this data with the second coder. The two also engaged in discussion about what had been found to date with the three interviews coded. The second coder offered feedback concerning the consistency of what the researcher identified as patterns in the data.

7. *Coding for first three interviews entered to NVIVO8.*

All coding was then entered and subsequently managed using NVIVO 8 software, a program created to support the management and analysis of qualitative data.

8. *Coding (and memos) completed for eight remaining interviews.*

The researcher completed coding for the remaining eight interviews.

9. *Queries created and run.*

Queries were then created to assemble information reported for each code across interviews.

The *Constant Comparison Method* was used to make sense of the data and in ‘grounding’ the categories in the data (Creswell, 2005, p. 406). Comparisons were made of statements and incidents within the interview to look for similarities and differences, consistencies and inconsistencies. This same type of comparison was also made *between* interviews.

In preparation for analysis, the researcher also wrote memos to document thoughts, observations and reactions of the researcher during data collection and to begin to identify emerging themes or patterns. These memos were invaluable in analyzing the data and describing findings and conclusion.

Research Ethics

There are several precautions that were taken that speak to the issue of research ethics. These ethics are aimed primarily at the protection of the privacy and well-being of participants (human subjects) in the study.

Pseudonyms. Names of educational institutions, individuals who played a historical role in those institutions, and participants in the research study, were replaced with pseudonyms. The purpose was to protect their privacy and to do everything reasonable to ensure that an individual or institution could not be easily identified.

Data collection and storage. In order to protect participants' identities, data collected did not include the participant's name. At the beginning of the interview, the researcher recorded the interviewee's name and interview code on the Interview Code Cross Reference document, which was stored in a fireproof safe, separate from the recordings and the transcriptions. In order to maintain the anonymity of the participants, only the researcher had access to this cross-reference document. In addition, any references to specific names, locations or other facts that might allow personal identification of the participant were omitted from resulting reports and presentations.

Interviews were audio-recorded so that the information could be transcribed at a later date. While awaiting transcription, audiotapes were stored in a locked fireproof cabinet off campus in the office of the researcher. Audio recordings were only accessible to the researcher, and will be destroyed after the dissertation is finalized.

Disclosure and consent. Prior to the interview, participants received a full explanation of the purpose of the interview and how it would proceed. They were also told that they could end the interview at any point if they did not wish to continue for any reason. All such information was also contained in the Informed Consent form. Participants were provided with a copy of the Informed Consent forms (Appendixes H & I) and asked to sign the form and return it to the researcher prior to participating in the interview.

A proposal to conduct research with human subjects along with all of the forms and questionnaires used in the study were previously submitted to the Institutional Review Board (IRB) for review and approval.

Researcher Role and Bias

In qualitative studies, the researcher plays an important role in the collection and analysis of the data. In fact, Mehra (2002) contends that what we elect to study is in itself a reflection of who we are and what we value. That is, we choose to study things to which we have a personal connection on some level. But Creswell (1998) reminds us that it is important for the researcher to disregard any pre-existing notions of the phenomena being studied in order to objectively view and interpret the data.

As a doctoral student in instructional technology at Eagle University, the researcher clearly has her own personal experiences, attitudes and opinions that might relate to the subject under investigation. Although experts in qualitative research

recognize that a researcher brings his or her personal experiences into a study, the challenge was to use this experience to help place interview data in context, without allowing personal experience to influence the interpretation of the data. At the same time, the researcher's familiarity with the subject helped determine when and how to probe participant responses for meaningful data and to provide in-depth analyses of familiar information from a different perspective.

Being enrolled in the same program being studied also means that the researcher knew some of the participants interviewed. However, all of these relationships were casual, and the researcher did not know much about those acquaintances beyond demographic information. One way in which this relationship level was minimized was the frequent use of the participants' own words to ensure that their thoughts and ideas were being reported and not those of the researcher.

Another area of researcher bias was the tendency to empathize with the student, particularly those who did not complete. And there was the urge to offer suggestions for ways to achieve their initial goals. This was combined with a personal bias that can only be described as eternal optimism, which translates into the belief that everyone can achieve their desired goals—given the desire and resources needed. To counteract these inclinations, the researcher reminded herself of the purpose and goal of the study and the importance of focusing on the participants' past experience; and the fact that some people *do* achieve their goals, while others do not.

Several additional techniques were used to address or counter potential researcher bias. This included reflecting on any preconceptions and prejudices surrounding completion and attrition; and postponing judgment to avoid arriving at conclusions too quickly. Issues related to validity and reliability of data are expanded in the next topic, *Trustworthiness*.

Trustworthiness

Trustworthiness can be thought of as the qualitative equivalent to validity in quantitative research. Many qualitative researchers still use the terms ‘validity’ and ‘reliability’; but others have adopted the term *trustworthiness* as a way to describe the quality of a study.

To address trustworthiness, *member checking* was employed with student interviewees. Member checking is a process in which the researcher asks participants in the study to check the accuracy of the account (Creswell, 2005). In this study, transcripts of the interviews were returned to participants for their review, giving them the opportunity to make corrections they felt were needed. Nine of eleven interviewees reviewed and returned their interview transcripts. Although repeated requests were made, the other two respondents did not return their edited copies.

The use of in-depth interviews facilitates *rich, thick description*. The goal of in-depth interviews is to gain a deep understanding of the research participant’s experience in anticipation of comparisons with other interviews.

During data collection and analysis, the researcher wrote *memos* to document thoughts and observations throughout the entire process. These memos were then used during data analysis to facilitate the development of research findings.

The study also employed double-coding for three of the interviews, the practice of having two people code the same interview. The use of double-coding is also discussed as Interrater Reliability (Boyatzis, 1998), and looks at the consistency of the coding between multiple coders. This practice helps strengthen the reliability of the coding process. The raters discussed their outcomes to identify differences and reach agreement on codes and their meanings. Using the revised code book, a second and then a third interview were coded by both coders, and a comparison made. The final code book resulted and was used to code the remaining eight interviews. Codes from the third interview were found to have an 85% consistency level between coders.

Peer review of interim data was included after completion of the three interviews that were double-coded. The researcher's overall assessment of interim results based on these three interviews was shared with the second coder. This person acted as a peer debriefer, as she responded to the researcher's reports based on her own experience with the data.

Data reliability is not just an issue with the researcher. It is also important to ask the question whether or not the information provided by the interviewee is accurate and reliable. Two techniques that were used to examine the reliability of interviewee data were Internal and External Consistency (Seidman, 2006). In internal consistency, the

question is whether or not the interviewee is consistent in his or her responses. If they are, then there can be more confidence in the accuracy of the information. One of the best ways to look at internal consistency is to compare responses of the participant over time. Because only one interview per student was conducted for this study, this concept was applied to the responses to different questions within the interview. Answers from related interview questions were examined for consistency. Question #1 asked, “How would you characterize your experience in the doctoral program in instructional technology at EU?” Responses to this question were compared to answers to questions about specific experiences in the program, like the challenges and supports they encountered.

External consistency looks at how closely one participant’s responses reflect the experiences of other study participants or previous findings in the literature. The researcher took care to ensure that only responses that appeared consistent based on these measures, were included in the final reporting for this study.

Study Design Limitations

Participation in the study was limited to students who were enrolled in Eagle University at some point beginning with the 2000–2001 school year through the Fall of 2011. The study was bound in this way to ensure there were enough potential candidates to fill 5–6 interview slots each for completers and non-completers. This pool did not extend below the year 2000 in an effort to try to maximize the accuracy of participants’ recall of their experiences.

Perhaps the most important limitations of the study are: 1) the study was conducted in one specific area of specialization within the College of Education and at one specific university; and 2) the participants who participated were not randomly selected.

Another limitation of the study is the fact that some participants either completed or left the program early in the time span for which the study was bound (between the 2000–2001 school year through fall of 2011). This time lapse could have affected participants' memories of the events and their reactions to them. However, in reviewing the transcripts of the interviews, when a participant felt that there might be some confusion about the information provided, they would generally make a statement to that effect so that the data could be included with a caveat, if necessary. In most instances like this, the interviewee used a second or third avenue of clarification to verify the validity of their responses. In any case, the data from those early interviews did not appear to be inconsistent with data from later interviews.

Summary

This study used qualitative methodology informed by phenomenology and guided by a theoretical framework influenced by postmodernism. The chosen methodology allowed the topic of doctoral attrition and completion to be explored in depth, using a relatively small number of interviews. The results of this study, though not generalizable to other departments or universities, provide valuable information about the experiences

of the students who participated, and it is hoped that their stories spark a conversation about attrition and completion that ventures beyond the generally accepted findings of the past.

Chapter 5 presents the findings from this study. It tells the story of completers and non-completers as summary data, and at times, in their own words. These stories provide insight into the experiences of the eleven study participants, and the factors that led to completion or attrition for those students.

CHAPTER 5

RESULTS AND ANALYSIS

One of the most revolutionary things you can do sometimes is just tell the story. Tell it, and be honest with it.

Viola Davis, 2012

Introduction

The above quotation speaks of the power of *the story*. This chapter describes the collective stories of six completers and five non-completers of the doctoral program in instructional technology at a major Southeastern research university, Eagle University (pseudo.), with “very high research activity” as characterized by The Carnegie Foundation (“Carnegie Classification of Institutions of Higher Education,” 2011). Note that the designation “very high research activity” is a relatively new classification, and was described in more detail in Chapter III of this dissertation. The classification previously used listed Eagle University as a Tier I or Tier II Research University. However, this classification system was changed in 2005 to discourage the tendency to use it to rank universities.

The purpose of the study was to explore the phenomenon of doctoral student attrition and completion in instructional technology at Eagle University. The goal was to examine doctoral attrition and completion in a new way.

The overarching research question to be answered was:

Why do some instructional technology students at a research university with very high research activity complete their degree while others do not?

The study was also guided by three related sub-questions:

1. *What are the experiences of completers and non-completers in the instructional technology program of a Southeastern research university (aka Eagle University) with very high research activity?*
2. *What drives a student at Eagle University to continue (or discontinue) with the pursuit of their Ph.D. degree in instructional technology?*
3. *What are the defining differences between instructional technology doctoral students who complete their degrees vs. those who do not?*

The results of the research described above will be unveiled by telling the collective story of six students who completed the doctorate in instructional technology (Viki, Linda, Mike, Wanda, Gary and Carson), and five students who did not (Matt, Lewis, Beth, Jean, and Franco). Rather than chronicling each individual student's experiences, this story will aggregate and contrast the story of the completers with that of the non-completers in an effort to understand how they converge as well as where they diverge.

The story itself will be chronicled through seven emergent themes, and will be presented approximately in chronological order. The discussion of these themes begins with a demographic description of the students themselves and move to their motivation for attending the doctoral program in instructional technology, financial issues, socialization, academic issues, experiences in various phases of the program, the impact made by different types of support (or lack thereof) and psychological factors that may have impacted the student's completion or withdrawal from doctoral study at Eagle

University. Additionally, quotations from individual students are used to provide the reader with additional perspective. When student statements are cited, a suffix of –C will be used to designate completers and –NC will be used for those who did not reach completion. Specifically, seven themes are addressed:

1. Student Profiles/Demographics
2. Motivation
3. Financing the Ph.D.
4. Socialization
5. Academic Issues
6. Program Experiences
7. Support Systems

This chapter will conclude with a synopsis of specific strategies employed by the students interviewed to aid in completion of the Ph.D. Here is their story.

1. Student Profiles / Demographics

The story begins by looking at the background and characteristics of the students who entered the doctoral program in instructional technology at Eagle University. Though their starting dates varied, the students in the study were all active at some point during the calendar years 2000–2010; and all completers finished the program by December, 2011. The demographic information collected from the 11 students in this study offers a basic profile of the completers and non-completers who participated in this study. Table 10 displays these demographics.

Table 10

Study Participant Demographics

Category	Values	Completers	Non-completers
Gender	• Male	3	3
	• Female	3	2
	• Caucasian-American		
Ethnicity	• African-American	4	4
	• Asian-American	1	0
	• Asian-American	0	0
	• Foreign (Non-US Citizen)	1	1
	• 20–29		
Age (At start of program)	• 30–39	2	3
	• 40–49	2	0
	• 50–59	1	2
	• No permanent relationship	1	0
Partner/Relationship Status (Married or in a permanent relationship?)	• Permanent relationship	2	0
	• Established relationship while in school	3	5
	• Dissolve relationship while in school	1	0
	• None	0	0
Children	• Had children when program began	1	0
	• Had children during the program	3	3
	• F/T	2	2
Employment status while in program	• F/T	3	3
	• P/T	1	1
	• Some F/T—Some P/T	1	1
	• Some GRAs/GTAs; but <50%	1	0
	• F/T		
Student Status	• F/T	2	3
	• P/T	3	1
	• Some F/T—Some P/T	1	1
	• Master's		
Last degree attained before beginning Ph.D.	• Ed.S.	4	4
		2	1

Legend: GRA: Graduate Research Assistant
GTA: Graduate Teaching Assistant

In examining profile information for the two groups studied, the demographics were amazingly neutral. Virtually every category examined showed similar results when comparing completers to non-completers. While the study did not set out to locate equal numbers of male and female completers vs. non-completers, for example, for both completers and non-completers gender was evenly split between males and females; age upon starting the program spanned several decades, from the 20's to the 50's; whether or not the student had children was similar for both groups; and student status, whether the student was full-time or part-time, also showed like patterns. Of course, individual experiences based on demographics varied. Though demographics were not found to drive attrition or completion, there were several interesting notations and discoveries in this category. For example in looking at the category of Partner/Relationship Status, one person implied that having a permanent relationship while pursuing the doctorate might be a hindrance. He did not specifically single out partnership status; but talked about the fact that if he had undertaken the program when he had fewer ties and obligations it could have improved his chances for completion.

... if I would've gone in directly after my Master's degree program, I would've done a lot better I think because I had a lot less obligation. If I was twenty-five—and I don't know if that's mature enough, that's something professors would know—but if I was able to go in earlier I think I would've made it. I know I would've made it and probably would have made it by the time I was thirty. (Franco-NC)

One completer had a very different take on his Partner/Relationship Status, indicating that marriage was an important reason he persevered as he indicated, “If I hadn't gotten married in the middle, I probably would have quit (Gary-C).” Yet another completer

conceded that marriage, along with doctoral study, can be challenging. Even with a great deal of support from his wife for his studies, he saw doctoral study as a strain on the marriage.

...my wife was just incredibly supportive throughout. In terms of, "Take the time you need and work on this, I'll take Sam." So she sacrificed a lot and I realize that. She sacrificed a lot. We're still together too, by the way. (But) I could understand how a marriage would not survive a Ph.D. I completely understand how that would happen. (Mike-C)

Another area of interest relates to employment. Although working or not working did not appear to determine completion, eight of the eleven participants in the study said they could not have studied for the doctorate without working.

It wouldn't have been possible (not to work). And I did not seek out a program like that, because I knew that I had to have work. I had to continue working full-time because they were paying for the school. And I needed a job in order to support my family. So it's a system. (Mike-C)

I had to work. I had a wife and two kids. I can't quit my job and go (and) be an academic student. That wasn't a luxury I had. If I was younger maybe. There's a lot of people that do that. (Gary-C)

In this study student status is defined as whether the student pursued his or her doctoral studies on a part-time or full-time basis. Five students considered themselves to be full-time; four part-time; and two studied full-time some semesters and part-time other semesters. An interesting finding was that two students worked full-time while pursuing the doctorate on a full-time basis. Both of these students powered through the coursework in less than three years, only to eventually time out during the Dissertation phase and become non-completers. It might be assumed that burnout caused these two students to time out. However, neither student mentioned stress and burnout from their schedules as

a contributor to attrition. Their interviews revealed that both students were initially on track to complete the Dissertation but encountered other issues that impeded completion. A curious contrast is provided by Viki-C, who attended primarily part-time; but thought of herself as a full-time student. She stated, “I was technically part-time but because I was also doing it over the summer, I just perceived myself to be maxed out there for hours. In my mind I was full time.”

In summary, demographics did not play a significant role in doctoral attrition or completion for the population in this study. This is in keeping with the conclusions reached by most prior research, and supports the assertion made in the literature review chapter that demographic characteristics may *describe* the phenomenon of doctoral attrition in demographic terms; but should not be assumed to *cause* attrition. At the same time, the data in this area offered some interesting insights into the experience these students had from the perspective of demographics:

- While one student found their partner/relationship status to interfere with their doctoral studies, another viewed their relationship as vital to the completion the Ph.D.
- Only two non-completers had reached the dissertation phase of the program at the time they discontinued their studies; and only one had actually begun writing the prospectus. This is in contrast to the belief that the majority of people who leave a doctoral program are ABDs (All But Dissertation).

- Employment was not perceived by most students as a significant factor in attrition or completion. In fact, over 70% of students interviewed indicated that doctoral study would not have been an option without viable employment.
- The categories of completer and non-completer, in the study, listed students who were both part-time students and full-time students. There did not appear to be an impact on completion based on this.

2. Motivation

When people consider working toward a doctorate, there is generally a driving force—the fulfillment of one or more goals envisioned upon completion. Those goals are predictably tied to the identification of their major as well as the decision about which university to attend. This study revealed the initial goals and motivations of students who attended, what motivated them to stay on track for completion, and the challenges that affected their progress and threatened to derail their plans for completion.

Goals: Why they came. This study found that a number of study participants decided to pursue a Ph.D. for personal reasons. It was a childhood dream, a milestone to conquer, or it represented the pinnacle of learning. In all, five participants—four of whom were completers—indicated a strong desire to have a Ph.D. as their primary objective for entering the program. For example, Linda-C’s interest in attaining the Ph.D. went back to childhood, as she explained, “I always wanted a Ph.D. Ever since I was a kid that was always an ultimate goal of mine.” Wanda-C was in the process of working toward her Ed.S. degree when her advisor suggested she go on for the Ph.D. She thought, “Why not

get a Ph.D.?” So she applied and continued into the doctoral program after finishing her Ed.S.

My advisor...asked me why I wasn't doing the Ph.D. program and I told him I never thought about doing the Ph.D. program...I wish I had some lofty, wonderful philosophical thing to say, but it just seemed like, "Why not?"

Three participants identified changing careers or broadening career options as their impetus for pursuing the Ph.D. One was a completer and two were non-completers. The primary objectives of the remaining three participants (one completer and two non-completers) were scattered between impressing family (2), and the guarantee of a higher salary upon completion of an earned doctorate (1).

These findings do not support the notion that specific, career-oriented goals are critical to success in the Ph.D. program. With four of the six completers citing "...because I wanted it" as their primary goal in pursuing the doctorate, one must question whether the specification of a career goal is a determining factor in completion. Further examination of the initial goals of non-completers yields a surprising contrast. Four of the five non-completers began the program with very specific reasons for wanting the doctorate. One wanted to become an Instructional Designer; one was on a course to become a professor; one was interested in using technology in teaching; and one had set his sights on a salary increase that automatically came with a Ph.D. in his K-12 position. For two non-completers, the specificity of their goals actually became a demotivator. In both cases the goal was suddenly rendered invalid during their studies when their life circumstances changed, leaving them without a clear reason for

completing. The individual seeking a position as an Instructional Design landed a position in the field shortly after beginning the doctoral program in IT, making completion of the Ph.D. unnecessary to make this career move. A second non-completer moved to a technical position in higher education that did not require a doctorate, as the Ph.D. no longer guaranteed a salary increase or other job perks. Bair (1999) explains the phenomenon of losing one's career goal this way:

The promise of future gains and job opportunities coming to the student as a result of attaining the doctoral degree was connected to persistence and attrition. When future job prospects were perceived as poor or bleak, students were more likely to change their plans and withdraw from doctoral study; when job prospects were perceived as promising, students were bolstered by that promise and were more likely to persist. (p. 90)

The passage quoted above addresses future job prospects. However, a slightly broader interpretation of Bair's finding implies that when the original goal for completing the doctorate is no longer viable, students are more likely to withdraw. A third non-completer is a good example of this concept. Although the loss of the initial goal did not in itself cause this individual to abandon his academic mission, later obstacles piled up and suddenly the significance of having lost that initial goal became intractable; resulting in the student's ultimate departure from the program.

The selection of the university has not been a theme in prior studies; and there was no indication from participants in this study that the decision to attend Eagle University played a significant role in later attrition or completion. When asked why they chose to attend Eagle University, the number one response was proximity and convenience. This was mentioned by seven people—three completers and four

non-completers. Two completers preferred the face-to-face / blended learning options of Eagle University. Two completers and one non-completer attended primarily because of the positive experience they had with previous degrees at Eagle University. One completer was not accepted into her first choice university, and another had no choice at all because the school selection was made by his financial sponsor. Another non-completer selected Eagle University after touring the school and being impressed with the program, faculty, and level of organization displayed.

Motivation to continue in the Ph.D. program. Once in the program, participants cited support and expectations of family members as a key motivator for continuing. For example for completers, the most common motivator was a determination to finish, regardless of circumstances. Though they faced challenges and fits of frustration, five out of six completers said that they never seriously considered quitting.

I never actually considered leaving the program. That was my state of mind. It was just never an option for me in my mind to quit. And in that state of mind, I didn't play around with "What am I gonna do if I quit," because it's not going to happen. I just focused on "What am I gonna do when I'm done." (Viki-C)

One completer indicated that having his studies paid for by an outside group provided a lot of motivation. In his words: "So already there's that motivation, added to the funding and the support, the option was out. I had to succeed (Carson-C)."

Non-completers expressed the desire to finish, though not in the same terms as completers. For example, Lewis-NC stated that, "I mean, I was motivated to get through. I wasn't just letting it drag on and on and on. Had it not been for this other situation I

would have been done.” This passage expressed a desire to finish; but did not echo the unshakeable declarations made by completers.

In all, four out of five non-completers experienced changes in job status or personal goals while attending the program. They acknowledged that these changes factored in to their eventual decisions to leave, yet in each case, they still held on to the hope of completion. Jean-NC and Beth-NC are examples of this determination to finish. Jean-NC could see that her degree would not be as valuable in her current job as she envisioned when she was an educator. Yet her last comment, “And still I tried,” reveals her strong desire to finish.

I (had) a career transition from educator, so now I'm in a corporate world. So with the career transfer, the Ph.D. that I was doing in instructional technology became obsolete... I couldn't throw money (at) an obsolete situation. And still I tried. (Jean-NC)

Beth felt like a “...square peg in a round hole...” but she went on to reapply to the program after timing out, hoping to complete the program after all.

I think that it was sort of interesting trying to turn my particular square peg into the round hole of social science, but overall I came to the conclusion that I really don't fit in that environment terribly well.

But I actually got readmitted to the program (Beth-NC)

Demotivators. Challenging the initial goals, expectations and motivations experienced by study participants, and a number of psychological demotivators were also at play. Although demotivators were experienced by all of the study participants, some were able to overcome these challenges and move to completion. In this study the

categories of psychological demotivators that follow include inaccurate expectations as well as physical and mental health issues that include family-related stressors.

Inaccurate expectations. Along with goals and outcomes, the students in the study began the program with a set of expectations, not all of which were accurate. For example, four students expected the Doctoral program to be very similar to the Master's program. One way in which this manifested itself was in the erroneous assumption by three students that the dissertation would be very similar to the papers completed in the Master's program. In fact one student jokingly referred to the dissertation as "the book report" (Matt-NC).

Once the reality of the program requirements were clear, three non-completers experienced fear and anxiety about their ability to complete one or more elements at the end of the program. These elements included the comprehensive exam, residency requirements, and the dissertation. They found the reality of the requirements of these elements to be more complex and challenging than their initial expectations. In all three cases, the students cited this disconnect as a source of worry and stress and a major contributor to discontinuing their studies.

Three students, one completer and two non-completers, expressed disappointment that the program did not provide an environment for students to work closely with their advisor and other faculty when it came to research. In at least one case, this colored the students' perception of her ability to complete the program.

(It was) my misunderstanding that the Ph.D. was all about what you like to do and then you register at the university and you get (access to) all of the facilities there. You have a guide who is your advisor. (Jean-NC)

In one case, the participant—a completer—felt that the decision to enter this particular doctoral program might have been different if he had known he would not have the opportunity to work closely with a mentor on research.

I was really hoping for an apprenticeship and to work really closely with someone or a group of someones. I kept waiting for that to happen. That never happened. It was very much autonomous. I mean I got a lot of support from my advisor and from my committee, but I never got the kind of apprenticeship that I really wanted to get, the kind of relationship.
(Mike-C)

In the final analysis, only one student reported having accurate expectations of the doctoral program. Carson-C had work experience at the university level and understood the requirements of a doctoral program. He commented, “I came in knowing exactly what I wanted to do, and largely what it was all going to be about. I was fairly aware of how it was going to be.” Despite some of the unclear expectations of the program as described earlier by several study participants, five out of these ten students completed their doctorates. The eleventh participant, who knew what to expect of the program, was a completer. The implication here is that there is no clear assumption to be made concerning the effects of unclear expectations on doctoral completion.

Physical and mental health and psychological issues. Physical issues as well as mental health challenges, like anxiety and stress, were experienced by both completers and non-completers. However, in the end psychological issues took a heavier toll on those who did not complete. One completer reported psychological stress resulting from participation in the doctoral program that resulted in the need for professional help, though completion occurred before treatment was imminent. Two others spoke of

burnout that made their doctoral journeys difficult. Three completers described their frustrations this way:

I think there comes a point for everybody in which they...it's late at night. It's maybe one or two o'clock in the morning, you still have more to go, and you have something going on. You have maybe an all-day meeting coming up tomorrow and you can feel the stress in whatever way your body feels stress. For me, it was a tightness in my throat. It's always a tightness in my throat. And you just kind of wonder, "Is all of this really worth it?" (Mike-C)

Just getting sick and tired of dealing with things all the time. Managing all that is life and trying to manage this whole new educational process and all the people that are involved in it and all the components of it. Jesus, I'm sick of doing this. I'm sick of sitting at this computer every Saturday and Sunday. I just did this last weekend. I'm sick of chasing after these people; I need this stuff by this day; constantly trying to get people to give me feedback. Constantly getting people to do what they're supposed to do. (Gary-C)

You're going to have times when you're going to want to pull your hair out and scream and yell, "I want to quit!" And be very frustrated and upset and struggle. (Gary-C)

Three completers and three non-completers reported concerns about psychological issues, including family stressors and anxiety. Here are examples of what several students said.

My little son, I was feeling very guilty about (him.) Nobody brought it on me. It was my own guilt, that I was neglecting him. (Jean-NC)

There was work, school and family and in the middle was me; and I felt like I was always a thief because at any given moment, I was stealing from one of those places in order to do all the stuff that was required. In order to do the work I needed to do I was stealing from the school. In order to do schoolwork I needed to I was stealing from work; and the family suffered pretty much throughout. (Mike-C)

I don't think it's a capability issue, I think it's maybe just stress management... Overwhelmed is a good adjective. I felt overwhelmed, definitely. At times not just with school, but just with my whole life experience at the time. (Franco-NC)

Personality traits such as perfectionism and dogged determination are sometimes thought of as good traits to have from the standpoint of the recipient of the rewards. But to those who exhibit those traits, they can also ambush students' goals. One completer and one non-completer talked about challenges in these areas.

To this day I still carry that with me. I think people who try to get a Ph.D. have a problem with perfectionism to begin with. And I think that's one of the things the Ph.D. prepares you for. You're given too much to do so you have to make some strategic decisions about what you're going to do really well and what you're going to do good enough to get by. (Mike-C)

I keep going until I burn out and that's when I stop. I don't stop before or downshift or slow down before hitting that point, I run as fast as I can until I hit a wall and that's not the best way to handle that stuff. So I think maybe I was not managing things well. (Franco-NC)

Summary. In analyzing the data on motivational factors, several things are evident. First, the primary goal for obtaining the doctorate, for four of six completers, was their own satisfaction. Although many had secondary goals that included becoming a professor for one candidate, the driving force for enrolling was personal. For those who did not complete, most listed specific career goals as the driver in obtaining the doctorate. However, four out of five non-completers experienced a shift in personal goals or job status—which they acknowledged played a role in their decision to discontinue pursuit of the Ph.D. Yet they all held on to a strong desire to complete the doctorate, even when their initial goals were no longer valid. This includes two people who re-applied to the program after timing out in spite of the fact that the degree held no clear value for their

current career path. The conclusions reached here are: (1) It cannot be assumed that a student who lacks clarity about what to expect when they enter the program is more likely to be a non-completer; and (2) Changes in personal goals or job status can have a significant impact on completion. In this study, such changes occurred with 80% of non-completers. Yet when such change occurs, a strong desire to complete remains; it may even trigger second attempts by non-completers.

Another key finding is that the majority of study participants entering the Ph.D. program in instructional technology at Eagle University are not focused on careers in higher education. Only 33% of completers had a primary goal related to being a professor in higher education. The professorate was expressed as a secondary goal by one completer and two non-completers.

3. Financing the Ph.D.

Students used a variety of options to finance their doctoral programs, and in most cases, used a combination of options. It was found that the primary funding sources used by students in this study did not appear to be disparate when examining completers vs. non-completers. Table 11 displays the results concerning the **primary** funding source used by participants in this study.

Although funding sources between completers and non-completers did not match exactly, the primary difference noted is that none of the completers self-funded with savings or personal income, while two non-completers used this method as a primary source of funding. When questioned about the impact of their investment, neither

Table 11

Primary Funding Used During Doctoral Program

Values	Completers	Non-completers
• Self (Savings / Cash)	0	2
• Loans	2	1
• Parents/Family	1	0
• Eagle University Aid (GRAs; GTAs)	1	1
• Fellowship	1	0
• Employer (Tuition Reimbursement)	1	1

Legend: GRA: Graduate Research Assistant
GTA: Graduate Teaching Assistant

self-funder looked at money as a significant factor in non-completion. As Matt-NC explains, “It would have been nice if somebody else had paid for it. That would have been great. Wouldn’t have changed the outcome.”

It could be a natural assumption that people who are borrowing heavily might be more likely to abandon their studies. In reality, two completers borrowed heavily as their primary source of funding, while only one non-completer took out loans as their main funding source. Neither of the completers who took out large loans considered leaving the program because of mounting debt, although the non-completer did look at the finance situation as one that was troublesome. However, it was not the primary reason for abandoning her studies.

I had some GTA and GRA positions, but I wasn't working like full-time. So I took loans—direct student loans. I have a bunch of that to pay back. That was a challenge, keeping myself afloat; 'cause I thought I would be finished in about six or seven years. It's been longer than that. (Linda-C)

Another way to look at the financial issue is that only two non-completers had primary funding sources other than themselves or loans to pay their way through school. But for completers, four relied heavily on funding sources other than themselves, which did not require repayment. Essentially those study participants with funding from gifts, grants, fellowships, or other financial aid that does not require monetary repayment were more likely to complete.

4. Socialization

This study asked students about their experiences with learning how to navigate the doctoral program in instructional technology and how they were able to integrate themselves into the culture of the university. The responses were quite varied, with most students lauding integration into the culture as playing a significant role in their ability to persevere in the doctoral program. Overall, completers and non-completers alike experienced benefits from both formal and informal relationships. Most consistently cited were: a) the value of relationships with other students, b) written program materials available from the university, and c) the two courses on the doctoral program and on research methodology. Some study participants also gained insight into the workings of the doctoral program as well as current research in progress through close relationships with faculty. At the same time, others reported fending for themselves in learning to

navigate through the Ph.D. program. There were no clear indications as to the reasons for this disparity.

Both completers and non-completers described connections and activities in the academic community as playing a key role in remaining in the program, as offered below by Lewis-NC.

I think the more tied you are to that community the longer you last in the program. But there's got to be supportive factors. That networking, that staying connected to the community, to your student community that was very helpful, and we learned a lot from each other. (Lewis-NC)

“Staying connected,” as mentioned by Lewis, helped study participants gain insight into the program and maintain moral support. They accomplished this through *ad hoc* bonding with other students and involvement in informal support groups as well as formal programs and activities like university sponsored resources, teaching assignments, and attending academic conferences.

In contrast, adapting to academic life and forming supportive relationships in the university environment were cited by two non-completers as stumbling blocks to completion. Jean-NC found it difficult to fit in culturally and was uncomfortable attending social events or conferences outside of the university.

Meeting outside the campus, that was a cultural challenge too. When you have to go to some professor's house for something (like a) meeting... I just couldn't do it because that's not (what) I was used to; so I felt alienated (and) rather uncomfortable. (Jean, NC)

Because of her technical background, Beth saw herself as a fish out of water as she tried to adjust to less structured concepts like qualitative research.

I'm not very good with hand-wavy stuff; and even though they like to make it sound like it's not hand-wavy stuff, a lot of the social aspect... I did okay with things like the psychology of education because that sort of made sense to me. And the framework for analyzing was fine too, but I literally had a hard time going to class in some of the classes because I just thought they were wrong. (Beth-NC)

Bonding with other students. Several students talked about forming bonds with other students, which allowed them to share their strengths and support each other when needed. This also created friendships that helped fill a void where outside friendships were difficult to build or maintain. And when the relationship was effectively one-sided, with a seasoned student sharing his or her experience with a newer student, the value of the information was clear.

I think being really connected to your fellow students, a lot of lessons learned from them. They can help navigate you through rough waters. (Lewis-NC)

I think with all the nitty-gritties you may not get them from faculty, you get it from a colleague who is about to do their proposal; a colleague who is thinking of what subjects to pick; advice on which professors' classes not to take for what reasons. Those become very, very critical—very critical. And so I think a lot of that information was invaluable, the ones that I got from colleagues who were in the program, that's sort of the hidden kind of information that you would not ordinarily get from the faculty. (Carson-C)

Informal support groups. These groups are formed by students who found a common bond. Sometimes that bond was the need to prepare for an upcoming exam or paper, or a team formed to work on a specific project. Whatever the cause, the group continues to function well past the original purpose, as described by Vicki-C. Ultimately the group may serve to keep individuals on track for completion.

There was a group of graduate students...we studied together for our Comprehensive Exams. We had developed friendships in our courses beforehand and we were just checking on each other and talking to each other...And even now we still send emails, encouraging those that haven't quite finished yet, to finish up and let us read your papers and we review things for each other and give each other feedback. (Viki-C)

University sponsored resources. Groups, activities and materials offered by the university were also cited as helping students become acclimated to the academic environment. In the following representative questions, several different support groups were specifically mentioned by study participants. In addition to the groups mentioned, the Graduate Fellowship Program (GFP, pseudo.) and Students of Instructional Technology (SITs) were two additional groups, and will be discussed in more detail in the section under *Support* entitled *Students and Student Groups*.

When asked how they learned to navigate through the doctoral program, students generally applauded the written materials available on-line; but reported that they neither experienced nor expected formal orientation activities and guidance from faculty or advisors.

I learned that I had to use the website they had to its fullest potential because during my program I didn't actually get a lot of advisement from a faculty member, or as much as I feel that I needed. And so I used the website a lot. (Viki-C)

They have that little 'How to be a doc student' class they make everybody take and I took that my first semester which is awesome. (Gary-C)

However, everyone mentioned the seminar that describes the doctoral program and the course on conducting research as well as online resources available in the department as important resources for Ph.D. students.

Interaction with advisors and faculty. Some people received a great amount of input from their advisor or other faculty, while others pushed through with little formal direction, relying instead on previously learned habits and personal tenacity.

I think a lot of it came from ... a close (relationship) with Dr. Ross. That helped a lot because he would give me the indicators and the highlights, what to look out for, the deadlines. (Carson-C)

I honestly don't know how I learned (to navigate the program). I have no problem asking questions. If I didn't know what to do next, I was asking or I was reading or I was researching and looking on the websites. But a lot of question-asking. (Wanda-C)

Research and teaching assignments. Graduate Research Assistantships (GRAs) and Graduate Teaching Assistantships (GTAs) were mentioned by two completers as contributing to their enculturation into academic life.

I was very involved with the teaching, the classes too, which helped me get to know some of the professors... But on two levels, so it was also that I had a professional, "I'm working with you" relationship as well as "I'm just a student." I haven't really thought about this before, but more of a well-rounded participation for me. Student, teacher-assistant and became kind of a friendship—support too—which was very helpful for me... Teaching the classes, I think, was also a great encouragement for me because I was getting immediate application of things I was learning. This is what I'm learning in classes and now I'm teaching classes and using some of the things I'm learning. (Wanda-C)

Conference attendance. Three students—two completers and one non-completer—spoke about the positive reinforcement provided by attending conferences. Establishing relationships with professors and students from other institutions allowed

students to broaden their awareness of research going on elsewhere. Conferences were also seen as an opportunity to interact with Eagle University faculty in a more relaxed setting and learn more about their research.

Summary. Socialization was an important factor in continuing and completing the doctoral program. Both completers and non-completers reported gaining encouragement and support from relationships with other students, student organizations, planned activities and conferences, and connections with people within the academic community. Two exceptions, non-completers, reported that the lack of such relationships hurt their chances of success in the program. Another key area that aided study participants were the instructional technology program printed and online support materials, which were cited as providing a high level of support for both groups of study participants.

5. Academic Issues

This study addressed academic issues and the completion or non-completion of the doctoral program by exploring five topics: (a) Deficiencies in prior experience; (b) Difficulty identifying a viable dissertation topic; (c) Loss of access to the research population; (d) How students moved through the program, which includes pacing, last phase completed, and whether or not students studied continuously; and (e) Use of time, covering total time in the program and whether or not students requested program extensions. Table 12 lists study statistics on these topics.

It was found that deficiencies in prior experience were not a determining factor in attrition. This problem was experienced by only one student, a completer who felt that his

Table 12

Academic Issues

Issue	C	N C
Deficiencies in prior experience	1	0
Total time in program		
0>3 yrs. (Up to 3 yrs.)	0	0
3>5 yrs. (over 3, up to 5)	2	0
5>7 yrs. (over 5, up to 7)	2	5
7>9 yrs. (over 7, up to 9)	0	0
>0 yrs. (over 9 years)	2	0
Continuous study?	6	2
Program extension requested	2	2
Last Phase Completed		
Almost Finished Coursework	0	2
Coursework	0	1
Comps	0	1
Residency Requirements	0	1
Dissertation	6	0

Legend: C = Completers; NC = Non-completers

level of knowledge of software applications was not sufficient when he entered the program. He worked on his software skills during the course of the program in order to become more proficient.

The time frame for completion ranged from five to nine years, while non-completers all left the program within five to seven years of beginning their studies. The Last Phase Completed category in Table 12 identifies the phase of the program that was the last one completed by the study participant. Obviously, all completers would have finished all phases of the program. As for non-completers, the last phase completed spanned four of the five phases listed. And to add to the information shown in the table, only two of the five non-completers indicated that they were beginning the dissertation phase of the program when they left. The other three exited before completing all of the requirements for doctoral candidacy.

When starting the doctoral program, students set targeted time frames for completing coursework, and even the degree based on their perceptions of what the experience would be like. Once in the program though, some students realized that the time commitment was more rigorous than they originally imagined. Yet none of the study participants reported issues with pacing as being responsible for attrition. A curious observation is that four out of five non-completers began with a steadfast determination to move swiftly through the program; with two of those four working full-time while attending school full-time. Following are two representative quotes from two of the four:

Like everything else, (I) did it as rapidly as I possibly could. Working full-time I think I took at least three classes a semester and in two and half years I was done with the coursework. (Matt-NC)

I wanted to finish it very fast. I used to take up to four classes a semester. Because I was really aggressively doing the core classes. That's how I finished my Master's, as I said. I would take three to four classes, even (with the) Ph.D. I wanted to finish it very fast. (Jean-NC)

Although these non-completers had an exceptionally fast start, full-time work and school was not noted as a factor in not finishing. All non-completers eventually timed out for a variety of other reasons that included having progress slowed by an advisor and being unable to manage the demands of the program after moving out of town.

When you get to that point and you're ready to move forward and you're being pulled back, where do you go from there? It's a tough thing so it's kind of wandering around in the wilderness I think. Two times a year you have to pay your money to do your Dissertation, to be a student or whatever. I did that for however long. (Lewis-NC)

When I first went away I thought I would finish it. And I actually commuted back and forth, ... and I came back for the last couple of classes...But overall, once you move away it is harder to focus because you don't see people and when they don't communicate back it just sort of falls apart; but I can't say I ever really made a conscious decision until I got to the semester where if I didn't do something it would be the end because I'd time out. But I actually got readmitted to the program and I think at that point I said, you know, it just wasn't working for me. (Beth-NC)

The study also found that students who took one or more breaks during study ended up in the non-completion category. Three of five non-completers took at least one break during study while all six completers reported continuous study toward the Ph.D.

Time restraints during the doctoral program in instructional technology at Eagle University require all students to advance to doctoral candidacy—completing all program requirements other than the dissertation—within seven years of beginning doctoral studies. The dissertation must then be successfully defended by the end of the 10th year. If these guidelines are not met, the student must request a program extension in order to continue. Findings about the impact of extensions were inconclusive. The four participants in this study who requested and were granted extensions to continue study

beyond the seven-year candidacy deadline were evenly split: two completers and two non-completers.

Summary. As participants began the program they had to acclimate themselves to the program requirements and gain an understanding of how best to work with professors and peers. This narrative delves into specific components of the doctoral program in IT at Eagle University to get a closer look at how participants experienced each. These components include coursework, creating and maintaining a viable committee, Comprehensive Exams, residency requirements, and the Dissertation phase.

A high-level view of the findings for academic issues reveals that pinpointing a dissertation topic, coupled with the loss of the study population, were reported as decisive factors. In terms of timing, three of five non-completers left the program before the dissertation phase of the program. Two non-completers combined full-time study with full-time work in hopes of faster completion. But with this heavy workload, burnout was not cited as a factor in their eventual attrition. Another factor weighing heavily in attrition is lack of continuous study. All completers reported moving through the program without taking breaks during fall or spring semesters, while three of five non-completers took breaks as they moved through their programs. Finally, program extensions were evenly distributed with two completers and two non-completers requesting and receiving program extensions.

6. Program Experiences

Once in the doctoral program, participants described a variety of individual experiences, some of which influenced their ability to complete the doctorate and will be detailed later in this chapter. It is interesting, though, that the ten out of eleven people interviewed described their experience as being positive, enlightening, and worthwhile through the initial phases, particularly the coursework. Even considering the fact that their initial expectations were not always met, as described in the topic in this paper titled *Motivation*, participants clearly saw value in the experience. Finally, regardless of whether or not the student actually completed the Ph.D., the findings that follow show that study participants generally found the initial phases of the doctoral program to be a good experience.

Overall impressions of the program. Four of the five non-completers saw the experience as a positive one, with the fifth non-completer having mixed reactions; while five out of six completers saw their overall experience as mixed. Following are comments from two non-completers describing their overall experience.

I think the overall program was a good experience. Primarily working with the different students and the ability to network in the community. That was probably the most positive aspect of my work there. (Lewis-NC)

I think it was a good experience overall. I use the skill set I think I either developed or grew when I was in the program and in my research just being a researcher and I use it at work quite a bit here. (Franco-NC)

Completers' reactions to the program were more reserved. They reported positive reactions at the beginning of the program, but experienced more challenges and stress

toward the end. For example, Linda-C described her experience toward the end of the program as stressful; yet called her early experience fun:

Mine was stressful, in the last year trying to get it done. That's the main thing. The first part went well because I can do coursework, because I've done (the) undergrad degree, Master's degree. The coursework was fun because I had been out of school for like twenty-some years since I got my Master's; and it was fun being back in school, because I love school.

Mike-C described his experience as being intense, calling it a marathon:

The experience was...it's mixed. It's a very intense program. It's a Ph.D.; it's designed to be intense. I feel like if you're not crazy going into the Ph.D. program, you're crazy by the time you come out...I think a Ph.D. is very much like a marathon. At mile twenty you want to stop, when your body begins to reject you. I don't know if you've ever done a marathon, but it's usually between miles eighteen and twenty that you find people on the side of the road getting sick. And that's because their bodies, it's depleted all of their stores of fuel, and it's beginning to chew away at itself. So it's that sort of transition. And I think we hit that transition in which we're no longer in our Ph.D. program, feeding off the good stuff anymore. We're chewing away at the stuff that makes us 'us.'

The difference between the tone of the comments made by non-completers and those made by completers might be explained by the fact that completers have gone through what is generally considered the toughest phases of the program: the Prospectus and Dissertation. Case in point: three of the five non-completers had not completed their Comprehensive Exams. Only two had begun the Prospectus/Dissertation phase of the program, with one having completed all residency requirements. This means that non-completers, for the most part, had only finished their coursework—the phase in which completers were also most complimentary.

Coursework. The coursework itself was seen very favorably by both completers and non-completers. The one significant drawback mentioned was with scheduling

courses that were required or desired by participants. Several people indicated that classes they wanted were not offered on a timely basis. Others registered for some classes, only to have them cancelled because of low enrollment. This frustrated some students and sometimes slowed their progress, though it did not present an insurmountable barrier to their forward progress. Comments like the following were expressed by Wanda-C, Carson-C and Jean-NC: “That was probably the most frustrating thing is some classes were offered every other year and I’m thinking, ‘How am I supposed to take it two years from now when I need it now? (Wanda-C)’” and “There are courses that I would have wanted to do but were not being offered in a particular semester. And yet I had to take something to fulfill my credits and get my funding and move towards attaining my minimum required course credits. So that was a major problem. (Carson-C)”

In spite of these challenges, the flexibility in course selection afforded by the program’s structure typically allowed participants to substitute courses for those that were not available, even if the student did not always end up with his or her first choice. In the end issues with course availability did not present a significant issue in completing the program.

Creating and maintaining viable committees. The College of Education at Eagle University requires students to select an Advisory Committee at some point before completing 27 hours of coursework. The purpose of that committee is to guide the student in their course selection, completion of residency requirements, and completion of the Comprehensive Exam. At this point, the student may continue with the same

committee members, but must add one additional person to form the Dissertation Committee. The student also has the option of changing one or even all of the Advisory Committee members in forming the Dissertation Committee. That final committee of four to five professors is responsible for guidance and direction during the Dissertation phase, which includes reviewing and approving the Prospectus and the Dissertation.

Both completers and non-completers were challenged by the need to form Advisory and Dissertation Committees. With a limited number of faculty in the IT department—especially early in the program’s existence—identifying and confirming viable committee members was especially difficult, though not insurmountable. In general, selection and management of a committee was a new experience for everyone, requiring a new set of skills.

I didn't know anything about forming a committee. I knew there was a committee, but that was a challenge for me, finding a professor who should like your interest. (Jean-NC)

I just assumed that people were going to sign on and if I asked them to be on my committee they were going to be on my committee because they're in my department and this is what you do. You're a teacher. You help the students. I wasn't prepared for their rejection. I had a decent amount of rejection from MSIT faculty, which is fine. I just wasn't prepared for that. I didn't know it was coming. It kind of blind-sided me. I got the feeling that people weren't looking for more work. People had their students they were advisors of, and really weren't particularly interested in getting on too many more committees—what I felt like was because of the work it entails. I can't say that I blame them. (Gary-C)

Most participants were able to move through this process and move on without it becoming a stumbling block to completion. For Jean and Lewis, forming and maintaining a committee represented an impossible barrier to completion.

You need to find people who like you. It was all about choosing the committee. I knew I wouldn't succeed in that. That put me down. It's not because I won't be able to deal with people, but I cannot make people deal with each other. So all those things just put me down, okay? Maybe I thought I would be able to overcome such challenges: find a professor who likes my research and then go ahead and have that professor like that professor. (One) class was on discussions about how the committees have failed when the people didn't agree with each other. Those things raised a fear in me, (that) maybe I was totally wrong in the whole situation. Culture inhibition in a sense?... I wasn't too comfortable, going and asking somebody, "Can you be on my committee?" It took me days and weeks and months to send an email to Doctor Porter (pseudo). What if I get rejected? (Jean-NC)

You had to line the moon and the stars up to make sure you had the right people on your committee and that you could move forward. You didn't have a lot of options at the time. I'm sure it's different now. But at the time they were just really behind the times. So when I moved, with the struggles I had with getting the right members on the committee, I ran into a snag (trying) to get a methodology person. (Lewis-NC)

Working with a committee. The introduction of a committee into the doctoral equation meant having to manage your committee and to please multiple committee members in order to be successful. This concept was startling to some; and managing and maintaining the committee had its drawbacks as well.

Working with a committee is brand new, none of us have done that before... When I tried to start putting my initial committee together, I realized that this involved other people and my success was not contingent on myself anymore. Whereas all the other degrees, I worked in a silo, I did the assignments—done. But the success of your doctorate is contingent on the committee... [This includes] identifying your committee, managing your committee, scheduling, dates, getting them to meet timelines, getting them to stay on your committee, in a nutshell. Managing interpersonal human interactions as opposed to writing papers and creating PowerPoints or other kinds of rote tasks you are normally asked to do in academia.... (Gary-C)

You're almost having to learn as well to manage a committee; which at times might not be that well versed in the area of research you want to do or the type of research that you want to do. (Carson-C)

It's like playing four teams at once. So to turn in a chapter or two of writing and have four people give you four completely different kinds of feedback and read the same thing and say four different things and then you have to figure out how to make them all happy, that's hard to do. Someone's not going to be happy. And usually I felt like it was me. (Wanda-C)

Comprehensive exams. Nearing the end of coursework, students in instructional technology are expected to pass a Comprehensive Exam developed by members of their Advisory committee. Each committee member develops one or two questions representative of his or her primary area of concentration and related to the student's research interest. Those topics and the nature of the questions may be discussed with the student in advance, depending on the question author. The student is given four hours to respond to each question, which is usually scheduled once per week over a three-week period. However, some committees may allow a portion to be completed at home. Following the written exam is an oral follow-up exam during which committee members quiz the student on questions they may have about the written exam and on his or her knowledge of their doctoral program coursework. This series of examinations make up the Comprehensive Exam, or 'Comps'; and was mentioned as a significant source of stress for two completers and two non-completers. Both non-completers considered it to be a contributing factor in their attrition. For example, one completer explained that comprehensive exams used a format that was very different from prior exams he had taken.

To sit in a room and write and write and write and write just from memory, especially for it to be scholarly writing with references was challenging. I'd never done that before. No one had ever asked me to do that before so it wasn't something I had ever experienced. So it was completely new. To try to prepare for that was completely new. So to spend months and months and months at home on the weekends just writing and writing about what I thought I might be asked? I can't tell you it's the most authentic form of assessment. And if there was one thing in the whole process that I probably would like to see changed the most, it might be that. (And) I think I should be allowed to either bring my resources with me or for them to be a take home. (Gary-C)

It's kind of an ominous test. I mean you walk in, you're given a question, you've got four hours to answer it ... and it could be on any topic that you've gone over; adoption and diffusion...it could be any of that stuff. So obviously it's probably going to be geared more towards your research question, but it's a pretty scary thing. I think I was experiencing a lot of anxiety before the Comprehensive Exams. I think that was a big, big problem for me. (Franco-NC)

The people who expressed concerns about Comps all mentioned the fact that the requirements for Comps were new to them and were not what they expected. Yet the two completers pressed forward and overcame their apprehensions about Comps, as illustrated by Gary's comment.

It didn't affect me in my progress. I set a date and I did it. I did it in November. I took the fall semester to prepare, to study, and that never had to be rescheduled or waived. I knocked that out. (Gary-C)

Non-completers, though, indicated that the prospect of Comprehensive Exams created a high level of anxiety, which contributed to the decision to leave the doctoral program.

Residency requirements. Residency requirements are a collection of experiences and assignments in scholarship, teaching, service, professional development, and collegiality. These experiences are documented in a portfolio and presented to the

student's advisor for approval at the end of the program. Residency was mentioned as a concern only by one student, Jean-NC. She saw residency as intimidating, in part because of the accomplishment of another student, and in part because of feeling uncomfortable socially with travelling out of town to conferences or other events.

(One student), Dennis Mattson (pseudo), he published a book...on adult learning. Those things make me so, those are the things that scared (me). When I say what scared me, (I mean) the residency requirements. The residency requirements, that was a little. That was unreachable I thought. (Jean-NC)

Going out of town for a conference—like presenting at a conference—I'd say that is one thing I thought was a challenge. That's again my own problem. I know that there are students who look earnestly for the next conference to go (to), but that's something I couldn't do. (Jean-NC)

In contrast, another non-completer saw residency requirements as confidence boosters and incentives to keep going.

I remember doing a presentation (at a conference). It was really neat to go there, to do a presentation, and to hang out with the professors at night. We would go have dinner together. They had their presentations in there also. That was a very nice thing and I consider that a positive reinforcer. I remember that fondly, that whole experience. That was something that kept me going. (Franco-NC)

In short, aside from one individual, residency requirements were not perceived as a problem for students to complete and did not pose a threat to completion. However, for one non-completer residency requirements appeared to be impossible based on the flawed assumptions that one must publish something comparable to a book and that there were no alternatives to out of town conferences.

The Dissertation phase. Once students complete coursework, residency requirements, and successfully pass the Comprehensive Exam, they move into the

Dissertation phase of the program. During this phase, the student must first complete and defend the Prospectus; complete original research; and report their findings to form a completed dissertation. The last major task is to present and defend the dissertation before the Dissertation Committee. Though the majority of doctoral students who leave their programs usually do so prior to the dissertation phase, in general the Dissertation phase of the program has long been considered to be the most difficult part of the doctoral program, accounting for as much as one third of all doctoral attrition (Bair, 1999, p. 121). For this reason, it is critical to examine the experiences of students in this study to determine the impact of their experiences during dissertation phase on student progress and attrition. It should be noted however, that three of the five non-completers never reached this phase of the program. Their attrition occurred prior to completing the Comprehensive Exam. As a result the majority of data discussed here came from completers.

For this phase of the doctoral program the study found that 66% of completers and 100% of non-completers who reached this phase reported difficulties with the unstructured environment of the dissertation phase as well as frustrations that arose during this phase. Clearly, the completers overcame these frustrations, which interestingly, was also true of non-completers. Neither of the two non-completers who reached this phase cited problems in this stage as significantly impacting their attrition. The detail that follows expands on these findings.

Lack of structure. Four of six completers had difficulty moving from the structure of coursework to the unstructured environment of the dissertation phase. These

four completers described the difference in the surprising shift in their operating environment and skills they would need when they moved into the Dissertation phase.

Mike-C characterized this as "...the wandering in the desert time."

I was prepared for the time and could budget the time (for coursework). I knew how long it took to do a presentation or to write a five or twenty page paper; and I could budget and I could a lot. And you did those and they were done. The Dissertation is really never done until you're done years later. Other coursework requirements are not really a process. It's sit down at the computer and do it and turn it in and it's over. And every semester you're done. And you're like, "OK, I'm done! I'm going to start next semester then I'm done." You have milestones and things that are concrete and you're like, "Okay, I'm moving forward like two semesters to go, I have one semester to go. I'm done." You never really know when you're going to be done with this Dissertation. (Gary-C)

These sentiments were repeated in similar ways by a third completer, Wanda-C.

Going to classes and having a structure and knowing exactly what the assignments were and knowing when it was due—that kind of beginning and end is set for you. You know the first day of class, you know the last day of class and you know what's on the syllabus and what's going to be done when. That is a lot easier to deal with than when okay now you've got to do this stuff and you set the schedule and you make sure things get done on time and in a timely manner and you get to all the people and you make sure everybody gets their feedback, and I think that's where things got frustrating. (Wanda-C)

Frustration. These same four students described their experience during this phase as "difficult" and "frustrating." The frustrations mentioned during this unstructured time included adjusting to working alone, minimal interaction on campus, lack of timely feedback from advisors or committee members, and managing divergent opinions of committee members. Yet the remaining two completers termed the dissertation phase as 'fun'; with one crediting his extensive experience with research for

the low-stress and enjoyment of this phase, while the other cited her enthusiasm for making the dissertation an enjoyable experience.

The two non-completers who began the Dissertation phase also reported being frustrated by having progress slowed, and being unable to assemble a viable committee. Though related to the Dissertation phase, the determining factors in the attrition of these non-completers were ultimately the results of issues that were unrelated to the dissertation itself.

Working alone. Though working alone has been cited by previous research as contributing to the difficult period of dissertation writing, study participants did not highlight this issue as being insurmountable, or especially difficult. Carson-C adeptly targeted the danger of getting lost in your work as the unheralded bane of working alone.

You should be able to work independently but without getting lost in that independency because some people end up getting depressed because you get so deep in. A Ph.D. to me is less about breadth but more about depth. You are really drilling into a particular area of either research or content subject application and it's easy to get lost somewhere down there in the drilling and then you lose yourself and you get people getting depressed and failing to see the purpose of the whole thing anyway. So once you begin to lose that focus, you lose motivation and then it becomes less of a desirable outcome. (Carson-C)

This interpretation focuses on the depressing effects of loneliness and isolation rather than the potential depression that can result from tunneling deeply into a topic.

Identifying a dissertation topic. Dissertation topics are rarely last-minute decisions. Students are encouraged to identify a Dissertation topic as early as possible in the program. This allows them to work on papers and projects during their coursework

that will provide background for the Dissertation later. One student recognized the value of early topic identification in hindsight.

I would say at like 60 hours I had pretty much figured what I wanted my Dissertation to be. So I had not had the iterations of...you know when I wrote a literature review, it was on whatever topic I was thinking of at the time. It wasn't something I could reuse or revamp. When I wrote whatever project for whatever class, it wasn't something I could reuse again for my Dissertation. (Matt-NC)

One completer, Linda-C, had selected a potentially sensitive topic. She was subsequently warned by a professor that, “You may never get out of here with that topic.” With that feedback, she promptly changed her topic.

Two non-completers recognized—after the fact—that their initial dissertation topics were probably too broad. One of them had actually worked with two different topics and had the same problem.

Part of it may have been the scale of my choice in topic and that goes back either to ignorance or grandeur. So either I didn't know that I could pick an easier topic or I didn't want to. I don't know which of those is true. (Lewis-NC)

The second person was forewarned by a faculty member that her topic would probably need to be narrowed down.

I would say Doctor Kreiger (pseudo) had warned me (that) my topic was too broad. You cannot do all this. You have to narrow it down. (Jean-NC)

Loss of access to the research population. Two students experienced loss of their study population. Both cited these challenges as significant in their attrition, as illustrated by this passage from the interview with Matt-NC, where he talks about the loss of several dissertation topics and hence access to the research population.

My topic changed a few times, once or twice by my doing, and once or twice I was told I could use this topic or this group or this company and then at some point the company said, "Naah, we change our minds." But it was not nearly as disappointing as the second time I lost my dissertation topic which was on the same day that I lost my job. That was sort of the end. (Matt-NC)

The second time he lost his dissertation topic—and even lost the job itself—was the final blow to his doctoral aspirations.

Writing the Concept Paper. Development of a concept paper, a brief literature review and description of the research, is usually the first step in the development of the Prospectus for the Dissertation. The primary intent of the concept paper is to provide the committee with a short summary of the research project, describing what the researcher is investigating, why it is important, and how the investigation will proceed. Findings showed that, while challenging to several people, difficulties developing the concept paper were not reported as a significant factor in non-completion. For example, Franco-NC completed two viable concept papers, each preceding a decision to leave the doctoral program. In both cases he thought the paper would be the first step in completing the Dissertation; and in both cases, the paper was not enough to keep him on track. There were other unrelated issues as well, such as guilt about time spent away from his family and apprehension about upcoming Comprehensive Exams and the Dissertation. Eventually these factors derailed his quest for the Ph.D.

The frustration with writing the concept paper experienced by Linda-C did not overpower her determination to finish; but it did slow her progress and lead her to conclude that the concept paper should not be considered a terminal task.

We went back and forth with trying to get a perfect concept paper, but to me we should've started right in on the Prospectus, and that time could've been spent writing a Prospectus rather than writing a concept paper. (Linda-C)

As proposed by Linda-C, the concept paper is no longer the focus of intense scrutiny in the instructional technology program at Eagle University, and is now commonly thought of as a starting point for the Prospectus. And in her case, the seeming push for perfection in the concept paper did not dissuade her from finishing.

Developing the Prospectus. The Prospectus represents the proposal for the original research conducted for the Dissertation, and will generally become the first 3–4 chapters of the Dissertation. Two non-completers tackled their Prospectuses, but did not reach the defense. Matt explained why he was never able to defend.

I never defended or presented my Prospectus only because it was never complete. And (yet) the intro was fairly simple. Every time I'd change topics, I'd change the intro, or I'd build a full outline. I don't know that I actually wrote a full intro. So I think it was the size of the project I was trying to eat. You stare at the elephant and you don't realize "hey one bite at a time." You think, "I should eat the entire elephant. (Matt-NC)

Matt also described the unwieldy nature of the literature review he was writing.

The literature review—obviously because of the scale of the topic—got really big really fast. I mean I probably got through 40 or 50 pages of the literature review and would think myself not quite half done with that. (Matt-NC)

Getting timely committee feedback. Four completers talked about having difficulty getting responses from advisors or committee members when seeking feedback about Prospectus or Dissertation drafts. None felt that this ultimately prevented

completion. However, they were definite stumbling blocks, as described by Wanda-C, Linda-C, Viki-C, and Gary-C.

The Dissertation, I think, was the hardest part. Trying to get four different professors, three in one department, one in another department, all to read your stuff and get it back to you with the comments. (Wanda-C)

One time when I was trying to get feedback on my Prospectus and I had to go into this one person's office and just walk in and say, "Can you give me the feedback?" I was just feeling, "Will you just do it already?" (Linda-C)

My advisor during the coursework...very friendly, very outgoing person but I didn't feel a lot of response and timely feedback. (Viki-C)

Gary-C remembered thinking:

I'm sick of chasing after these people; I need this stuff by this day; constantly trying to get people to give me feedback. Constantly getting people to do what they're supposed to do. (Gary-C)

Importance of previous research experience. Three completers mentioned prior experiences with prior research as being a possible hindrance to completing the dissertation, although the two non-completers who reached the dissertation stage did not list this as a specific issue. The comments by the completers suggest that the dissertation can be daunting for a student who has not tackled a project of this magnitude in the past. Carson-C felt that completion was closely related to one's research ability, though he concedes that someone can overcome such a deficiency if they are a fast learner.

(Completing the Ph.D.) is also very closely related to either your previous knowledge in research or the rate at which you learn about research. I think (while) completing the course work has got its own challenges, the thesis—the Dissertation itself—can really close somebody off. I think strength in research methodology, even if somebody does not have that experience, if they learn fast and became comfortable in those areas fast enough, that makes a huge difference. (Carson-C)

Gary-C reinforced the idea that a lack of formal research experience was a disadvantage.

(One challenge for me was) probably formalized research. I had done research for my EDS but it's all very formal, obviously, for the Dissertation. So not a lot of formal research experience. (Gary-C)

Lack of formal research experience also means that students may be unclear about the appropriate research method for their proposed study. Linda-C discovered that she needed to take additional research courses to properly address her research. This revelation cost her an extra year in the program.

I was talking to my chair about what I really wanted to find out, (and) they suggested I do more of a case study, a more qualitative study. But at the time this was changed over, I hadn't taken any qualitative courses because I was going to do quantitative. So I had to hurry up the following semester and get into a qualitative course. Luckily a Qual-I (introductory qualitative methods course) was being offered in the spring and then I took Case Study Methods that summer so I could actually make that happen and that was an extra year. (Linda-C)

Summary (Dissertation Phase). The Dissertation is a lengthy experience with multiple pieces that can present joy and excitement for some, and frustration for many, and ultimately the end of the Ph.D. quest for others.

Summary (Program Experiences). Overall reactions to the doctoral program in instructional technology were very positive, particularly the coursework. Scheduling desired courses was cited as a temporary setback, but was not perceived as a deciding factor in attrition. Forming and managing a committee required a new set of skills, which was not only threatening to some, but played a major role in the attrition of one student. Comprehensive exams were specifically mentioned as a major source of stress by four of

eleven participants. For two of them, this apprehension was instrumental in their decision not to complete the doctorate degree. Residency requirements were generally not reported as significant in the decision to complete or leave the doctoral program at Eagle University. However, one non-completer did see residency requirements as impossible, while another saw his experience as positive and reinforcing.

As for the Dissertation experience, the study found that students had difficulty moving from the structure of classroom work to the less structured dissertation phase of the program. Frustration with the dissertation process affected four completers and two non-completers; but neither of the non-completers reported this as a deciding factor in attrition. Problems identifying a suitable topic slowed five students but were not solely responsible for stopping anyone from completing. Two students lost access to their research populations, both of whom listed the frustration of that loss as a big factor in non-completion. Difficulty writing the concept paper was also an impediment to completion, but was not reported as preventing completion. Writing the prospectus contributed to attrition for one non-completer on two occasions as he discovered the sheer enormity of the project it all became overwhelming. Lack of timely committee was also a drawback for several participants, but did not prevent completion. Finally, the lack of formal research experience was cited as a problem or disadvantage by several completers who said that this posed a problem for them as they worked toward completion. However, this was not specifically mentioned by non-completers.

7. Support Systems

The typical student pursuing a Ph.D. can be characterized as capable, self-reliant, and goal-oriented. However, when facing the relatively new environment of doctoral study, the support received from others—including family, friends, advisor and faculty—has been identified by past researchers as having a significant impact on the student's progress and ultimately attrition or completion. Five different sources of student support were investigated. They include support from the (a) major advisor, (b) committee members and faculty, (c) individual students and student groups, (d) Partners, family and friends, and (e) employers. Following is a summary of the key findings noted in those discussions. Of those five categories, the Advisor relationship was cited as having a significant impact on completion and attrition. Positive advisor relationships and support from individual students and/or student groups correlated positively to completion; while difficult advisor relationships correlated positively to attrition. In the areas of faculty/committee support and support from family and friends, both groups enjoyed positive support. However, when partner support was missing, that lack of support contributed to attrition. Following is an account of the support-related experiences of the eleven students in this study.

Advisor. The student's major Advisor or Chair provides the primary direction and guidance throughout the student's doctoral experience. The Advisory Chair oversees approval for the student's coursework, the Comprehensive Exam, and Residency requirements; while the Dissertation Chair presides over the Dissertation phase of the program. In many cases, the Advisory Chair and Dissertation Chair are the same person,

though this is not a requirement. The student's relationship with his or her advisor is cited frequently in the literature as a critical component of successful degree completion. In fact, Franco recognized the importance of the relationship, albeit too late.

An advisor is not like a counselor in high school. This is somebody that you need to be on a team with and that has to be a good relationship and I think in some ways it was. Just to be aware of that. I just wasn't really thinking that way. (Franco-NC)

Looking at the Advisor relationship, more completers (3 out of 6) reported a positive relationship (4 of 6 after one person changed Dissertation Chairs); while more non-completers (4 out of 5) reported concerns or negative relationships, two of which clearly contributed to attrition.

Gary-C felt his advisor was "very helpful", while Wanda-C described her advisor as being "available...very supportive...(and) as a friend as well as a mentor...always willing to give me ideas....guiding without handholding...(and) moral support." Carson described his advisor relationship this way:

I was working with Dr. Ross and that helped a lot because he would give me the indicators and the highlights, what to look out for, the deadlines. And what I learned from that process was if I gave myself, if I put in 100% effort, my advisors were willing to even go out of their way to assist. (Carson-C)

Of the three remaining completers, one changed advisors for the dissertation phase of the program and was happy with the resulting relationship, while another had ongoing difficulties working with her advisor yet still completed. The final completer did not express positive or negative feelings about his advisor, but had hoped for a closer mentoring relationship that was not to happen.

The four remaining non-completers indicated that their advisor relationships were less than perfect, recounting varying levels of strain or conflict as represented in this statement by Matt-NC.

The problem is, the chair I had at the time really didn't have an understanding of that world (re: the Dissertation topic).... We really didn't hit it off. We didn't have an appreciation for what each other brought to the table. (Matt-NC)

Two of these non-completers were near completion when they had to leave the city because of changes in employment. They felt that they were dedicated to completing the Ph.D., but did not feel that there was support available to make that happen. One of these was Beth, who sensed a lack of support after she moved away.

When I had to leave (the city), which was part of the problem, I didn't feel like I had any support or that anybody was interested in whether I did finish or not, even though I was all ready to take my Comps at that point. (Beth-NC)

Committee Members/Faculty. Aside from the advisor, Advisory and Dissertation Committee members and other faculty at Eagle University also represent an important source of support for the Ph.D. student. The majority of completers (four of six) and non-completers (four of five) offered a number of unsolicited accolades for faculty, with several tributes going to faculty in disciplines outside of instructional technology. One completer and two non-completers raised concerns about faculty support. However those who expressed disappointment did not indicate that it was a major contributor to attrition.

Following are examples of the complimentary comments about the support received from Advisory and Dissertation committee members and faculty.

The professors were always there to answer questions, very responsive. And I think part of that is being in the instructional technology program you're lucky enough to have professors that studied teaching. So they're pretty good about understanding what it means to have good teaching practices. (Franco-NC)

I was very involved with the teaching, the classes too—which helped me get to know some of the professors. .. but on two levels. So it was also that I had a professional, “I’m–working–with–you” relationship as well as a, “I’m–just–a–student” relationship. I haven’t really thought about this before, but more of a well-rounded participation for me. Student, teacher-assistant and became kind of a friendship, support too which was very helpful for me. (Wanda-C)

(Several people who were very supportive were) in the department but outside instructional technology. They were very helpful in encouraging me not to give up. ‘Cause they reminded me that if they accepted you into the program, they thought you had what it took to finish. So that was like, “Yeah, you’re right.” So since then I’ve relied in them to help get me through this whole process getting through the Prospectus, getting the dissertation done. I would go into their offices and I would sit with one person in particular and just talk. (Linda-C)

The sentiments of the participants who felt they experienced a lack of support are represented by the following comments.

There are a couple of (faculty members) that you can e-mail and e-mail and they just don’t respond in a timely manner, and it’s just really frustrating. I think there are some people you might find who left the IT program who attribute some of their leaving to getting frustrated with those couple of people. (Linda-C)

One guy no—showed my prospectus, and I didn’t contact him again after that—that was it. I fired him. And then I had a committee member quit. (Gary-C)

I just know remembering discussions with some of my fellow students who did or didn’t finish, there are just issues around having really great support from the department. I know that some talked about having certain department members who wouldn’t return emails or get back with them. There were more barriers than being a real supportive organization. (Lewis-NC)

Students and student groups. Both completers and non-completers spoke of the importance of support from other students. All six completers and two non-completers commented on the value of support from student groups and/or individual students; while two non-completers did not mention benefitting from individual student or student organization support; and one non-completer discussed feelings of discomfort and alienation in terms of seeking or even participating in this type of support.

Of particular note is that the spirit of students supporting each other was described by two completers as self-perpetuating. Not only did these participants receive assistance from other students, but this freely-given support engendered a sense of obligation to do the same for others, as evidenced by the following comment.

People helped me, whether it was directly or indirectly. There was support, so I feel like if someone else needs help, whether it's a student I'm teaching in my class or another Ph.D. student or whatever. Even if it's a 'yeah, you can do it' cheerleading thing, you need to pass it on. But it's not easy, but it's worth it. (Wanda-C)

Partners, family and friends. Support from partners, family, and friends was prevalent for most study participants. Aside from one non-completer, everyone described support from partners as very strong. That non-completer mentioned a spouse whose support was lacking. There were, however, several isolated situations in which individuals who lauded support from others, did not benefit from support in one or more categories. For example, two completers talked about the loss of friendships due to the demands of the program. However, both were able to compensate for this with increased support from family.

Evidence of the strong partner support mentioned by study participants is shown below.

My biggest supporter that was definitely my spouse. And he was very proud of me and telling all his friends, "Oh, this is my wife. She's getting her Ph. D." He cared for the children a lot and the home. (Viki-C)

My mom was very supportive and she would come and help, stay with the kids, take the (kids) for the weekend, things like that so I would have study time... She was always "Really, I'll do what I can to help you." My sister helped out some too.... As far as family members go those were to the two most hands on supportive although there was plenty of "You go girl!" from all of my family. (Wanda-C)

My family, my husband were very encouraging. My husband had told me not to take a job, but complete the Ph.D. first. He would support me. (Jean-NC)

Carson-C was a Non-US citizen whose family and friends did not accompany him to this country. And while he was extremely focused and completed the doctoral program in five years, he missed having their support close by.

In the absence of family to support you at home, in the absence of family and friends who would understand what you're trying to do, and in the absence of social circles like church and other things that I would otherwise have access to in (my country) it was very difficult. So in a foreign country different culture, different accent and you don't have your loved ones, it's—you're just yourself in an apartment. (Carson-C)

One non-completer had a very supportive partner, but she neither experienced nor sought support from extended family and friends. This was clearly a cultural expectation, as she describes her family's connection to her pursuit of the doctorate.

Everybody in my family felt proud that I was doing (the) Ph.D. But then nobody—that's again cultural. You learn by yourself. That's it, that's the way it is. (Jean-NC)

Employer. A final support network is the employer. Two people, one completer and one non-completer, had a great deal of support from their bosses and/or companies, including moral support and financial support. In both cases, the employer provided tuition reimbursement and was very understanding of the demands required for doctoral study. In one of these two cases, the participant also described an extremely supportive boss who himself had pursued a doctorate, though he made the decision to leave the program because of conflicting personal goals. Following are examples of what these participants had to say.

I had a full-time job at Other University (pseudo.) that was really flexible and they were paying my tuition. I couldn't ask for anything more.

One of my co-workers...was probably the most supportive throughout the whole process. He was actually my boss. He was absolutely my mentor throughout that and I told him as much. I told other people as much. Yeah, he was very helpful. (Mike-C)

Summary. This section described the support experienced by study participants from advisors, committee members and faculty, individual students and student groups, partners, family, friends, and employers. Findings in these areas indicated that four of five non-completers described difficult relationships with their advisors, while four of six completers reported their advisor relationships as being very positive. In addition, positive relationships with the advisor supported completion; while difficult advisor relationships appear to contribute to attrition. In terms of faculty and committee, positive faculty relationships were reported as encouraging to participants. Problems with faculty

and committee were reported as roadblocks, but only in one case was it perceived as a major factor in attrition.

The impact of student-to-student relationships was evident in that all completers reported reaching out to other students and gaining critical support. Non-completers generally agreed that student support was important, though more non-completers mentioned support from individual students than student groups or formal organizations. In the end, only one non-completer lacked any positive experiences with group or individual student support.

Support from partners, family and friends was strong for both groups. However, lack of spousal support in one case emerged as a contributor to non-completion. Finally one completer and one non-completer described strong support from employers. While this was a welcomed bonus, it did not appear to be a determinant of completion or attrition.

Retrospectives

Up to this point, the background and experiences of participants during their work in the doctoral program in instructional technology at a major Southeastern university with very high research activity has been presented. Much of the interview data has already been analyzed and synthesized to report on factors that may have influenced the outcomes of their experiences toward completion or attrition. The next section of this chapter takes a different vantage point. Participant responses were reviewed to pinpoint

conscious strategies used by participants to improve their chances of completion and challenges that threatened completion.

What Strategies Were Used to Aid Completion?

As study participants discussed their experiences during the Ph.D. program in instructional technology, they frequently described strategies they used that moved them toward completion of the doctorate. Some students developed their own unique plans at the onset, while others found ways to adapt to emerging challenges. Table 13 summarizes strategies used by both completers and non-completers to help them move toward successful completion of the Ph.D. The specific strategies mentioned by individuals are listed on the right. These strategies have been grouped into basic categories in order to provide a platform for comparing the types of strategies used by completers with those used (or not used) by non-completers. Note that the column headed #Cs reports the number of completers who made use of this category; while #NCs represents the number of non-completers who made use of the category.

The strategy categories shown in this table are sequenced first by the number of completers who used strategies in the category, followed by the total number of participants (completers + non-completers) who adopted strategies in the category. By comparing completers to non-completers, it is easy to see two things. First, both completers and non-completers created and personalized numerous strategies aimed at success. In fact in two categories—personal success strategies and getting a head start with the dissertation topic—completers and non-completers were essentially even.

Table 13

Completion Strategies Employed by Study Participants

Category	# Cs	# NCs	Strategies
<p>Found ways to cope with stressors and the unexpected</p> <p><i>"A lot of it was just pitch my private fit and then say, 'Okay, now how do I play your game?'" (Wanda-C)</i></p>	6	3	<ul style="list-style-type: none"> • Altered timelines, schedules, and course selections to adapt to goals and circumstances • Exercised (running, biking, etc.) • Vented in private • Depersonalized feedback • Picked battles over committee recommendations carefully • Worked with doctors to mediate the effects of health problem(s) • Worked overtime to compensate for skill deficiencies • Gave himself/herself permission not to be perfect; accepted personal performance that was less than perfect
<p>Subscribed to a "never give up" creed</p> <p><i>"I never quit anything in my life." (Gary-C)</i></p>	6	1	<ul style="list-style-type: none"> • Determination to finish "no matter what" • Positive thinking. Never entertained thoughts of leaving • Task orientation. Did not allow distractions that could derail the process
<p>Integrated themselves into the academic community</p> <p><i>"(By attending conferences) I saw people of all kinds who were finished, presenting papers and doing research. So that was very encouraging." (Linda-C)</i></p>	5	3	<ul style="list-style-type: none"> • Sought input from faculty members beyond the advisor and committee members • Attended professional conferences • Procured positions as Graduate Research Assistants or Graduate Teaching Assistants • Reached out to individual students for information and support • Formed/participated in student support groups

Category	# Cs	# NCs	Strategies
<p>Formulated personal success strategies</p> <p><i>"I created my own special table that I kept, and then I would update that; and it became part of my portfolio." (Carson-C)</i></p>	4	4	<ul style="list-style-type: none"> • Set goal of registering every semester until finished • Focused on goal of completing coursework in 2–3 years • Created a master plan or schedule to use throughout the program • Dedicated nights/weekends to schoolwork • Worked on schoolwork while children participated in activities • Substituted independent study for unavailable course(s) • Scheduled weekly meetings with Advisor (after Prospectus Defense)
<p>Made lifestyle changes to accommodate the Ph.D. quest</p> <p><i>"My (kids) sometimes actually came with me to class. If all else failed they brought a book and they sat in the back of the classroom." (Wanda-C)</i></p>	4	2	<ul style="list-style-type: none"> • Quit a job • Took children to class, if necessary • Studied whenever time permitted—before, during or after children's activities • Moved away from family to attend school • Commuted to class long-distance
<p>Got a head start with dissertation topic</p> <p><i>I knew exactly what I wanted to do. And how I wanted to do it." (Matt-NC)</i></p>	2	3	<ul style="list-style-type: none"> • Identified dissertation topic early • Used assignments during coursework phase to support dissertation research
<p>Requested a program extension</p> <p><i>"And when I'd gotten to the point where I needed an extension—petition to extend—to do my prospectus defense, I had heard that they did not do that very often for people so I'm thinking 'Okay, I'm done.' I was thinking it wasn't going to happen and I talked to one person and she was, 'No, no, no, no. You put the petition in.'" (Linda-C)</i></p>	2	2	<ul style="list-style-type: none"> • Filed for a time extension after passing the 7-year limit for achieving doctoral candidacy

However, in the other five categories, completers show a significant lead over non-completers—with the most significant issues being finding ways to cope with stressors and the unexpected and subscribing to a “never-give-up” creed.

Summary

The interviews conducted with eleven former doctoral students at Eagle University provided a tremendous amount of data as well as insight into the experience they had. Both completers and non-completers described what they experienced, how they experienced it, and factors that either supported or hindered their pursuit of the Ph.D. Summarizing all of the areas examined, Table 14 highlights the key findings and how they appeared to affect the outcome for doctoral students in instructional technology at Eagle University.

This chapter detailed and summarized the findings from this qualitative research study involving eleven former students in the doctoral program in instructional technology at Eagle University. In all, six completers and five non-completers were interviewed. By telling their stories, several themes emerged that describe their reactions to those experiences and their perceptions of how their own completion or attrition was affected. Data gleaned from those experiences also contributed to the findings concerning who completed and who did not.

The next chapter will focus on conclusions and recommendations, and will address the overarching question posed in this study: *Why do some instructional*

Table 14

Key Factors affecting completion and attrition

Category	Finding	Affected Completion or Attrition?	Comments
Motivation	Non-completers were much more likely to begin the doctoral program with very specific goals in mind.	Yes	When these non-completers experienced a change in job prospects, they were more affected by it than completers who experienced the same thing. Completers' primary motivation was not tied to a specific goal, and therefore they had no need to redefine their reasons for completing the doctorate.
	Completers were more likely to report that their primary motivation for pursuing the Ph.D. was for personal reasons.		
	Four out of five non-completers experienced a shift in personal goals or job status.		
	Students in the study who were focused on a career in higher education were in the minority.	No	Three of six completers included this as one of their goals (two primary and one secondary), while two of five non-completers listed it as a secondary goal (future possibility)
	Only one of eleven students reported that their expectations of the program were on target.	No	Despite incongruence with expectations in a variety of areas, this did not appear to be a factor in attrition.
	Three completers and three non-completers spoke about physical and mental health issues that affected their journeys to completion.	Yes	Feelings of being overwhelmed were reported by completers and non-completers. Family stressors also stood out for non-completers
	Five of six completers had expressed a determination to complete at all costs. Non-completers spoke about their desire to complete, but did not express it in those uncompromising terms.	Yes	All of those who made this statement completed.

Category	Finding	Affected Completion or Attrition?	Comments
Financing	Student loans were the primary source of funding for two completers and one non-completer.	No	Concerns about taking out loans were not reported as playing a role in completion vs. non-completion.
	Only two non-completers relied primarily on funding resources other than themselves. However, only one of them cited funding as a barrier to completion.	No	Those who described their primary source of funding as themselves stated that they were not concerned about paying for their own studies.
Socialization	Establishing relationships with other students, faculty, and participation in group activities was considered an important factor in staying with the doctoral program until completion	Yes	Both groups reported these relationships as aiding their continuation in the program.
	Written/online materials about requirements for the instructional technology program at Eagle University were credited with providing significant support for successfully moving through the program.	Yes	This issue was reported by nearly every program participant.
	Courses on the structure of the doctoral program and writing the dissertation were considered highly valuable.	Yes	The first course on understanding the doctoral program was mentioned most often.
Academics	Students who expressed particular difficulty pinpointing a dissertation topic and who lost their research population did not complete.	Yes	Problems finding a topic did not in and of itself stymie completion, although it did slow the process. However, when the research population was lost also, this seemed to create a seemingly insurmountable scenario.
	The majority of non-completers left the program prior to achieving doctoral candidacy (the dissertation phase.)	No	Only two non-completers began the dissertation process officially; though another mentioned collecting information on the dissertation during their studies.
	Combining full-time study and full-time work did not adversely affect completion.	No	Two of the non-completers chose this route.

Category	Finding	Affected Completion or Attrition?	Comments
Academics (<i>cont'd.</i>)	Students who studied part-time were no less likely to complete than those who studied full-time.	No	Demographics indicated that diversity in the type of study (part-time vs. full-time) selected by study participants when compared to who completed and who did not.
	Students who requested program extensions were as likely to complete as those who did not.	No	Two completers and two non-completers requested extensions.
Program Experience	Overall, both completers and non-completers had very positive reactions to the program.	No	All study participants reported finding significant value in having taken part in the doctoral program.
	Availability of courses for scheduling was not seen as a major impediment to completion.	No	Though this was reported as aggravating and sometimes not being able to take some desired courses, it was not reported as preventing completion.
	Forming and managing a committee was a new and challenging requirement for most participants; and played a role in attrition for at least one person.	No	This was not the primary source of the issue with the non-completer that cited this as a critical issue. It resulted in cultural differences that made it more difficult to complete these requirements.
	Apprehension and stress associated with end-of-program requirements such as residency requirements, the comprehensive exam, and completing the prospectus and dissertation did play a role in completion for two non-completers.	Yes	Some of the stress described appeared to be attributable to misconceptions about what would be required in these last phases. Some also seemed to be fear of the unknown.
	Challenges and frustrations with the dissertation process did not factor in to attrition for the two non-completers who had reached candidacy.	No	Neither reported this as a major deterrent from completion.
Support	A positive advisor relationship was seen as a critical factor for completion.	Yes	Those with difficult advisor relationships did not complete.

Category	Finding	Affected Completion or Attrition?	Comments
Support (<i>cont'd.</i>)	Support from other students emerged as a critical factor in completion.	Yes	Those who did not have this type of support did not complete.
	Support from partners, family and friends is necessary though not sufficient for completion.	Yes	When present, this support was valued. When absent, it was seen as a contributor to attrition. However when absent, it was not reported as the only factor that affected completion.

technology students in a research university with very high research activity complete their degree while others do not?

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

Are you doing it full time or part time? Are you funded? If not, what is your source of funding? Are you working? How are you going to balance your work and college work? Your course selection, are you a resident student or a non-resident student, you travel, all those things and then you've got your specific course requirements, prerequisites. A lot of your success is going to depend on your ability to manage those things. Because if you don't manage them properly, regardless of how good you are or how motivated you are, failure to organize and manage yourself might end up being some of the causes for someone to drop. (Carson-C)

Introduction

This quotation from Carson-C was part of his advice to students considering entry into the doctoral program. He begins with questions the student should ask before they apply; and continues by discussing what he considers to be a key success factor: the ability to organize and manage yourself.

This research study was an exploration of doctoral student completion and attrition in instructional technology at Eagle University (pseudo.), a major research university with very high research activity (per Carnegie classification). Chapter 5 presented the background and experiences of participants during their doctoral program. Data from the interviews with study participants was reported, analyzed, and synthesized to report on factors that may have influenced the outcomes of their experiences toward completion or attrition. This concluding chapter will place those findings in the context of the research questions for the study. This chapter also contains a summary of advice and

recommendations, like Carson's, that were generated based on participant interviews.

The overarching research question to be answered was:

Why do some instructional technology students in a research university with very high research activity complete their degree while others do not?

The study was also guided by three related sub-questions:

- (1) *What are the experiences of completers and non-completers in the instructional technology program of a Southeastern research university (aka Eagle University) with very high research activity?*
- (2) *What drives a student at Eagle University to continue (or discontinue) with the pursuit of their Ph.D. degree in instructional technology?*
- (3) *What are the defining differences between instructional technology doctoral students who complete their degrees vs. those who do not?*

Finally, this chapter will also present insights gained by the researcher and will discuss implications for the study as well as recommendations for future research.

Conclusions

Each sub-question from the study will be presented in this section, along with related conclusions and an expanded discussion of findings where appropriate.

Sub-question 1: What are the experiences of completers and non-completers in the instructional technology program of a Southeastern research university (aka Eagle University) with very high research activity? The seven themes discussed in

Chapter 5 (Student Profiles/Demographics, Motivation, Financing, Socialization, Academic Issues, Program Experiences, and Support Systems) presented findings and analysis of student experiences in the program. Based on those findings, several general conclusions are offered here.

Within most of the themes discussed, the experiences of completers and non-completers were very similar. Both groups faced challenges in selecting and maintaining a committee, managing family stressors, financing the program, managing physical and mental health, and dealing with the demands of each phase of the program. Completers, however, remained focused on their internally-driven goal of completion and refused to allow challenges to overcome them. Yet this is not the entire story. Having or not having a strong internal driver was not always the determining factor in attrition for non-completers. In two instances, non-completers were unable to identify options to overcome external obstacles they faced—causing them to abandon their studies. One example is Lewis-NC, who moved out of state and was unable to assemble a committee that met the necessary criteria for a dissertation committee. Another example was Jean-NC, who could not find ways to address her anxieties about comprehensive exams and residency requirements in time to meet the deadline for achieving doctoral candidacy; and was not confident that an extension was the answer.

Changes in personal goals or job status were clear factors in attrition. Four of five non-completers faced this situation. These changes in and of themselves did not immediately cause students to abort their studies. However, when coupled with additional

challenges during the program, these changes took on greater importance and the accumulation of challenges eventually led to attrition. Even though this same challenge was experienced by two completers, they charged forward to completion.

Varying levels of stressors as well as other issues related to physical and mental health can overtake a student if not addressed. Both completers and non-completers reported these types of experiences. But for two non-completers, these challenges were overwhelming. In both instances, the level of stress experienced might have been managed through professional intervention. The question is whether or not the student or their advisor recognized this and considered seeking this type of assistance. In contrast, the severe personal stressors experienced by one completer went untreated until after graduation. And in another instance, a completer chose to address the problem with family stressors by leaving full-time employment.

Selection, maintenance, and management of the Advisory and Dissertation committees were difficult for both completers and non-completers. Most study participants suggested that this was a new skill for them because they had never needed to manage a committee over which they had no formal authority. It was a task for which they felt they received little coaching. Particular problems mentioned included:

a) determining who should be on the Advisory or Dissertation committee, b) assembling the right combination of committee members, c) managing communication and feedback from committee members, and d) resolving differing opinions of committee members related to feedback.

A final conclusion is that there was unanimous agreement among all study participants that the program was valuable to them, whether or not they completed. This sentiment was characterized by a comment made by Jean-NC, “The starting was very exciting. Then it was very insightful.... I learned a lot too.”

Sub-question 2: What drives a student at Eagle University to continue (or discontinue) with the pursuit of their Ph.D. degree in instructional technology?

Table 15 lists influences that encouraged and supported continuation in the doctoral program, and challenges that contributed to potential discontinuation of the program. These same factors and challenges can also be thought of as drivers for completion and potential contributors to non-completion. The terminology used was carefully selected to avoid tying specific factors to either completers or non-completers. This is because the issues listed are not mutually exclusive to completers or non-completers. Both groups contributed to the list. Interestingly, many of the factors that motivated completers also motivated non-completers to continue. And factors that challenged non-completers often challenged completers as well. In short, a continuation factor did not guarantee completion; and a discontinuation factor does not automatically predict attrition.

It is also important to understand that continuation factors and discontinuation factors are not mirror images of each other (Tinto, 2007). Note that where there were

Table 15

Factors Supporting Continuation or Discontinuation of the Doctoral Program in Instructional Technology at Eagle University

CONTINUATION [Factors that kept students moving forward. Potential contributors to completion]	DISCONTINUATION [Factors slowing student progress. Potential contributors to attrition]
1. STUDENT PROFILES/DEMOGRAPHICS	
<ul style="list-style-type: none"> • (Not cited) 	<ul style="list-style-type: none"> • (Not cited)
2. MOTIVATION	
<ul style="list-style-type: none"> • Clear expectations of the program. • Internal driver for continuing the program: determination to finish “no matter what.” 	<ul style="list-style-type: none"> • (Not cited) • Having external motivators for pursuing the doctorate as opposed to internal drivers • Change(s) in personal or career goals rendering the Ph.D. degree unnecessary • Early achievement of goal(s) for which doctorate was targeted.
3. FINANCING	
<ul style="list-style-type: none"> • Full funding from outside source • Ability to support self / family during studies 	<ul style="list-style-type: none"> • The need to work on a full-time job rather than attend to doctoral studies full-time (related to lack of full funding for doctoral students) • Concerns about maintaining finances or health insurance
4. SOCIALIZATION	
<ul style="list-style-type: none"> • Written program materials on the doctoral program in IT • Courses offered by the university that were relevant to the program itself • Experience and relationships gained through research and teaching assignments • Conference attendance provided opportunities to build relationships with faculty, students, and outside professors • Information gained through relationships with other students and student groups 	<ul style="list-style-type: none"> • (Not cited) • (Not cited) • (Not cited) • (Not cited) • (Not cited)

CONTINUATION [Factors that kept students moving forward. Potential contributors to completion]	DISCONTINUATION [Factors slowing student progress. Potential contributors to attrition]
5. ACADEMIC ISSUES	
<ul style="list-style-type: none"> • Enjoyment/familiarity of coursework • (Not cited) • (Not cited) • (Not cited) 	<ul style="list-style-type: none"> • Insufficient expertise in essential software applications • Limited course offerings, resulting in difficulty registering for desired courses • Lack of structure in the dissertation phase of the doctoral program • Concerns about ability to conquer end-of-program requirements (Comprehensive exam, residency requirements, prospectus/defense, dissertation/defense)
6. PROGRAM EXPERIENCE	
<ul style="list-style-type: none"> • Overall positive reaction. Value of program coursework and program experience. • (Not cited) • (Not cited) • (Not cited) • (Not cited) • (Not cited) • (Not cited) • (Not cited) • (Not cited) • (Not cited) • (Not cited) • (Not cited) 	<ul style="list-style-type: none"> • (Not cited) • Problems forming and maintaining committee(s) • Lack of timely response(s) from committee members • Difficulty identifying a suitable dissertation topic • Loss of access to research population • Taking breaks while working through the doctoral program • Problems with physical health • Strained personal relationships because of time devoted to doctoral study • Feelings of being overwhelmed • Difficulty handling stress and anxiety • Guilt associated with time spent away from family
7. SUPPORT SYSTEMS	
<ul style="list-style-type: none"> • Support from partner, family, friends • Supportive relationship from advisor • Supportive relationships with faculty 	<ul style="list-style-type: none"> • Lack of support from partner • Difficulty working with advisor • Difficulty managing committee(s)

CONTINUATION	DISCONTINUATION
[Factors that kept students moving forward. Potential contributors to completion]	[Factors slowing student progress. Potential contributors to attrition]
<ul style="list-style-type: none"> • Supportive relationships with other students and student groups • Support from employer (in the form of tuition assistance, time allowances, encouragement, and feedback) 	<ul style="list-style-type: none"> • No close supportive relationships with other students or student groups • (Not cited)

similarities between them in the table, factors are listed across from each other.

Otherwise no corresponding issue is listed on the opposite side of the table.

Factors in continuation. As mentioned earlier, this column in Table 15 was headed *Potential Contributors to Completion* because the category represents motivators and supports that were reported by completers and/or non-completers. Study participants felt that these factors helped them stay in the program, even if they didn't stay until completion. In other words, these factors were not necessarily the reason for completion; but were necessary for completion. This nuance in definitions is reflected in the concept of Hygiene factors by (Herzberg, 1987). Hygiene factors are considered maintenance-level factors that might result in a negative outcome if NOT present; but by themselves do not guarantee a positive outcome. One reason something is considered a hygiene factor is because we *expect* it to be present—like support from your advisor or timely responses from your committee. They are not considered to be unusual in and of themselves, unless they occur at a level significantly above what is normally expected.

Factors in discontinuation. Listed in the Discontinuation column are factors that could potentially influence attrition. They are not considered to be causes of attrition, but in some cases contributed to the decisions made by non-completers to discontinue.

Continuation vs. Discontinuation. Continuation and Discontinuation are listed separately. The *presence* of a specific item listed under *Continuation* would not necessarily guarantee attrition; and the absence of an item listed under *Discontinuation* would not either. But a combination of factors can conspire to produce attrition.

Many past studies have sometimes reported conflicting results concerning what causes continuation and what causes discontinuation. One reason is that the goal of many prior studies was to define *causality*; but instead what was proved is *correlation*. Just because descriptive statistics show a number of people to have one trait or another, does NOT mean that causality is at work. It only means there is a correlation. Students interviewed for this study talked about issues that contributed to continuing or discontinuing; but rarely did they say, “This is the *cause* of my not finishing. And when they did, they were *not* necessarily referring to issues commonly discussed in the literature.

Sub Question 3: *What are the defining differences between instructional technology doctoral students who complete their degrees vs. those who do not?* This study showed that there were many more similarities than differences between the factors that support or hinder completion for completers, and those that support or hinder non-completers. For example, factors such as the distribution of demographics like gender,

ethnicity, age, children, part time vs. full time study or employment, and last degree before entering the doctoral program were not mentioned by either group as playing a significant role in completion or attrition. However, there were several clear distinctions. First, time limits affected six out of the eleven students in this study, four of whom were non-completers. When faced with the seven-year time limit for doctoral candidacy, two completers and two non-completers needed extensions in order to continue in the program. Two other non-completers were not confident that an extension would be granted, and if so, that they would be able to take advantage of it to complete their studies. Previous studies have shown that it is not unusual for doctoral students in the humanities to take an average of eight or ten years or more to complete a doctoral degree (Bowen & Rudenstine, 1992; Gumport, 2005; Gravois, 2007). For the two completers and two non-completers who were granted extensions, an extension made it possible for them to continue in the program, thus dampening the potential impact of the seven-year time limit for achieving doctoral candidacy. The flexibility of extensions at Eagle University provides an avenue for promising students to exceed the original time lines and still complete the degree. It should be noted that the number of extensions discussed in this study do not support a conclusion about the effects of requesting an extension, though it could be surmised that when a student goes as far as to ask for an extension, it does not foretell completion.

Overall, non-completers were more complimentary of the doctoral program in IT than were completers, though all study participants reported positive experiences during

the initial phases of the program. This may be because completers experienced the entire dissertation phase, which is often described as the most difficult phase in the program. (Rudestam & Newton, 2001; Yeager, 2008)

The way(s) in which completers vs. non-completers financed their studies varied somewhat. Though two completers and one non-completer relied heavily on student loans, this was not a source of discouragement for completion. On the other hand, only two non-completers relied primarily on funding resources other than themselves.

In looking at advisor relationships, four out of five non-completers had problems working with their advisors. The one completer who had similar issues changed advisors before the dissertation phase of the program. This corroborates the findings of Bair (1999), Lee (2003), Kim (2007), and others, who found that a strong positive relationship between a doctoral student and his or her advisor is highly correlated to successful completion of the doctorate (p. 114). The success of this relationship can be affected by many things. For example, Golde (1994) describes the relationship between student expectations and the advisor relationship by saying that students expect a caring advisor and nurturing community; and when they do not experience those, they feel deprived and alienated. And in Kim's 2007 study of advisor relationships for Korean doctoral students in the United States, Kim found that differences in how advisors and Korean students viewed advisement and communication became barriers to successful relationships.

Unmanageable levels of apprehension and stress were reported by two non-completers. Though completers reported experiencing stress, they found releases (like

exercise) to help manage it so that it did not reach an untenable level. And in general, completers reported challenges, frustrations and stress associated with the dissertation phase.

All completers had full support from partners, family, and friends, while two of them reported feeling a great deal of guilt because of obligations to family. One described this guilt as feeling like a ‘thief’ in stealing time and attention from his family. This person went on to complete, but required professional counseling after graduation. One non-completer lacked the full support of his partner, and two non-completers talked about guilt over family issues—all of which were considered to influence the decision to leave the program.

Another finding that separates completers from non-completers is the fact that four of five non-completers experienced a change in personal goals or job status. Two non-completers were derailed when their very specific purpose for pursuing the Ph.D. was taken away. Although they did not quit right away, when other problems came up, it made more sense to leave the program because they did not have a good reason for staying. So, contrary to conventional beliefs, for people who do it because they want it, this is a higher level drive than an external motivation like achieving a career goal or making more money. Therefore those who had a specific purpose, when that purpose change, were more likely to drop out. Two examples are:

- (1) The non-completer who was pursuing the Ph.D. to get a raise, and then had a job change where earning a Ph.D. did not merit a salary increase.

(2) The person who pursued the Ph.D. in order to become an Instructional Designer, but got the job not long after beginning the doctoral program. Their motivation was taken away.

Two non-completers reported having difficulty identifying a topic and losing access to their research population. This was a significant issue and a major contributor to their giving up their hopes for earning the Ph.D.

Unlike non-completers, five out of six completers said they never seriously considered quitting; and everyone who completed had made the statement that they would finish “no matter what.” The conclusion here is that internal drivers are stronger than the motivation that comes from external goals. As stated in Reamer (1990), “Although some of those who persisted confessed to having feelings of giving up, they also overwhelmingly stated that it was their unwillingness to experience failure that kept them in school” (As cited in Bair, 1999, p. 114). This suggests a determination to succeed against all odds, which seem to be a personal quality that helps students to persist. These conclusions were echoed in research on internal vs. external motivation. For example, Goodman, Keresztesi, Mamdani, Mokgatle, Musariri, Pires, and Schlechter (2011) investigated the relationship between students’ motivation and academic performance. They describe intrinsic motivators as achievement motivation – the desire to achieve success. Extrinsic motivators are described as rewards and socialization. They found that students who are intrinsically motivated will generally apply effort and this achieve.

However, those who are extrinsically motivated tend to apply less effort, and thus do not achieve.

Abuhandeh and Csikszentmihali (2009) go a step further. In reporting on their study of internet chess players, they contend that those who are intrinsically motivated also tend to find enjoyment of optimal challenges – challenges that are neither too easy nor too difficult. This concept is contrasted to those who are extrinsically motivated, who see challenges as a win or lose proposition. Though this finding comes from a very different discipline, it shows a potential connection of interest to this study of attrition and completion, where findings show that both completers and non-completers faced challenges in their doctoral programs. However, those who were intrinsically motivated were more likely to complete. This concept also appeared in the interviews with Vicki-C and Carson-C, who described several challenges they faced, but characterized their overall experience – especially the dissertation – as ‘fun’. On the other hand, the non-completers who discussed extrinsic motivational factors as their driving force for pursuing the Ph.D. made a final decision to discontinue the program when faced with mounting challenges – especially if their extrinsic goals had changed.

A third study connected to intrinsic and extrinsic motivation was the study conducted by Ivankova and Stick (2007), who looked into student persistence in a distributed doctoral program in Educational Leadership. They found that self-motivation – intrinsic motivation – was a key factor in completion. Case in point is one student in the study who indicated that completing her doctorate was a personal dream

and a challenge; and her determination to finish would not be swayed by negative experiences. In fact, she looked forward to the next phase of the program. She considered it a motivator to move into a different phase (p. 110). A second student even described her experience with learning as entertaining "...in a twisted way" (p. 112). This was in keeping with the findings of Abuhandeh and Csikszentmihalyi (2009), as they described overcoming optimal challenges by intrinsically motivated students as providing enjoyment. Case in point is that in the current study on doctoral attrition and completion, taking breaks during doctoral study was unique to non-completers. All completers went straight through the doctoral program. However, three of five non-completers took one or more breaks during the program.

In summary, the various points of differentiation just described between completers and non-completers described above imply that one or a combination of these differences point to reasons for continuation or attrition for study participants.

Contributions of this Study

This study explored completion and attrition through the lens of the student in an effort to see things from their perspective. It adds to the dialogue encouraging thinking about attrition and completion in different ways. It also presents an in-depth look at the history of Eagle University and of the instructional technology program.

The findings in this study suggest that the discussion around causes of attrition needs to shift to a much more complex conversation around how student experiences may

influence the decision to continue or discontinue study; and more specifically, the notion that those factors that influence attrition are not necessarily *the* cause; but rather elements of a student's internal conversation about the value of continuing vs. the price to be paid for completion.

The overarching research question in this study is this:

Why do some instructional technology doctoral students at a major research university complete their degree while others do not?

Few issues were found that were reported solely by either completers or non-completers. However, there were several findings that helped shed light on the path that led to attrition or completion. These findings have led to two conclusions.

1. In examining the plight of non-completers, there was not one cause of attrition. Instead, non-completers had multiple challenges that came together to fashion a case for attrition. As challenges mounted, the scale balancing coping strategies vs. challenges was tipped, requiring a decision about whether or not continuing in the doctoral program was still a realistic option.
2. In contrast, those who finished were not without their challenges. They met and overcame those challenges time and time again. And for five out of six completers, they were determined to finish, no matter what. Their internal motivation was stronger than the external challenges they faced. Carson-C summed up the importance of this internal motivation well when he said:

I think to do a doctoral program one needs to be—in my view one needs to be intrinsically motivated, not motivated by outside factors like “I’ll get a better job, I’ll get better money.” Because I don’t think it’s more about that. I think it’s more to do with, again, self-actualization, the pursuit of truth and the pursuit of our potential to extend the boundaries of knowledge. (Carson-C)

In effect, all but one completer only allowed themselves the option to finish. They never considered attrition as a possible solution to any challenges they encountered.

Researcher’s Insights

Aside from answers to the research questions, there were several observations made during the study that are worthy of note. These things came to light in part because of the underlying study framework, postmodernism, that laid the groundwork for embracing non-traditional lines of thinking in analyzing research results.

Lack of impact of demographics. The demographics of participants in this study, though not significant in terms of attrition and completion, are a testament to the original mission of Eagle University—to serve those urban citizens who are not easily served by other universities. The demographics presented in Chapter 5: Results and Analysis, presents a picture of a diverse group of students in terms of gender, ethnicity, age, marital status, and even student status and employment status. Much like the historical demographics of Eagle University, a decided majority of study participants had full-time jobs and attended school part-time.

The quest for the professorate. Only one study participant listed a career in higher education as their primary goal in pursuing the doctorate. Of course, a significant

number of instructional technology majors come from the business world, and that certainly accounts for some of this disparity. However, this finding still offers a sharp contrast to the widely-touted purpose of the Ph.D. as preparation for the professorate. Lovitts (2001) says that a large percentage of Ph.Ds. do not seek positions as professors, and never have. This issue was also addressed by Wendler (2010) as he noted that even if everyone who earned a Ph.D. had a goal to work in higher education, only half of the Ph.Ds. obtained in the U.S. could be absorbed by universities. The implication here is that more consideration should be given to preparing scholars for the different types of roles they might fill with a Ph.D. in instructional technology.

Placing blame for attrition? None of the study participants laid the blame for attrition at the doorstep of the university. All of the non-completers saw themselves as responsible for their own attrition. Interestingly, it is common for students to see the complete responsibility for their lack of success to be theirs (Lovitts, 1996).

Are non-completers really done? Non-completers all mentioned having had the desire to finish the program after leaving Eagle University, even when the Ph.D. in instructional technology would not be of value in their careers. But after some time and additional thought, one of those considered going after an MBA instead. Two students who had no prospects for benefitting from the doctorate in IT went as far as to request program extensions, still hoping to complete.

Relevant experience or endurance test? Several study participants spoke of the doctoral program as an ‘endurance test’ or having to jump through hoops, as in this quotation from Matt-NC.

I don't know how you can be prepared. It's such a unique experience. And I guess, apparently that's part of it. I think my advisor told me it's an endurance test. ... I'm not in academia. Maybe that's kind of what academia is about. (Matt-NC)

This terminology is common in the literature, as a number of prior study participants have spoken about having to jump through hoops to complete their dissertations (Brause, 2001).

The Dissertation phase. The dissertation phase of the program was seen as fun for two completers; and challenging and stressful to several others. Both completers made positive comments, like this one from Viki-C:

I found a lot of fun in writing my dissertation once I had the Prospectus completed and I was writing about something that I was passionate about and it was approved and so I just found the fun and the joy in the situation that was given to me and I'm really glad that I did it.

Two non-completers who did not experience this phase, included the dissertation as a source of their anxiety, which contributed to their decision to discontinue the program. This concern was expressed by Franco-NC, as he said, “I wasn’t really worried about the coursework but ... I was still really worried about the end game.”

In consideration of these points, it was clear that a number of participants considered this phase of the program to be a definite source of stress and anxiety, which is consistent with the literature. Hinchey and Kimmel (2000) contend that

“...the dissertation functions as a trial by fire that purifies and hardens the worthy (those who manage to survive) and eliminates the unworthy masses (those who can still be driven out at this point). Openly functioning as a weeding mechanism, the dissertation requirement demonstrates the university's tenacity in clinging to outmoded practice and its refusal to consider the best interests of its students rather than its own needs" (p. 91).

Several authors have talked about changing the dissertation in favor of shorter papers for publication or outcomes-based projects that would more accurately track with what a scholar would have to do after graduation. This is a model already used at some universities, particularly in the hard sciences (Huba, Schuh & Shelley, 2006; Brause, 2001; Duke & Beck, 1999). Brause suggests that dissertation policy review committees consider which requirements are really essential for a doctoral degree; and allow for the possibility of revising those requirements. Two examples given are the field of medicine and the Doctor of Arts degree, where the traditional dissertation is not used. Brause maintains that a different type of experience could be viable for doctoral students; and that universities should ensure that students have experiences that reflect the knowledge and expertise they are expected to gain from the program (p. 4).

Duke and Beck (1999) argue that the dissertation is neither a training document nor an original and significant contribution to knowledge, which they say are the purposes touted in the prevailing view (p. 31). They point out that many disciplines outside of Colleges of Education have supported alternative formats, and they suggest that Colleges of Education do likewise. The formats described by Duke and Becker are based on writing multiple articles ready for publication in peer-reviewed journals or

practitioner-oriented publications, or a combination of such. They point out that this approach encourages students to look at their data from different angles and moves their work to a broader stage.

In another example of an alternative to the dissertation, Huba, Schuh, and Shelley (2006) discuss a new framework for doctoral study in education in which the Capstone Project replaces the traditional dissertation. This project is client-centered and problem-focused, yet requires the same level of writing as the dissertation.

Expecting the unexpected. Two themes that ran through participants' analyses of their experiences in the program were: 1) the unexpected, and 2) the new. Study participants repeatedly mentioned the unexpected challenges they encountered with selecting and managing a committee, preparing for and taking comprehensive exams, and working on the prospectus and dissertation. As Matt-NC observed, "It's not anything that you've ever experienced before and it's new." As confirmation of this idea, Brause (2001) points out that most of the interviewees in her study of 250 former doctoral students had no idea what to expect in the dissertation process. Few had read dissertations or dissertation proposals, and most had the perspective that the dissertation was much like a term paper, just longer. This is reminiscent of comments made by three participants in this study who thought the dissertation would be similar to papers prepared during the Master's program.

Implications

The study of attrition and completion is important because of the high rates of attrition in doctoral programs coupled with the high price of attrition. As outlined in Chapter 1, this price includes wasted resources including money, time, and significant emotional investments for students, faculty, and the university. If results from research studies like this one can shed light on the issues that influence attrition and factors that encourage completion, there is hope for improving completion rates and diminishing those costs. This study has implications for both doctoral students and for the university/program.

Implications for students. Students should seek to learn as much as possible about the doctoral program they propose to enter, and ensure they have the data necessary to make an informed decision about pursuing a doctorate. Listed are a summary of several ideas suggested by participant interviews. They represent things students can do to guard against being surprised and possibly overcome with unanticipated program requirements.

- Investigate the requirements of the doctoral program before applying.
Look for documents on line that describe the program requirements.
- Talk to a professor and get their perspective on what is required; and what would be a reasonable time for completion, given your specific circumstances. (e.g. work, family, other obligations?)

- Talk to graduates who have completed the Ph.D. in instructional technology at Eagle University. Find out what the experience was really like.
- Ask the university about student organizations that support IT doctoral students. Contact the president of those organizations and schedule an interview; or attend a meeting and talk to some of the current members.
- It is fine to have a career goal; but recognize that if anything changes, it may take away your reason for finishing. Ask yourself, “How important is it to me to have a doctorate? What if I change jobs? What if I can’t achieve my next desired position? Would I still want the Ph.D.?”
- Analyze your current schedule and obligations. Can you dedicate at least 20 hours a week to your studies over a period of 5–7 years? In the last two years in the program, can you dedicate 30–40 hours a week?
- Assess your ability to support yourself without any financial aid you do not currently know about, at least: Part-time for 3–5 years; and full-time for 1–2 years?
- For professional experience as well as funding purposes, determine if you can you spend time teaching a course or doing a graduate assistantship for at least 3–4 years (min. of 10–15 hours a week)?

Following are additional insights offered by study participants, in their own words.

Decide how bad you want it and be ready to realize that you are going to have to give up a lot of stuff if that's what you want; and everybody else around you is going to have to understand, this is your focus. You may give up holidays, you may give up weekends, you may give up nights, you may give up sleep, you may give up a social life. Make sure you're ready to commit because if you don't want to give it a hundred percent and really commit then don't bother. (Gary-C)

Don't mortgage your life to get a degree." Either pay as you go or don't do it. ... Don't come out of there with forty, fifty, eighty grand in debt. I would have never done it for that. If I didn't have the money, I would have never done it. I would have never done any of it. (Carson-C)

Make sure that (you and your advisor) are compatible because that person has a huge influence on your path. (Matt-C)

Find a mentor early or get with other students early on, or start a group. Also join—right now there's SITs (pseudo.) ... Or join a student version of some of the larger organizations. Go there and get with other people doing the same thing. (Linda-C)

Find a group of students to go through the program as a cohort so that you're with other folks and you're a group. I didn't have that, I was very much alone. (Mike-C)

Develop a plan that either keeps (you) physically attending (the program) or keeps (you) still socially participating. No matter what, (you) have to interact with the program and program participants. (Viki-C)

If you're trying to do a Ph.D. and your (partner) does not believe in a Ph.D., you're going to obviously have a hard time. So you need to have supportive friends and family as well. (Carson-C)

You don't have to do it on Day 1, but on Day 3, you should have a pretty good understanding of what you're thinking about as a dissertation topic and use it top-of-mind through your classes. Run it by all the professors you're sitting in front of. (Matt-NC)

A lot depends on your ability to organize yourself as well as to manage yourself. So you need to have organizational and managerial skills in terms of managing your program because it's a program that needs managing. (Carson-C)

Get up. Exercise. ... Get to the gym. Go for a walk. Go for a run. Take (a) little time, when you can. (Gary-C)

Eat the elephant one bite at a time. (Matt-NC)

Don't quit. It's okay to feel frustrated and upset. It's normal. It's expected. Expect the unexpected. It's okay to take more time. You need to be flexible. (Gary-C)

Implications for the University/Program. The university should examine institutional policies that might affect attrition and completion. Revising or replacing ineffective policies or implementing new communication instruments might mean the difference between completion and attrition for a student. For example, many schools have spent countless hours and expense trying to design the perfect selection system. Yet the attrition rate has been constant since the early years of the doctorate. If selection criteria were the primary issue in student attrition, the problem would have been solved long ago. Clearly, the issues are not related to student readiness or preparation. In fact, it has been said that both completers and non-completers are clearly capable of finishing the work (Lovitts, 2001).

The issue of attrition is complex and may not always be predictable. But that does not mean that some of them are not avoidable. Below are suggestions that address several issues raised in this study.

- Develop a manual clearly defining each phase of the program, its objectives, and guidelines, and requirements. The manual should contain a section for students and one for professors, detailing expectations for the Advisor's role.

- Institute a plan to clarify program expectations of potential students before they enter, or even apply for the program.
 - Offer a pre-program seminar that introduces prospective students to the doctoral program. This seminar could be a face-to-face seminar; a series of interactive online seminars; or a series of eLearning modules.
 - Seminars should include speakers who are professors, former and current students, and/or a panel discussion where prospective students can ask questions. (This could be accomplished through eLearning as a pre-designed FAQ section.)
 - Remember, the goal is to set realistic expectations around what the program would be like—before people apply for the Ph.D. program.
- Require new students to take the existing seminar (course) about the doctoral program during the first or second semester of study.
 - Include information on how to work with your advisor; how to select your advisory and dissertation committees; and how to work with your committees.
 - Require students to develop several additional practical tools, like the creation of a schedule to complete a dissertation.
 - Require students to meet with their advisors at least 2–3 times during the span of the seminar.
 - If necessary, expand this seminar to two parts. (a second semester)

- Recognize that all paths do not lead to the professorate. There may be other reasons for pursuing a doctorate dictated by other settings.
- Encourage faculty to be responsive to student communications and needs.
 - Respond to communications within a given period of time.
 - Monitor the progress of advisees; and get to know them and what may be happening in their lives that may affect completion.
 - Look for ways to support students in their efforts to finish.
- Consider alternatives to the dissertation that have practical application in the environment(s) in which students will work after obtaining the degree.
(See discussion in the section titled *Researcher's Insights*.)
- Consider creating a mentorship program. The mentor may be a student who is satisfying part of the residency requirement; or it may be another professor. But the mentor should be dedicated to helping the student with all issues related to the Ph.D. program.
- Comprehensive exams should be handled the same way by all professors for all students. An example of this is how questions are handled and what is allowed during Orals. This will allow students to anticipate the process and be prepared for what will be expected of them.

The following comments by participants suggest additional topics to be addressed by the university:

A Ph.D. interview should...have a second interview. The first interview is like the one we have for a job... the aptitude and the knowledge base of the candidate. ... And then (you) should short-list a few candidates. Then start explaining to (the interviewee), "This is that, this is that. Are you prepared for all this? (Jean-NC)

I think the resources (e.g. financial aid) are critical. Because when somebody decides to do a Ph.D., it's usually later in life and depending on where they are in terms of their security, in terms of job, family and things that—those things will have a major impact on their pace of doing the program and whether they end up completing the program or not. (Carson-C)

Even though (you) say, "It's your degree, and your dissertation," I think you can still be supported and structured to make sure you're stepped along and not just kind of left out there on your own. Because as adult students, life gets in the way in terms of jobs and crises or things like that. (Linda-C)

If there was one thing in the whole process that I probably would like to see changed the most, it might be (Comps). ... When you talk about making assessment authentic and applicable and relevant, we all need to get up at conferences and make presentations, but you have the material in front of you. We all need to have ten second elevator speeches with people about our research topics and what we're studying. You don't ever have to sit down and you never will ever again be locked in a room and write and write and write without your resources in front of you. It's just not how academic writing occurs in a natural setting. So it seems like a contrived or fabricated setting that doesn't mirror any authentic experience in real life. (Gary-C)

Following is an observation and recommendation from Linda-C, several parts of which were echoed by other study participants. The case she makes is for more of a mentoring approach to working with students.

I felt like somehow in this program, there's some kind of antagonistic thing going on with some of the faculty and some of the students. Meaning that the way you want to be supported they don't want to do it that way. Their idea is you're on your own, it's your program, it's up to you, they are going to be hands off....Whereas most of us students, we wanted more structure. More help. Give us some guidelines and give us some support.

You see people (at conferences) with their faculty members, who come to those programs with their students, and they're talking and they publish together and present together....I think that...model, when you step in the door there's a mentor, you're researching, you're writing together, ... I noticed those folks were coming out sooner. (Linda-C)

Yet with all of the recommendations and ideas presented, everyone felt that program was tremendously beneficial; and generally felt that the totality of their experience gave them the knowledge, skills, and personal fortitude to meet the challenges awaiting them:

I feel like it taught me a lot about myself and what I can do and what I can't do. Would I have liked for it to have been easier, yeah. Would I have liked for someone to pay for it for me? Yeah, that would have been nice. But the big picture (is) I don't think I would have gone back and changed anything. (Wanda-C)

Recommendations for future research

The findings in this study were limited to participants seeking a Ph.D. in instructional technology from Eagle University. The results cannot be generalized to other populations. It would be valuable for a similar study to be conducted in more than one university offering this degree.

Another similar study could determine whether there are unique characteristics of instructional technology or Educational technology programs that might contribute to completion or attrition. It would also be helpful to further explore the idea that the decision to leave the doctoral program is made based on the cumulative effects of several challenges that pile up. Then if a critical incident occurs, an imbalance is created such that the student's coping mechanisms are no longer sufficient to meet all of the challenges, and the student abandons the hope of completion.

The story of attrition involves both students and faculty. Conducting a follow-up study to obtain the faculty perspective on the same issues addressed with students would allow comparisons to be drawn between the student and faculty perspectives.

Finally, a longitudinal study to follow a random selection of students through their doctoral experience could make an important contribution to the field. This study would include periodic interviews to discuss their feelings, issues and concerns at various points in the program. The study would also document their reactions to challenges encountered and coping strategies enlisted.

Concluding Thoughts

This research study explored the phenomenon of doctoral student attrition and completion in instructional technology at Eagle University (pseudo). The study was situated in a major Southeastern research university with very high research activity located in an urban downtown environment. Eagle University serves a diverse population

including a variety of minority students as well as working students, particularly in the graduate division. The goal of the study was to examine doctoral student completion and in a new way. Using a qualitative approach conducted through the lens of post-modernism, interviews were conducted with eleven former doctoral students in instructional technology. Six of these alumni completed the doctorate, while five students left the program without finishing.

Results from the study show that attrition and completion are complex issues. Examining the factors that contribute to completion or foster attrition shows that these experiences are not exclusive to either completers or non-completers. Instead, both groups experience similar issues. However, one factor stands above all others in determining the final outcome—the level of determination of the participant to complete. Students who reported completion as their primary goal in pursuing the Ph.D. had a higher rate of completion. One last quote comes to mind, that was surely the mantra of those who completed:

Never give up. Never, never, never.

Winston Churchill

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APPENDIXES

APPENDIX A

ENROLLMENT / DEGREES AWARDED / FACULTY EARNED DOCTORATES - EAGLE UNIVERSITY

Year	Enrollment (End of Period)	Bachelor's	Master's	EDS	Ph.D.	Professional	Faculty with Earned Doctorates/Total Faculty (Year Reported) ^D
1913	44						0/5+
1914-20	261	14 ^A					??/16
1920-30	660	24 ^A					??/43 (1927)
1930-40	1,479	359 ^A					18/56 (1937)
1940-50	7,804	616 ^A					20+/72(1947)
1950-60	5,074	2,975	16				38/128 (1952)
1960-70	16,860	5,189	989		39		??/485
1970-80	20,338	18,678	16,038	1,190	802		??/758
1980-90	23,039	20,640	13,222	1,450	1,119	701	705/886
1990-2000	23,410	20,799 ^A	13,079 ^A	785	1,008	1,295	767/941
2000-10	30,431 ^B	32,842 ^C	18,478 ^C	905 ^C	1,581 ^C	1,854 ^C	957/1127 ^B

Notes: Data through 2000 adapted from Smith (2005), pp. 188-234

^A Data incomplete: Information for one or more years was missing.

^B Adapted from Common Data Sets available through the university website at www2.eu.edu/~wwwire/pdf/CDS, accessed 2/17/11

^C From data provided by EU Office of Institutional Research, 4/25/11

^D Faculty counts included part—time faculty prior to 1940

APPENDIX B

SUMMARY OF THE HISTORICAL PURPOSE/MISSION OF EAGLE UNIVERSITY

The multi-page chart that follows is a synopsis of the primary themes presented in the vision/mission/purpose statements of Eagle University from its modest start in 1913. Following this lengthy overview are the actual statements from which the themes were extracted. Of course, at its inception Eagle University was not a university at all – but a division of an existing university. But in time, the school evolved into a major research university.

It is also important to note that the descriptions of the school's missions were not always defined or even written as true mission statements. Through bulletins and other communications, descriptions of the school's purpose were also used by historian(s) and researcher(s) as acceptable descriptions of the school's mission in its early years. The result is that the level of detail in the statements varies for different periods in the school's history. However, the essence of the vision is still evident.

By following the themes in each category in chronological order, the growth and development of the school's mission begins to unfold.

Note: Adapted from Big University 1. Bulletin of the Big University 1: General Announcements, 1912-1927. Progressive City: Big University 1, 1912-1927

(Category)	1913-1933 <i>Evening School</i>	1933-1947 <i>The University System Evening School</i>	1941 <i>Revisions: War-related Focus</i>	1947-1955 <i>Progressive City Division of the Big University 2</i>
Overarching Goal(s) (University)	<ul style="list-style-type: none"> High standard of collegiate training in business 	<ul style="list-style-type: none"> Center of Adult Education in Progressive City 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> High standard of collegiate training
Additional Goal(s) (Students)	<ul style="list-style-type: none"> Business acumen for engineering students Technical and business skills to business people 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
Population(s) Served	<ul style="list-style-type: none"> Engineering students Business people Education for men and women of GA who cannot attend college during the day 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Potential draftee; their replacement in the business world; government workers preparing for defense program; potential officers in the armed forces; patriotic civilians 	<ul style="list-style-type: none"> Men and women of GA who cannot attend college during the day
Scholarship	<ul style="list-style-type: none"> Business acumen / skills Bachelor of Commercial Science (3-year degree) 	<ul style="list-style-type: none"> Evening School Department of General University Extension transferred from Big University 2 at Rural City 	<ul style="list-style-type: none"> Curriculum focused on service-related topics 	
Teaching				
Service	<ul style="list-style-type: none"> Principles of citizenship High code of moral and business ethics Develop straight-thinking citizens with leadership skills for the state 			<ul style="list-style-type: none"> Principles of citizenship High code of moral and business ethics Develop straight-thinking citizens with leadership skills for the state
Research				

(Category)	1955-1961 <i>Eagle College of Business Administration</i>	1961-1969 <i>Eagle College</i>	Early 1970's <i>Eagle University</i>	Mid-1990's <i>Purpose Statement</i>
Overarching Goal(s) (University)	<ul style="list-style-type: none"> Educate the whole man, helping him to grow in each of four aspects: man the doer, the planner, the artist, and the philosopher 	<ul style="list-style-type: none"> Advancement of knowledge and the pursuit of truth Extension of the borders of knowledge through experimentation and research. Complement and lead the academic, economic, social, and cultural development of the urban society of which the College is an integral part. 	<ul style="list-style-type: none"> Advancement of knowledge and the pursuit of truth Extension of the borders of knowledge through experimentation and research. 	
Additional Goal(s) (Students)	<ul style="list-style-type: none"> High quality and higher standards 	<ul style="list-style-type: none"> Development of an inquiring and challenging attitude. (students and faculty) Development of respect for the dignity and worth of the individual, a capacity for critical reasoning, an appreciation and understanding of the arts, humanities, and sciences, and genuine desire for knowledge. 	<ul style="list-style-type: none"> Development of an inquiring and challenging attitude. (students and faculty) Development of respect for the dignity and worth of the individual, a capacity for critical reasoning, an appreciation and understanding of the arts, humanities, and sciences, and genuine desire for knowledge. Assist each student in realizing his own potentialities. 	
Population(s) Served	<ul style="list-style-type: none"> Every applicant who satisfies (the school's) standards of admission 	<ul style="list-style-type: none"> Every applicant who satisfies (the school's) standards of admission 	<ul style="list-style-type: none"> Every applicant who satisfies (the school's) standards of admission. 	

(Category)	1955-1961 <i>Eagle College of Business Administration</i>	1961-1969 <i>Eagle College</i>	Early 1970's <i>Eagle University</i>	Mid-1990's <i>Purpose Statement</i>
Scholarship	<ul style="list-style-type: none"> • Opportunities in Business Administration and the Arts and Sciences • Development of mental tools for thinking and decisions making • Above-average liberal arts (curriculum) and advanced courses in business 	<ul style="list-style-type: none"> • Rigorous scholarship 	<ul style="list-style-type: none"> • Broad range of undergraduate, graduate, and professional programs • Operational dimension to the student's education through participation in technical, social, and artistic activities 	<ul style="list-style-type: none"> • Provide an excellent academic experience for its student body • Produce scholarship
Teaching		<ul style="list-style-type: none"> • Climate of academic freedom • Responsible teaching 	<ul style="list-style-type: none"> • Climate of academic freedom • Responsible teaching 	<ul style="list-style-type: none"> • Heighten the environment for scholarship and learning
Service		<ul style="list-style-type: none"> • Development of individuals who will <ul style="list-style-type: none"> ○ transcend provincialism ○ be sensitive to the realities of a dynamic world ○ be responsible citizens at all levels. 	<ul style="list-style-type: none"> • Develop competence and responsible leadership in business and in the professions, in the arts and sciences, in government and public service, and in education 	<ul style="list-style-type: none"> • Serve societal needs • Increase the University's contributions to the regional, national, and global communities.
Research				

(Category)	1996 Mission Statement	2000-2005 Mission Statement	2005-2010 Mission Statement	2011-2016 Goal Statement / Mission Statement
Overarching Goal(s) (University)	<ul style="list-style-type: none"> • Achieve a front-rank position among the nation's premier state-supported universities located in an urban setting • Be recognized for first-rate undergraduate and graduate education, leading-edge research, and committed public service 	<ul style="list-style-type: none"> • Become one of the nation's premiere research universities located in an urban setting • Promote intellectual development of its students 	<ul style="list-style-type: none"> • Become one of the nation's premiere research universities in focused areas that maximize our unique strengths • Select programs on which to focus special resources in order to achieve the national and international distinction it must achieve to serve Great State best. 	<p>Mission: As the only urban research university in Great State, Eagle University offers educational opportunities for traditional and nontraditional students at both the graduate and undergraduate levels by blending the best of theoretical and applied inquiry, scholarly and professional pursuits, and scientific and artistic expression. As an urban research university with strong disciplinary-based departments and a wide array of problem-oriented interdisciplinary programs, the goal of the university is to develop, transmit, and utilize knowledge in order to provide access to quality education for diverse groups of students, to educate leaders for the State of Great State and the nation, and to prepare citizens for lifelong learning in a global society.</p> <p>Goal: Be recognized as a dynamic academic community where teaching and research combine to produce leaders and create solutions to conquer the challenges of the 21st century.</p>

(Category)	1996 Mission Statement	2000-2005 Mission Statement	2005-2010 Mission Statement	2011-2016 Goal Statement / Mission Statement
Additional Goals	<ul style="list-style-type: none"> • Educate the whole person • Prepare students in the areas of critical thinking, decision-making, appreciation for diversity, creative problem-solving, and responsible citizenship. • Excellence and responsiveness in academic achievements • Cultural, ethnic, racial, and gender diversity (faculty, staff and students) 			<ul style="list-style-type: none"> • Become a national model for undergraduate education by demonstrating that students from all backgrounds can achieve academic and career success at high rates • Significantly strengthen and grow the base of distinctive graduate programs that assure development of the next generation of researchers and societal leaders • Become a leading public research university addressing the most challenging issues of the 21st century. • Be a leader in understanding and addressing the complex challenges of cities and developing effective solutions • Achieve distinction in globalizing the University

(Category)	1996 Mission Statement	2000-2005 Mission Statement	2005-2010 Mission Statement	2011-2016 Goal Statement / Mission Statement
Population(s) served	<ul style="list-style-type: none"> ● In particular, residents of the entire Progressive City metropolitan area ● Nontraditional and traditional ● Traditional, working and returning students <p><i>(Over half of the students work full time.)</i></p> <ul style="list-style-type: none"> ● Diverse and well-prepared student body 	<ul style="list-style-type: none"> ● Traditional and nontraditional students 	<ul style="list-style-type: none"> ● (Undergraduates not mentioned) ● Graduate students who are proficient in their discipline as trained and talented professionals; and have interpersonal skills and competence to lead in a global society. 	<ul style="list-style-type: none"> ● Traditional and nontraditional students at both the graduate and undergraduate levels
Scholarship	<ul style="list-style-type: none"> ● Scholarly interactions with <ul style="list-style-type: none"> ○ diverse people ○ compelling ideas ● Best of basic and applied inquiry, scholarly and professional pursuits, scientific activity and artistic expression ● Highest standards of academic excellence ● Combination of programs not available anywhere else in the Union of State Universities 	<ul style="list-style-type: none"> ● Highest quality undergraduate and graduate programs in the arts and sciences, business, education, health and human sciences, law, and policy studies ● Undergraduate programs based on a core curriculum promoting interdisciplinary, intercultural, and international perspectives, and that provide options that emphasize urban focus 	<ul style="list-style-type: none"> ● Undergraduate programs based on a core curriculum that promotes interdisciplinary, intercultural, and international perspectives; and that provide options that emphasize an urban focus ● Premiere graduate and professional programs 	<ul style="list-style-type: none"> ● Strong disciplinary-based department and a wide array of problem-oriented interdisciplinary programs
Teaching	<ul style="list-style-type: none"> ● Instructional excellence ● Academic assistance to promote achievement 	<ul style="list-style-type: none"> ● Excellence in instructional programs 	<ul style="list-style-type: none"> ● Excellence in instructional programs 	

(Category)	1996 Mission Statement	2000-2005 Mission Statement	2005-2010 Mission Statement	2011-2016 Goal Statement / Mission Statement
Service	<ul style="list-style-type: none"> • Collaborative relationships with System institutions, state agencies, local schools, technical institutes, business and industry • Share information and other resources to enhance programs and services available to the citizens of Great State • Prepare students to...become responsible citizens 	<ul style="list-style-type: none"> • Contribute to the economic, educational, social, professional, and cultural vitality of the city, the state, and the region • Close collaboration with businesses, schools, technical research groups, social science and professional services 	<ul style="list-style-type: none"> • Contribute to the economic, educational, social, professional, and cultural vitality of the city, the state, and the region 	<ul style="list-style-type: none"> • Educate leaders for the State of Great State and the nation • Prepare citizens for lifelong learning in a global society
Research	<ul style="list-style-type: none"> • Wide-ranging research consistent with the highest standards of academic excellence 	<ul style="list-style-type: none"> • Excellence in strategic research programs. • Enhancement of interdisciplinary research programs and centers 	<ul style="list-style-type: none"> • Excellence in strategic research programs. 	

DESCRIPTION OF SCHOOL'S PURPOSE (1913)

[Initial Announcement for the new school]

The Evening School aims to meet the present demand of the businessman, for a wider knowledge and a more accurate understanding of all important business facts and principles. To accomplish this aim the work is to be organized in two distinct divisions. The first of these is to give the Business Man a college training, and the second is to give the Engineering Student a business training. The work of the first is to be carried on during the early hours of the evening (6 to 8 p.m.) by the Commercial Division [Evening School]. The second is to be carried on during the regular hours of the engineering courses by the Engineering Division.

There is an urgent need for training in the engineering student in the elements of business principles and the same need for giving the business man collegiate work in the engineering principles of commerce.

(General Announcement, 1913-14, as cited in Smith, p. 43)

DESCRIPTION OF SCHOOL'S PURPOSE (1914-1933)

The Evening School has three chief aims: to give to the young men and women of Great State who through unfortunate circumstances are unable to attend college during the day, a high standard of collegiate training in commerce; to inculcate into the mind of the student the principles of citizenship and a high code of moral and business ethics; and to turn back to the state the type of citizen who is straight thinking in all lines and who has developed effective leadership. (*Bulletin*, Progressive School of Technology, 1914-1915, as cited in Smith, p. 186)

SCHOOL'S PURPOSE, AS OUTLINED IN THE SCHOOL'S BULLETIN (1933)

The University System Evening School has three chief aims: to give the young men and women of Great State, who desire to attend college in the evening, a high standard of collegiate training, to inculcate into the mind of the student the principles of citizenship and a high code of moral and civic ethics; and to turn back to the state the type of citizen who is straight thinking in all lines and who may develop effective leadership. (Flanders, 1955, p. 28)

INSTITUTIONAL MISSION AND PURPOSE AS ARTICULATED BY THE BIG BOYS UPON GRANTING THE SCHOOL INDEPENDENCE WITHIN THE NEWLY CREATED UNION OF STATE UNIVERSITIES (1933-1947)

The Regents thought it advisable to develop a real center of adult education in Progressive City. They, therefore, transferred from the Big University 2 at Rural City the Department of General University Extension and located this Department in the building in Progressive City, which houses the Evening School. This Department and the Evening School is not functioning as an independent unit of the University System. It is doing a splendid work and is growing in numbers and popularity by leaps and bounds. It will not be many years before this unit of the University System will be one of the most popular in the whole system. It now has an enrollment in excess of 700. (*Annual Report, Big Boys, Union of State Universities, 1933-34, as cited in Smith, p. 193*)

PRESIDENT-1'S REVISION TO SCHOOL CURRICULUM DURING WORLD WAR II**(1941)**

President-1 was ever changing the focus of the University System Evening School to meet real-world needs and demands. During WWII, he revised the curriculum to "...serve the potential draftee, those who would take his place in the business world, the Government worker preparing for the defense program, those who seek commissions in the armed forces, and the patriotic civilian." (Flanders, 1955, p. 37)

INSTITUTIONAL MISSION AND PURPOSE (1947-1955)

1. To give the young men and women of Great State, who for sound reason could not attend college during the day, a high standard of collegiate training;
2. To inculcate in the mind of the student the principles of citizenship and a high code of moral and business ethics;
3. To turn back to the state the type of citizen who is straight-thinking in all line and who has developed effective leadership. (*Bulletin*, Progressive City Division, Big University 2, 1947-48, as cited in Smith, p. 199)

INSTITUTIONAL MISSION AND PURPOSE (1955-1961)

Eagle College of Business Administration has been established by the Big Boys to provide opportunities for a collegiate education in both Business Administration and the Arts and Sciences that is characterized by quality and higher standards.

Whether the course of study pursued leads to the degree of Bachelor of Business Administration or to other cultural and professional objectives, the continued emphasis is upon the development of mental tools for thinking and for making decisions. The best educated businessman is not an economic animal only; he is a social, aesthetic, scientific, and moral being as well.

The college academic program seeks to develop the best educated man by offering a two-year program in arts and sciences that is almost identical with the first two years offered by the above-average liberal arts institution and by offering an additional two years characterized by advanced courses in the various business concentrations.

To simplify the picture we have emphasized those four aspects of man, which we believe to be a major importance: man the doer, the planner, the artist, and the philosopher who believes in the ultimate worth of mankind. It is the task of the Eagle College to help man grow in each of his functions.

But even as we attempt to picture man as a set of separate kinds of activity, it is obvious that man is a single unit, most effective when he brings a planner, artist, and philosopher, to his activities as a doer. It is the whole man that

Eagle College will always try to educate. (*Bulletin*, Eagle College of Business Administration, 1957-58, as cited in Smith, p. 205)

INSTITUTIONAL MISSION AND PURPOSE, 1961-1969

Eagle College endeavors to promote the advancement of knowledge and the pursuit of truth through rigorous scholarship and responsible teaching. In a climate of academic freedom, faculty and students are free to follow where honest, rational, and critical inquiry leads. The institution fosters the dissemination of all phases of the cultural heritage, the extension of the borders of knowledge through experimentation and research, and the development of an inquiring and challenging attitude on the part of both students and faculty.

Eagle College endeavors to serve the educational needs of every applicant who satisfies its standards of admission. It is the responsibility of the institution to develop in each student a respect for the dignity and worth of the individual, a capacity for critical reasoning, and appreciation and understanding of the arts, humanities, and sciences, and a genuine desire for knowledge. By offering a broad range of undergraduate, graduate, and professional programs the institution further seeks to assist each individual in discovering and realizing his competence and responsible leadership in business and the professions, in the arts and sciences, in government and public service, and in education.

Eagle College endeavors to develop individuals whose scope transcends the narrow confines of provincialism, who will be sensitive to the realities of a dynamic world, who will enter enthusiastically into the responsibilities of citizenship at all levels, and who will work wisely and insistently to improve our economic, social, and political institutions.

Eagle College endeavors, through a broad range of institutionally sponsored programs and through the talents and interests of its faculty, students and alumni, both to complement and to lead the academic, economic, social, and cultural development of the urban society of which the College is an integral part. (Eagle College Bulletin and Catalog, 1966-67, as cited in Smith, p. 211)

INSTITUTIONAL PURPOSE (EARLY 1970'S)

Eagle University endeavors to promote the advancement of knowledge and the pursuit of truth through rigorous scholarship and responsible teaching. In a climate of academic freedom, faculty and students are free to follow where honest, rational, and critical inquiry leads. The institution fosters the dissemination of all phases of the cultural heritage, the extension of the borders of knowledge through experimentation and research, and the development of an inquiring and challenging attitude on the part of both students and faculty.

Eagle University endeavors to serve the educational needs of every applicant who satisfies its standards of admission. It is the responsibility of the institution to develop in each student a respect for the dignity and worth of the individual, a capacity for critical reasoning, an appreciation and understanding of the arts, humanities, and sciences, and a genuine desire for knowledge. By offering a broad range of undergraduate, graduate, and professional programs the institution further seeks to assist each individual in discovering and realizing his own particular potentialities. The institution thereby provides the requisites for competence and responsible leadership in business and in the professions, in the arts and sciences, in government and public service, and in education.

Eagle University, located at the hub of the rapidly growing southeastern complex, endeavors to add an operational dimension to the student's education by affording opportunities to participate in the vast technical, social, and artistic ferment that characterizes modern society. (Eagle University General Catalog, 1973-74, as cited in Smith, p. 222)

INSTITUTIONAL PURPOSE (MID-1990S)

To provide an excellent academic experience for its student body, to produce scholarship, and to serve societal needs, the university as two strategic initiatives for the next five years: A. Excellence; Heighten the intellectual environment for scholarship and learning; B. Distinctiveness: Increase the university's contributions to the regional, national, and global communities. (*University Strategic Plan*, 1995, pp. 11-12)

MISSION STATEMENT (1996)

[AS ARTICULATED BY THE INSTITUTION, AND APPROVED BY THE CHANCELLOR OF THE UNION OF STATE UNIVERSITIES AND THE UNIVERSITY SENATE IN 1996-97]

As the only urban research university in the state, the overarching goal of Eagle University is to achieve a front-rank position among the nation's premier state-supported universities located in an urban setting. Educational opportunities are provided for both nontraditional and traditional students, fostering scholarly interactions among diverse people around compelling ideas and questions and blending the best of basic and applied inquiry, scholarly and professional pursuits, and scientific activity and artistic expression.

While students are attracted from all parts of the state, the nation, and many areas of the world, the downtown and satellite campuses provided access to quality education in particular for residents of the entire Progressive City metropolitan area. The university offers a welcoming academic environment to traditional students as well as working and returning students, with over half of other students working full-time. This produces a

mature, serious student body with considerable ethnic and international diversity and a high proportion (thirty percent) of graduate students.

Approximately 24,000 students are enrolled in a quarter and over 34,000 different students per year take courses for credit. Several thousand bachelor's degrees are awarded annually in over 200 majors, as well as over 1600 Master's degrees and 170 doctoral degrees. Eagle University seeks to provide a range of curricular and co-curricular activities which prepare students to think critically, make ethical and informed choices, appreciate diverse cultures and ideas, become creative problem-solvers, and demonstrate responsible citizenship.

Careful selection of doctoral programs in the humanities, the social sciences, and the natural sciences has established strategically positioned centers of scholarly activity to enhance liberal education. Similarly, the university has established strong doctoral programs in business administration, economics, education, and nursing. More recently, the university's commitment to excellence in professional education has been underscored by the establishment of the College of Law, which, in addition to providing a full-time J.D. program, offers the only ABA-accredited part-time legal education in the state.

Certain programs in the natural sciences, the social sciences, the humanities, and professional areas are nationally competitive for research grants from federal agencies. [The] Eagle University faculty has joined with colleagues from other institutions to enhance economic and scientific development in partnership with the Great State Research Alliance. Areas of emphasis include vaccine development, design and synthesis of new drugs, protein production, environmental science, and telecommunications. Policy

areas, including economics, education, health, crime, poverty, transportation and law, contribute to the base of knowledge and produce information that is useful in making policy decisions. National attention is garnered through programs in the Policy Research Center, the Language Research Center, the Economic Forecasting Center, and the Center for High Angular Resolution Astronomy.

The university's efforts in mathematics education have attracted significant regional and national attention and federal and state funding. Teacher preparation initiatives in this area as well as in the natural and social sciences, which are designed jointly by the Colleges of Education and Arts and Sciences, serve as a model of cross-college collaboration and fulfill national expectations for education reform.

Eagle University shares with the other research universities of the Union of State Universities the following core characteristics or purposes:

- Within statewide scope of influence, a commitment to excellence and responsiveness in academic achievements that impart national or international status;
- A commitment to a teaching/learning environment, both inside and outside the classroom, that sustains instructional excellence, serves a diverse and well-prepared student body, provides academic assistance, and promotes high levels of student achievement;
- A commitment to wide-ranging research, scholarship, and creative endeavors that are consistent with the highest standards of academic excellence, that are focused on organized programs to create, maintain, and apply new knowledge

and theories, and that promote instructional effectiveness and enhance institutionally relevant faculty qualification;

- A commitment to public service, economic development and technical assistance activities designed to address the strategic needs of the state of Great State along with a comprehensive offering of continuing education programs, including continuing professional education to meet the needs of Great State's citizens for life-long learning;
- A range of disciplinary and interdisciplinary academic programming at the baccalaureate, Master's and doctoral levels, as well as a range of professional programs at the baccalaureate and post-baccalaureate level, including the doctoral level.

Eagle University will be characterized by:

- A supportive campus climate, necessary services, and leadership and development opportunities, all to educate the whole person and meet the needs of students, faculty and staff;
- Cultural, ethnic, racial, and gender diversity in the faculty, staff and student body, supported by practices and programs that embody the ideals of an open, democratic, and global society;
- Technology to advance educational purposes, including instructional technology, student support services, and distance education;
- Collaborative relationships with other System institutions, state agencies, local schools and technical institutes, and business and industry, sharing

physical, human, information, and other resources to expand and enhance programs and services available to the citizens of Great State.

Eagle University's identity as a nationally and internationally advanced research and teaching institution as well as an urban research center will attract students from the metropolitan area, the region, and all parts of the nation and around the world. It will offer the residents of Great State a combination of programs and activities found nowhere else in the Union of State Universities, and it will be recognized for first-rate undergraduate and graduate education, leading-edge research, and committed public service.

MISSION STATEMENT (2000-2005)

The overarching goal of Eagle University is to become one of the nation's premiere research universities located in an urban setting. The University will achieve this goal through the continual pursuit of excellence in its instructional and strategic research programs. *Eagle University will strive to fulfill the expectations of the citizens of Great State by providing undergraduate and graduate programs of the highest quality in the arts and sciences, business, education, health and human sciences, law, and policy studies for traditional and nontraditional students.* Eagle University's mission as a research university in an urban setting is multi-faceted:

- Eagle University is committed to the enhancement of its interdisciplinary research programs and centers that have achieved national and international recognition.

- The University, which has the most diverse student population in the Union of State Universities, is dedicated to undergraduate programs based on a core curriculum that promotes interdisciplinary, intercultural, and international perspectives and that provide options that emphasize an urban focus.

In addition to its primary mission of promoting the intellectual development of its students, the University's majors and graduate programs contribute to the economic, educational, social, professional, and cultural vitality of the city, the state, and the region in the following ways:

- Through its partnership with the Great State Research Alliance in biotechnology, telecommunications, and environmental studies, the University assists in economic development in the state.
- Through close collaboration with the business and legal community and programmatic and research efforts in e-commerce, the Robinson College of Business and the College of Law enhance the economic development of the state.
- Through a close collaboration between the professional education faculties in the College of Education and the College of Arts and Sciences and partner schools in the Progressive City metropolitan area, the University develops strategies for public education reform and models for K-12 learning.
- Through the basic and applied research of its social science and professional faculties, through the research and service of its students,

and through problem solving in community outreach between these groups and community constituencies, the University addresses business and economic issues, social and human welfare issues, especially those of urban settings, and promotes continuing innovation.

- Through its programs in the fine arts and humanities, Eagle University contributes to the artistic and cultural vitality of the region and assists metropolitan Progressive City in achieving its aspiration to become an increasingly important international city. (Action Plans for the University Strategic Plans, 2000-2005)

MISSION STATEMENT (2005-2010)

The overarching aspiration of Eagle University is to become one of the nation's premiere research universities in focused areas that maximize our unique strengths. We recognize that perhaps our greatest comparative advantage is our location in Progressive City, a cosmopolitan city with a diverse population, and with close proximity to corporations and centers of state and city government as well as easy access to an international airport. The University will achieve this goal through the continual pursuit of excellence in its instructional and strategic research programs. Eagle University will strive to fulfill the expectations of the citizens of Great State by providing undergraduate and graduate programs of the highest quality in the arts and sciences, business, education, health and human sciences, law, and policy studies for traditional and nontraditional students.

Eagle University's mission as a research university in an urban setting is multi-faceted:

- The University, which has one of the most diverse undergraduate student populations nationally and the most diverse in the Union of State Universities, is dedicated to undergraduate programs based on a core curriculum that promotes interdisciplinary, intercultural, and international perspectives and that provide options that emphasize an urban focus.
- The University, which has one of the most diverse graduate and professional student populations nationally and the most diverse in the Union of State Universities, is dedicated to provide premier graduate and professional programs in a significant number of areas.
- The University is committed to graduate students who are proficient in their discipline as trained and talented professionals and have interpersonal skills and competence to lead in a global society.
- The University is committed to the enhancement of scholarship of its disciplinary and interdisciplinary research programs, centers and institutes that have achieved, or demonstrated promise to achieve, national and international recognition.
- The University is committed to have its undergraduate, graduate, and professional programs contribute to the economic, educational, social, professional, and cultural vitality of the city, the state, and the region.

- The University recognizes, nevertheless, that it must select some programs on which to focus special resources in order to achieve the national and international distinction it must achieve to serve Great State best. (Action Plans for the University Strategic Plans, 2005-2010)

MISSION STATEMENT (2011-2016)

[AS STATED ON THE UNIVERSITY WEBSITE ACCESSED 9/25/12]

As the only urban research university in Great State, Eagle University offers educational opportunities for traditional and nontraditional students at both the graduate and undergraduate levels by blending the best of theoretical and applied inquiry, scholarly and professional pursuits, and scientific and artistic expression.

As an urban research university with strong disciplinary-based departments and a wide array of problem-oriented interdisciplinary programs, the goal of the university is to develop, transmit, and utilize knowledge in order to provide access to quality education for diverse groups of students, to educate leaders for the State of Great State and the nation, and to prepare citizens for lifelong learning in a global society.

APPENDIX C

INSTRUCTIONAL TECHNOLOGY COURSE LIST
Eagle University (2011)

**Undergraduate
Courses (7)**

- Computer Skills for the Information Age
 - Integrating Technology into the Elementary Classroom
 - Gaming and Simulation for Exploratory Learning
 - Technology, Society, and Education
 - Educational Technology in Africa and the Diaspora
 - Teaching, Learning, and Technology Integration
 - Training and Performance Technologies
-

**Graduate
Courses (17)**

- Design of Performance and Instructional Systems
 - Analysis of Performance and Instructional Systems
 - Integrating Technology in School-Based Learning Environments
 - Foundations of Instructional Technology
 - Evaluation and Assessment of Online Learning
 - Internet for Educators
 - Managing Instructional Technology Projects
 - Diffusion and Adoption of Technological Innovation
 - Design and Development of Multimedia for Education and Training
 - Analysis of Education, Training, and Performance Support Centers
 - Advanced Authoring Technologies
 - Topics in Instructional Technology
 - e-learning Environments
 - Advanced Instructional Design
 - Human Performance Technology
 - Internship in Instructional Technology
 - Evaluation of Instructional Technologies
-

APPENDIX D

SUMMARY OF PURPOSE/MISSION FOR INSTRUCTIONAL TECHNOLOGY
PROGRAM AT EU

The following chart summarizes the primary themes extracted from descriptions of purpose and mission statements of The Instructional Technology program at Eagle University. Although there are only two formal mission statements presented here, the IT program has always operated out of a vision for the future.

Notes: 2003 Mission Statement taken from:
Vision of IT @ EU. (2003). Instructional Technology. Eagle University.

2008 Mission Statement includes the entire department of Media and Technology, and is taken from Ariail (2010). (Graduate Student Edition ed.).

(Category)	1973 <i>Inception</i>	1990 – 2000	2003	2008
Overarching Goal(s) (Program)	<ul style="list-style-type: none"> • Supplement/support undergraduate programs in the College of Education 	<ul style="list-style-type: none"> • Expansion of the IT program • Shift in focus from corporate to K-12 	<ul style="list-style-type: none"> • Strengthen the reputations of the program and the faculty locally, nationally, and internationally. • Vision of equal access to learning opportunities and opportunity to apply skills and knowledge for the greater good. 	<ul style="list-style-type: none"> • Focus on corporate, K-12 and all other settings utilizing IT professionals ¹ • Vision of equal access to learning opportunities and opportunity to apply skills and knowledge for the greater good.
Additional Goals (Students)	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
Population(s) Served	<ul style="list-style-type: none"> • Primarily K-12 degree-seeking undergraduates 	<ul style="list-style-type: none"> • Focus shifted from 1980's spotlight on graduate students in corporate settings to K12. 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Inclusive of all settings utilizing IT professionals [§]
Scholarship	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Systematic application of creative thought 	<ul style="list-style-type: none"> •
Teaching	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Facilitate learning and problem solving 	<ul style="list-style-type: none"> • Engagement in research, teaching and service in urban environments with people from diverse populations.
Service	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Improve education in the state • Expand the number of contributing IT professionals • Increase understanding of IT among IT professionals and the public 	<ul style="list-style-type: none"> • Working collaboratively with other people and organizations • Commitment to innovation and creativity
Research	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Contribute to the body of knowledge regarding the application of technology to learning and performance 	

¹ This goal was not part of the written mission statement, but was extracted from informal conversations with current/former faculty.

VISION OF IT @ EU
(2003)

Learning Technologies Vision

- We envision a world in which everyone has a desire to learn, equal access to meaningful learning opportunities throughout their lives, and the chance to apply their knowledge and skills for the greater good.

Mission:

- To strive to bring about this vision by enhancing and facilitating learning and problem solving through the systemic and systematic application of creative thought.

Goals

- To contribute to the body of knowledge regarding the application of technology to learning and performance
- To improve education in Great State by increasing the integration of technology for meaningful learning
- To expand the body of contributing professionals in our field
- To promote the appropriate application of learning theories and technologies to facilitate learning and performance in a variety of settings
- To increase the understanding of colleagues and the general public as to the nature of our field
- To strengthen our program's reputation both locally and on a national level
- To strengthen our faculty members' reputations locally, nationally, and internationally

**Mission of Educational Media and Technology (pseudo.) (From University Website,
as of September 25, 2012)**

The Educational Media and Technology department prepares educators and other professionals in career and technical education, English education, English as a second language education, learning technologies, mathematics education, middle childhood education, reading education, science education, and social studies education. We offer 34 programs (B.S.E., M.A.T., M.Ed., M.S., and Ph.D.); three certification-only programs; and three endorsement programs. These programs are offered in face-to-face and online formats. Our acclaimed faculty, among the leading researchers and teachers in their fields, come from many countries around the world and are committed to bettering the human condition.

Our mission is to engage in research, teaching, and service in urban environments with people from multiple cultural, ethnic, and linguistic backgrounds. We work collaboratively with people in schools, communities, and organizations in metropolitan Atlanta and around the world. We are committed to innovation and creativity and to pushing the boundaries of knowledge and practice.

We strive to realize our vision of pluralism, equity, and social justice where individuals have equal access to meaningful learning opportunities throughout their lives and the chance to apply their knowledge and skills for the greater good.

APPENDIX E

PILOT STUDY INTERVIEW QUESTIONNAIRE

Participant Code # _____

QUESTIONNAIRE FOR PILOT STUDY**A FUNNY THING HAPPENED ON THE WAY TO MY PHD**

An exploration of the factors that influence completion of the Ph.D. in instructional technology at a major southeastern research university (referred to as “the program”)

Demographics / Foundational Information / Goals

1. When did you start your coursework in the program?

2. Age when you began your coursework in the program?

3. Do (did) you consider yourself to be a F/T or P/T student while pursuing the Ph.D.?

4. On average, how many hours did you work per week while pursuing the Ph.D.?

5. What was your family situation at the beginning and currently (or at the end of) the program?

	Beginning	End (or currently, if you are in process)
Partnership Status		
Ages of children		
Parental responsibilities		

6. How much time (calendar years/months) did it take:
 - a. To complete your undergraduate degree.
 - b. Between undergraduate and beginning your Master's degree program.
 - c. To complete your Master's degree.
 - d. Between your Master's degree and beginning the Ph.D. program, if applicable.
 - e. Between your Master's degree and beginning Ed.S. program if applicable.
 - f. To complete Ed.S. degree if applicable.
 - g. Between Ed.S. program and Ph.D. program, if applicable.

7. Thinking back to your decision to enter the program at the time, why did you decide to pursue a Ph.D.?

8. Why did you choose this university?

9. Why did you choose this program?

10. What were your personal goals at that time?

11. What were your professional goals at that time?

12. Did these goals change over the course of the program?
 - If so, in what way?
 - Why do you think they changed?

Current Status in the IT Ph.D. Program at EU

1. What is your current status in the doctoral program? (Graduated; In Process; On hold; Left the Program)

2. How much time have/did you spend in the Ph.D. program (calendar time)?
 - a. Was this time continuous?
 - b. If not, what interrupted your study?

3. If you have not yet graduated, what have you completed in the program?
 - a. Some coursework (How many hours?)
 - b. All coursework
 - c. Comprehensive Exam
 - d. Residency Requirements
 - e. Prospectus
 - f. Dissertation

4. Tell me about your experience with each phase of the doctoral program:

	Describe your experience during this phase of the program.	What were some of the things that helped you get through this phase? a) External b) Internal (personality traits)	What are some of the things that you feel hindered your progress? a) External b) Internal (personality traits)	What would you do differently if you had it to do over again?	What could be done differently in the program to make improve the experience
a.	Course Work				
b.	Selecting your Advisory Committee				
c.	The Comprehensive Exam				
d.	Selecting your Dissertation Committee				
e.	Writing the Prospectus				
f.	Defending the Prospectus				
g.	Research for the Dissertation				
h.	Writing the Dissertation				
i.	Defending the Dissertation				

Challenges and Support

1. If you are on 'hold' in the program (inactive), what do you see as the factors that contributed to the interruption in your progress?

2. If you have left the program, what do you see as the factors that contributed to the decisions to leave the program?

3. During your time in the program, did you experience any significant changes in your life? (e.g. marital status, health, finance, family)
 - a. If so, do you feel that any of these changes impacted your progress in the program?
 - If so, which ones?
 - In what way?

4. What were your biggest challenges as you worked toward completing your Ph.D.?

5. What helped you to overcome those challenges?
 - What would have provided more help?

6. What other things would you say helped you keep going throughout the program?

7. How would you describe the support you had from family and friends, employer/supervisor?
 - What, if any, additional support do you wish you had?

8. How would you describe the support you had from your advisor?
 - What, if any, additional support do you wish you had?

9. How would you describe the support you had from other professors?
 - What, if any, additional support do you wish you had?

10. How would you describe the support available through other avenues at Eagle University (e.g. ERB, student services, library etc.)?
 - How could this support have been different, to improve your experience in the program?

11. Considering all of these things, what could have been different to provide more support in any of these areas during your program?

12. What do you wish you had known before beginning the program?
 - How would this have impacted your experience?

13. If you were starting over, what would you do differently to improve your experience? Why?

Self-Perceptions

1. On a continuous scale of 1-10, how would you describe yourself in terms of the following:
 - a. Collaboration vs. working alone
 - 1) Work better collaboratively
 - 10) Work better independently
 - b. Need for structure / guidance
 - 1) Need to have structure provided for me
 - 10) I Create my own structure
 - c. Self Confidence
 - 1) My abilities and skills are not usually sufficient to accomplish what I want to do.
 - 10) I am almost always able to accomplish what I set out to do.
 - d. Perceptions of Control
 - 1) Outside influences and forces beyond my control are responsible for the things that happen in my life.
 - 10) I am in complete control of what happens to me in my life.

Wrap-Up

1. What other issues have we not discussed, that you feel influenced your progress in the Ph.D. program?
2. What questions do you have for me?

APPENDIX F

RESEARCH STUDY - STUDENT INTERVIEW QUESTIONNAIRE

QUESTIONNAIRE FOR RESEARCH STUDY

A FUNNY THING HAPPENED ON THE WAY TO MY PHD

An exploration of the factors that influence completion of the Ph.D. in instructional technology at a major southeastern research university (referred to as “the program”)

A. Opening Questions	
1.	How would you characterize your experience in the doctoral program in instructional technology at EU?
2.	What expectations did you have for the Ph.D. program when you started that were met? Not met?
B. Challenges and Support	
3.	Was there ever a time when you felt disillusioned with the program? <ul style="list-style-type: none"> • What were the things that encouraged or supported you to continue?
4.	What challenges did you face during the program? <ul style="list-style-type: none"> • How do you think this impacted your progress through the program? • How were you able to overcome those challenges?
5.	Was there ever a time when you became disillusioned with the program? <ul style="list-style-type: none"> • Where were you in the program? • How were you able to overcome it? <ul style="list-style-type: none"> ○ If you weren’t able to overcome it, what stood in the way? • What was the end result?
6.	Tell me about a time when you might have considered leaving the program. <ul style="list-style-type: none"> • If this did not result in your leaving, what helped you to move past it? • If it resulted in your leaving, how did leaving the program affect you?
7.	Tell me about how you learned to navigate through the doctoral program.
8.	How did you learn about what was expected of you in the program?
9.	How would you describe the support you had from friends and family?

QUESTIONNAIRE FOR RESEARCH STUDY

A FUNNY THING HAPPENED ON THE WAY TO MY PHD

An exploration of the factors that influence completion of the Ph.D. in instructional technology at a major southeastern research university (referred to as “the program”)

10. How would you describe the support you had from EU?
<ul style="list-style-type: none"> • Did you connect with an advisor or other faculty member right away? <ul style="list-style-type: none"> ○ If not, how long was it before you feel you made a connection? ○ Please elaborate on what made you feel you ‘connected’. • What did your advisor, committee, or other faculty members do (or not do) to help you move along in the program?
C. Personal and Professional Goals
11. Think back to when you applied for admission to the doctoral program. Why did you make the decision to pursue a Ph.D.?
12. Why did you choose to come to (Eagle University)?
13. Why did you choose instructional technology?
D. Demographics / Foundational Information
14. When did you start your coursework in the program?
15. What was your age when you began the program?
16. Did you consider yourself to be p/t or f/t during the program?
<ul style="list-style-type: none"> • How do you think this impacted your progress through the program?
17. How long were you in the program?
18. Was this continuous study, or did you take some time off?
F. Finances
19. How did you finance your Ph.D. program?
<ul style="list-style-type: none"> • How do you think this impacted your progress through the program?
20. Did you work either part time or full time?
<ul style="list-style-type: none"> • How do you think this impacted your progress through the program?
21. What percentage of your expenses for the doctoral program were covered by:
<ul style="list-style-type: none"> • Fellowships or grants from the University • Graduate Research or Teaching Assistantships (GRAs or GTAs) • Loans • Personal Savings • Ongoing Employment (excluding GRAs or GTAs)

QUESTIONNAIRE FOR RESEARCH STUDY**A FUNNY THING HAPPENED ON THE WAY TO MY PHD**

An exploration of the factors that influence completion of the Ph.D. in instructional technology at a major southeastern research university (referred to as “the program”)

G. Wrap-up

- | |
|---|
| 22. Some students finish their doctoral studies and others do not. Can you tell me why? |
| 23. What do you wish you had known when you began the program? |
| 24. If you had it to do over again, what would you do differently? |
| 25. What advice would you offer future Ph.D. students in IT at EU? |

APPENDIX G

RESEARCH STUDY - ADMINISTRATOR INTERVIEW QUESTIONNAIRE

1. What do you know of that has been done since 2000 to study doctoral student attrition and/or completion in the College of Education?
i. When were they done?
ii. What were the results of the 'study'?
2. What if anything has been done to address those findings?
i. What was done?
ii. What results were hoped for?
iii. What were the actual results?
3. Are there any other things you know of that have been done in the last 10-12 years that might lower attrition or improve completion rates?
i. What was done?
ii. What results were hoped for?
iii. What were the actual results?
4. Tell me about the model for the PhD program in the College of Education
i. What does it look like now?
ii. What do you expect it to look like in the future?
5. I understand that there is a planned change in the Program of Study. Can you speak to that?
i. Why was a change made?
ii. What does the new Program of Study look like?
iii. What results do you expect?
6. I have also heard that there is a new Doctoral Mentoring policy. Can you describe that?
i. What does it cover?
ii. What prompted the development of a new policy?
iii. Who is responsible for seeing to it that it is followed?
iv. How is it different from any previous mentoring policies?
v. What do you expect to be the outcomes?
7. Is there anything we haven't talked about that you feel might be pertinent to doctoral attrition or completion rates?
8. What questions do you have for me?

APPENDIX H

RESEARCH STUDY – STUDENT INFORMED CONSENT FORM

Georgia State University
Department of Middle-Secondary Education and Instructional Technology
Informed Consent

Title: A Funny Thing Happened on the Way to My PhD – Research Study
Principal Investigator: Wanjira Kinuthia
Student PI: Carla L. Williams

I. Purpose:

You are invited to participate in a research study. The purpose of this study is to explore factors that support or hinder completion of the PhD in Instructional Technology at a major southeastern research university. The goal of the study is to begin the development of a theory to describe how and why attrition occurs. The study will also look at why some students continue through to completion.

You are invited to participate because you were identified as having attended this university at some time between August, 2000 and September, 2011. A second criterion is that you were working on a PhD degree in Instructional Technology.

A total of 10-12 participants will be recruited for this study. Participation will require one face-to-face interview lasting approximately 90 minutes. There may also be a second interview lasting no more than 30 minutes. Interviews will be scheduled at your convenience between September 12, 2011 and November 30, 2011.

II. Procedures:

If you decide to participate, you will be asked to schedule an initial one-on-one, face-to-face interview conducted by the Student Principal Investigator and respond to questions about your background and your experience with the doctoral program in IT at your university. If a second interview is required, you will be contacted within 30 days of the first interview. The second interview may be face-to-face or by telephone. Face-to-face interviews will be scheduled on campus or at a location convenient for you.

Interviews will be audio-recorded so that the information can be transcribed at a later date. While awaiting transcription, audio tapes will be stored in a locked fireproof cabinet off campus in the office of the Student Principal Investigator. Audio recordings will only be accessible to the Student Principal Investigator. They will be destroyed as soon as the interview is transcribed and data has been analyzed.

There is no compensation for this study, and participation is strictly voluntary.

III. Risks:

This study poses minimal risks and will likely not expose you to any more risks than you would experience in a normal day of life. The transcription from your interview(s) will be sent to you for



your review and approval. Any changes identified will be made and a final copy of the transcript will be forwarded to you. The data from your interview will be used as part of a dissertation. This dissertation will identify factors related to attrition and completion in doctoral students in Instructional Technology at a major research university. The data will also play an important role in the development of a grounded theory on doctoral attrition and completion. Though we will remove names from this data, we cannot prevent people from speculating as to who was the source of any part of this data.

IV. Benefits:

Participation in this study may not benefit you personally. However, one of the goals of the study is to provide information that may help universities improve support for Doctoral students in IT. Overall, we hope to gain information about various factors that affect a student's success in completing the PhD program in IT. Another outcome will be a new theory that describes doctoral attrition and completion.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any possible benefits or be penalized in any way.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. Only Carla Williams will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use a code rather than your name on study records. The information you provide will be stored in a locked cabinet accessible only to the Student Principal Investigator, and on firewall-protected computers. A key code sheet will be the only connection to identify the research participant, and this key will be stored separately from the data to protect privacy. This key code as well as handwritten and transcribed interview notes and audio recordings will be kept for 18 months from publication of the dissertation and then will be destroyed. All electronic database information used for analysis will be kept for a period of 10 years.

Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

Contact Wanjira Kimuthia at (404) 413-8426 [wkimuthia@gsu.edu] or Carla L. Williams at (678) 289-1067 [cwilliams95@student.gsu.edu] if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.



VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research and be audio recorded, please sign below.

Participant

Date

Principal Investigator or Researcher Obtaining Consent

Date



APPENDIX I

RESEARCH STUDY – ADMINISTRATOR INFORMED CONSENT FORM

Georgia State University
Department of Middle-Secondary Education and Instructional Technology
Informed Consent

Title: A Funny Thing Happened on the Way to My PhD – Research Study

Principal Investigator: Wanjira Kinuthia
Student PI: Carla L. Williams

I. Purpose:

The purpose of this study is to explore factors that support or hinder completion of the PhD in Instructional Technology at a major southeastern research university. Based on this information, the study seeks to describe how and why attrition occurs – regardless of when it occurs; and the converse, which is why students persist through to completion.

You are invited to participate because you were identified as an Administrator who would have knowledge of one or more of the following:

- Work done by the University and/or the College of Education to explore attrition and completion of the PhD.
- Measures taken by the University and/or the College of Education to address doctoral attrition during the last 10 years.
- Changes planned in curriculum or support of doctoral students that might impact attrition / completion for students in the Instructional Technology department.

A total of 3-5 participants will be recruited for this portion of the study. Participation will require one face-to-face interview lasting 60-90 minutes. There may also be a second interview lasting no more than 30 minutes. Interviews will be scheduled at your convenience between April 23, 2012 and June 30, 2012.

II. Procedures:

If you decide to participate, you will be asked to schedule an initial one-on-one, face-to-face interview conducted by the Student Principal Investigator and respond to questions about your knowledge of the doctoral program in the College of Education at your university. If a second interview is required, you will be contacted within 30 days of the first interview. The second interview may be face-to-face or by telephone. Face-to-face interviews will be scheduled on campus or at a location convenient for you.

Interviews will be audio-recorded so that the information can be transcribed at a later date. While awaiting transcription, audio tapes will be stored in a locked fireproof cabinet off campus in the office of the Student Principal Investigator. Audio recordings will only be accessible to the Student Principal Investigator. They will be destroyed as soon as the interview is transcribed and data has been analyzed.

There is no compensation for this study, and participation is strictly voluntary.

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APPROVED Consent Form Approved by Georgia State University IRB April 19, 2012 - September 29, 2012

III. Risks:

This study poses minimal risks and will likely not expose you to any more risks than you would experience in a normal day of life. The transcription from your interview(s) will be sent to you for your review and approval. Any changes identified will be made and a final copy of the transcript will be forwarded to you. The data from your interview will be used as part of a dissertation. This dissertation will identify factors related to attrition and completion in doctoral students in Instructional Technology at a major research university. The data will also play an important role in the development of a grounded theory on doctoral attrition and completion. Though we will remove names from this data, we cannot prevent people from speculating as to who was the source of any part of this data.

IV. Benefits:

Participation in this study may not benefit you personally. However, one of the goals of the study is to provide information that may help universities improve support for Doctoral students in IT. Overall, we hope to gain information about various factors that affect a student's success in completing the PhD program in IT. Another outcome will be a new theory that describes doctoral attrition and completion.

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VI. Confidentiality:

We will keep your records private to the extent allowed by law. Only Carla Williams (Student Investigator) and Wanjira Kimuthia (Principal Investigator) will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and the sponsor). We will use a code rather than your name on study records. The information you provide will be stored in a locked cabinet accessible only to the Student Principal Investigator, and on firewall-protected computers. A key code sheet will be the only connection to identify the research participant, and this key will be stored separately from the data to protect privacy. This key code as well as handwritten and transcribed interview notes and audio recordings will be kept for 18 months from publication of the dissertation and then will be destroyed. All electronic database information used for analysis will be kept for a period of 10 years.

Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.



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