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In Pursuit of the Ed.D. :  
A Study of East Tennessee State University's Doctors of Education  
Who They Are and Why They Persisted

---

A dissertation  
presented to  
the faculty of the Department of Educational Leadership and Policy Analysis  
East Tennessee State University

In partial fulfillment  
of the requirements for the degree  
Doctor in Education

---

by  
Mata J. Banks  
December 2006

---

Dr. Hal Knight, Chair  
Dr. Glenn Bettis  
Dr. Cecil Blankenship  
Dr. Terrence Tollefson

Keywords: Appalachian, East Tennessee State University, Education doctorate,  
First-generation, Post-baccalaureate, Persistence

## ABSTRACT

In Pursuit of the Ed.D. :

A Study of East Tennessee State University's Doctors of Education

Who They Are and Why They Persisted

by

Mata J. Banks

According to Kerlin (1995a), first-generation students are not expected to survive to doctorate degree attainment because of vulnerability to negative affects associated with their status; yet persist they do at East Tennessee State University. The desire to study the first-generation East Tennessee State University's Doctors of Education and the limited number of first-generation graduate studies available, especially in the academic field of education, promoted developing this study. It was the intent of this study to offer additional empirical research toward understanding variables associated with first-generation persistence as encountered by East Tennessee State University's Doctors of education.

Quantitative analysis derived through survey research served as an explanatory framework to investigate major variables of first-generation persistence. The survey targeted East Tennessee State University's Doctors of Education who received degrees prior to June 2004.

Investigation of empirical evidence revealed that unlike previous first-generation studies (Hayes, 1997; Hurley, 2002; Inman and Mayes, 1999; Khanh, 2002; NCES, 1998; Terenzini, Springer, Yaeger, Pascarella, and Nora, 1996) the bulk (73.7%) of East Tennessee State University Doctors of Education were first-generation. Moreover, although previous studies suggested the presence of unique barriers attributed to first-generation status, no significant differences resulted in either identification or ranking of barriers or facilitators to degree attainment between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts.

The Survey of ETSU Doctors of Education requested respondents to prioritize identified barriers and facilitators. After plotting significant bivariate coordinate pairs among ranked barriers and facilitators, flat line (zero sloped) clusters depicted the presence of 6 weak monotone associations among variables. Facilitator rankings were associated with a respondent's age, parental college attendance, and education specialist degree, while barrier rankings were associated with a respondent's marital status at the time of degree attainment, secondary support source, and post doctorate employment.

## DEDICATION

I dedicate this paper to

The memory of committee member and mentor, Dr. “Russ” West;

The memories of my first educators, Grandma Gertrude and Pop;

The memory of my role model of persistence, Aunt Lee;

My role model of independence, Mother Phyllis;

My soul mate, helpmate, and life-partner, Husband David;

Our beloved children Byron and William who prompted renewed strength;

and

Unnamed friends and family who tempered my iron will more often than necessary.

## ACKNOWLEDGEMENTS

I believe acknowledgements begin with thanking God, my eternal teacher. My faith in God's insight and teachings has never wavered, yet strength to continue this combined professional and personal journey to degree attainment has been anything but steady. As a life-long learner, I acknowledge there are lessons still to be learned in both formal and personal classrooms; however, I am thankful that God has been with me and will be there tomorrow for the next step in my journey.

This study is a collective acknowledgement of the brave and strong spirited individuals who succeeded, according to Kerlin (1995a), in the face of overwhelming odds favoring failure. Like a metaphoric bumblebee, first-generation East Tennessee State University's Doctors of Education were not supposed to attain great heights, but seemingly unaware of their perceived limitations by others, they buzzed aloft to degree attainment. It has been a pleasure and an inspiration to trace their path.

I would like to acknowledge the professional guidance received from my chair and committee members. To Dr. Hal Knight, without whom I would not have obtained answers to either research or intrinsic questions asked and Dr. Cecil Blankenship for graciously accepting to serve as my committee member not of the Department of Educational Leadership and Policy Analysis, I say thank you truly. To special committee members, Dr. Terrance Tollefson and Dr. Glenn Bettis, who shared both professional and personal insights, advice, and encouragements that went well beyond the classroom walls, I say thank you and may God bless you.

I would like to acknowledge the professional patience of Ms. Aracelis Vasquez and Mrs. Betty Proffitt, two marvelous East Tennessee State University employees. Ms.

Vasquez's assistance was instrumental in successfully meeting deadlines and completing lengthy but necessary paperwork for the University's institutional review board process. Mrs. Proffitt's wisdom with nurturing overtones was often an oasis of insight just when I believed myself within a desert.

I would like to acknowledge personal guidance received from special friend Mrs. Linda Rowe. Many have observed Mrs. Rowe's determination in a classroom environment, and her quality of never giving up personally. The combination of both qualities in one small body is that which I relied upon when believing this study would never be successfully completed. Without Linda's guidance and sometimes-swift red number six shoe placed strategically, this scarecrow would not have made it to Oz

Finally, I would like to acknowledge the collective spirit of my most nurturing family. David, my eternal soul mate is more than just a husband of 33 years; he is my best friend. Sons Byron and William are the source of renewed strength and are indeed God's blessings and source of renewed strength. My family, more than even the completion of this study and degree attainment mean everything to me and I acknowledge they are the foremost reasons for my never, never giving up.

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## CHAPTER 1

### INTRODUCTION

First-generation undergraduate students are the first in their family to enter college and among college classmates the first to drop out (Inman & Mayes, 1999; Padron, 1992; Pascarella, 2001; Swail, 2002; Whitt, Edison, Pascarella, Terenzini & Nora, 2001; Willett, 1989). Of the comparatively few first-generation students who do attain a baccalaureate, most do not pursue post-baccalaureate degrees and even fewer attempt doctoral degrees (Hurley, 2002; Katz, 2001; Kerlin, 1995a, 1995b; National Research Council [NRC], 1995a, 1995b, 1996, 1998; National Science Foundation [NSF], 2003; Norfles & Mortenson, 2002). This is in stark contrast to first generation's majority status among East Tennessee State University's campus enrollment (East Tennessee State University, 2004d, 2005a; National Center for Education Statistics and U.S. Department of Education [NCES], 1998a, 1998b, 1998c).

When attempting to compare the number of doctors of education degrees attained between first-generation and non-first-generation East Tennessee State University graduates (East Tennessee State University, 2004d, 2005a), data was not present that supported comparisons between first-generation graduates and their counterparts among graduate students nor provide stratification for first-generation status among attainment totals. While seeking data comparisons among national studies (Hsiao, 1992; NCES, 1998c; NRC, 1995a, 1995b, 1996; NSF, 2002a, 2002b), although medicine and science offered a limited number of available first-generation studies, there were few follow-up studies of educational doctorates. The lack of first-generation East Tennessee State University Doctor of Education studies echoed the lack of national studies available on

first-generation doctors of education graduates. Moreover, no available study either regional or national examined the relationship between first-generation educational doctorates and their non-first-generation counterparts.

In 1972 (East Tennessee State University, 2005b), East Tennessee State University's Doctor of Education program awarded the school's first Doctor of Education degree [Ed.D] and therefore provided an adequate history spanning 30 years of productivity for study. Approximately 400 doctors of education (N=397) successfully graduated prior to Spring Semester 2004 from East Tennessee State University's Department of Educational Leadership and Policy Analysis' graduate program and served as the targeted population for this study.

### Statement of the Problem

It is the primary intent of this study to explore associations of graduation persistence between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts. Comparisons among available first-generation studies revealed the majority of national studies relied on undergraduate data (Hayes, 1997; Hsiao, 1992; Inman & Mayes, 1999; Khanh, 2002; London, 1992, 1996; McConnell, 2000; Mitchell, 1997; Swail, 2002; Terenzini & Pascarella, 1994; Terenzini, Springer, Yaeger, Pascarella & Nora, 1996; Tluczek, 1995; Whitt et al., 2001; Willett, 1989). Of the comparatively few first-generation graduate studies available, most were over 10 years old and none targeted education (Bae, Coyle, & Tuckman, 1990; Baird, 1993; Bowen, Lorad, & Sosa, 1991; Chatman, 1994; Curran, 2001; Golde & Dore, 2001; Kerlin 1995b).

## Research Questions

This study addressed the following research questions:

1. Is there a difference in demographic characteristics between first-generation and non-first-generation East Tennessee State University's Doctors of Education at the time of graduation?
2. Is there a difference in time-to-degree between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts?
3. Is there a difference in educational backgrounds between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts?
4. Is there a difference in the registered-time-to-degree between East Tennessee State University's Doctors of Education who entered with an education specialist's degree and those who did not?
5. Is there a difference in registered-time-to-degree between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts?
6. Is there a difference in ranked facilitators to graduation between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts?
7. Is there a difference in ranked barriers to graduation between first-generation and non-first-generation East Tennessee State University's Doctors of Education?



8. Is there an association or difference among East Tennessee State University Doctors' of Education demographic characteristics and ranked facilitators?
9. Is there an association or difference among East Tennessee State University's Doctors of Education demographic characteristics and ranked barriers?
10. Is there an association or difference among East Tennessee State University Doctors' of Education educational histories and ranked facilitators?
11. Is there an association or difference among East Tennessee State University Doctors' of Education educational histories and ranked barriers?

#### Significance of the Study

According to both Hurley (2002) and Swail (2002), colleges and universities deal with fiscal crises and other pressures of diversified enrollment needs created by first-generation students. Both Hurley and Swail suggested that early intervention in developing first-generation students was the key to increasing first-generation attainment rates. The design of this study is to assist policymakers, administrators, faculty, and other researchers addressing challenges of intervention and institutional governance reform required by first-generation graduate students. This study offers empirical data collected regarding facilitators and barriers encountered to graduation by East Tennessee State

University's Doctors of Education and adds to the limited collection of literature available previously.

When comparing East Tennessee State University's first-generation majority enrollment to negative affects attributed to first-generation status by most reviewed studies (Chatman, 1994; Hayes, 1997; Hsiao, 1992; Inman & Mayes, 1999; Khanh, 2002; London, 1996; McConnell, 2000; Mitchell, 1997; Norfles & Mortenson, 2002; Terenzini et al., 1996), a primary issue arose. If first-generation East Tennessee State University students persisted to become doctors of education, how did they beat odds favoring attrition? While attempting to resolve this issue, this researcher discovered neither national nor regional available studies targeted first-generation doctors of education.

This study specifically targets barriers and facilitators to graduation as experienced by first-generation East Tennessee State University's Doctors of Education. By comparing first-generation doctors to their non-first-generation counterparts, this study is significant in that it offers findings for contribution to empirical first-generation research not available previously. Moreover, by targeting the specific population of East Tennessee State University's Doctors of Education, this study significantly reduced errors described by Worthen and Sanders (1988) as generalizability errors encountered when attempting to transfer other studies' findings (Chatman, 1994; Hurley 2002; Norfles & Mortenson, 2002) to East Tennessee State University.

#### Delimitation

1. This study examines direct responses collected from East Tennessee State University Doctorate of Education who graduated prior to June 2004.

### Limitations

1. Generalizability errors could result if generalized to any institution beyond East Tennessee State University.
2. Compared to more recent conferred doctors of education, earlier East Tennessee State University graduates might view indicators of quality differently because of the time elapsed since degree conferment.

### Definitions of Terms

1. All-But-Dissertation (ABD): Course work for doctorate program completion is finished but the enrolled student has not completed the required dissertation.
2. Background information: This study includes demographic classifications of age, citizenship, employment status, financial support, first-generation status, gender, marital or partnered status, post-doctoral degree attainment, pre-requisite and non pre-requisite education, program delivery, race, regional affiliation, and residence.
3. First-generation: Hayes (1997), Hsiao (1992), Hurley (2002), Inman and Mayes (1999), Khanh (2002), NCES (1998b) and Terenzini et al. (1996), defined first-generation participants as the first to attend college from their family and whose parents have not attended any college. London (1992, 1996), Mitchell (1997), Terenzini, et al. (1996) and Willett (1989) assigned first-generation status to participants whose parents might have attended but did not graduate from any college. Because of differences

among reviewed literature in what defined first-generation, this study used a combination of the most prevalent definitions and defined first-generation participants as those who were the first to graduate from a four-year college. For the purpose of this study, participants' parents who either attended some college or graduated from a two-year institution did not exclude participants from first-generation status assignment.

4. Non-first-generation: First-generation counterparts that had at least one parent or guardian graduate from a four-year college.
5. Registered-time-to-degree (RTD): The measurement of the time interval elapsed between the first doctorate class registration for and final degree conferment. This study did not adopt the definition of registered-time-to-degree as defined by the National Research Council [NRC] (1996, p.14), which included time actually enrolled in a masters or non-doctorate degreed programs.
6. Time-to-degree (TTD): This dissertation used the definition of time-to-degree as defined by the NRC (1996) to denote the measurement of the time interval elapsed between receipt of the baccalaureate and the East Tennessee State University's Doctor of Education degree conferred. Time-to-degree measures included enrollment interruptions or breaks.

### Overview

Chapter 1 provides a brief overview of the literature and highlights a few of the most important facts, ideas, or theories presented in depth in Chapter 2. Chapter 2

presents a review of the pertinent literature organized in two divisions, national and regional, of both positive and negative factors affecting first-generation graduates. Chapter 3 includes the methodology used in answering the research questions presented. Chapter 4 presents analyzed data and resultant findings. Chapter 5 summarizes the research, presents conclusions, makes recommendations to improve performance, and offers suggestions for developmental and extended research.

## CHAPTER 2

### LITERATURE REVIEW

Chapter 2 of this study targets literature reviewed and is organized in two sections. The first and larger section of literature reviewed includes college trends derived from national literature (see Figure 1). The second section includes college trends derived from regional literature (see Figure 2).

#### National Trends

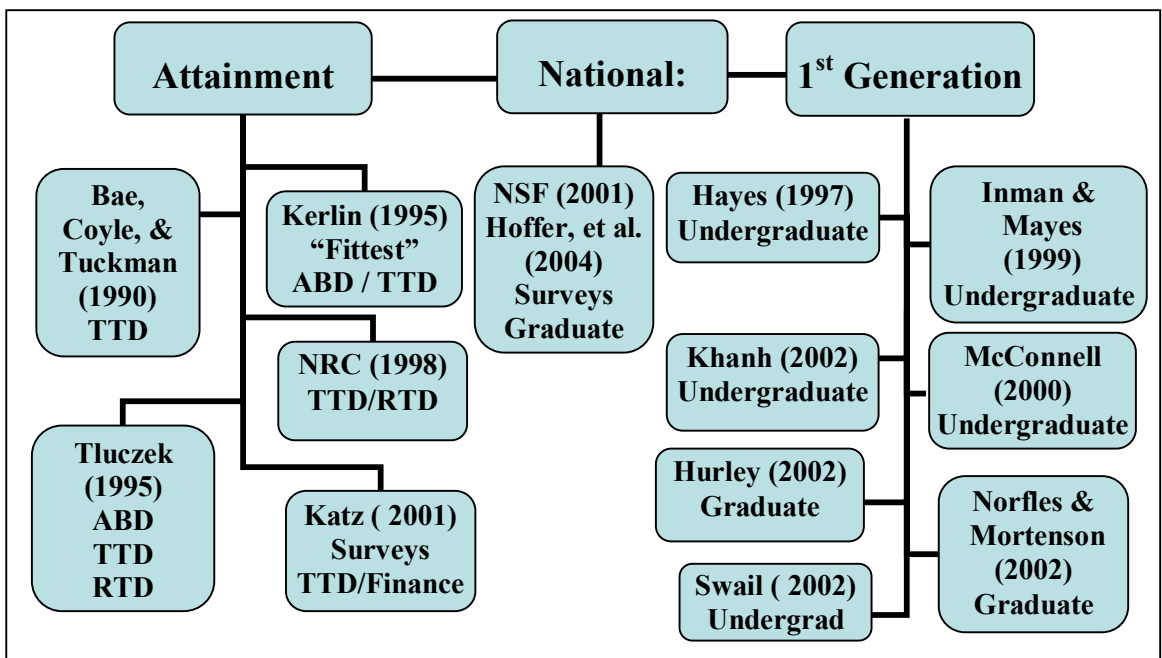


Figure 1. Flow Chart of National Literature Reviewed for First-generation Trends

National data were more abundant for undergraduate studies (East Tennessee State University, 1998a, 2004d; Gonyea, Kish, Kuh, Muthiah, & Thomas, 2003; Hayes, 1997; Hsiao, 1992; Inman & Mayes, 1999; Khanh, 2002; London, 1992,1996;

McConnell, 2000; Mitchell, 1997; NCES, 1997, 1998a, 1998b, 1998c; Norfles, 2003; Pascarella, 2001; Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1996; Swail, 2002; Terenzini & Pascarella, 1994; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001) compared to graduate studies (Bae et al., 1990; Baird, 1993; Bowen et al., 1991; Chatman, 1994; Curran, 2001; Golde & Dore, 2001; Hill et al., 2004; Hurley, 2002; Katz, 2001; Kerlin, 1995b; National Research Council, 1996; Syverson, 1996; Tluczek, 1995).

The consensus of national studies reviewed supported trends of attainment and first-generation status that included:

1. White male doctorate recipients are the majority nationally; and
2. First-generation students nationally are less likely to attempt graduate courses than non-first-generation.

In addition to the two primary trends discovered, this study explored how they arose by expanding on supportive secondary trends. The primary trends are shown below under the sub-headings of attainment and first-generation.

### Attainment

Nationally reported doctoral attainment rates in all fields of study fluctuated in the decade between 1993 and 2003. Attainment rates during this time interval were lowest in 1993 with 39,754 doctorates conferred and peaked in 2001 with 44,930 doctorates conferred (NCES, 1998a, 1998b, 1998c; NRC, 1995a; NSF, 2002a, 2002b).

Bae et al. (1990, p.5) suggested that intensity of doctorate attrition paralleled the rise in the lengthy time-to-degree. Bae et al. concluded that the more time spent in

obtaining the doctorate, the more likely the student was to quit. Moreover, “increased age at time of entry” (p.3) was the variable that most negatively affected time-to-degree.

Tluczek (1995) warned that a decrease in commitment and an increased time-to-degree interval were overlapping barriers to graduation, especially among the graduate students who had completed text work but had not completed required dissertations. Tluczek suggested graduate students’ lack of commitment resulted from combined infringements of family and/or employer demands and labeled graduate students who had difficulties in finishing their theses as all-but-dissertation, or “ABDs”. According to Tluczek, the lack of self-discipline and commitment among ABD students contributed more to dissertation non-completion than a lengthy time-to-degree interval. Tluczek hinted that both lengthy time-to-degree intervals and increased attrition rates were a direct result of the inability of doctorate students to work independently.

Kerlin (1995a, 1995b) echoed Tluczek’s findings (1995) but described ABDs slightly different by including the completion of all text work and qualifying exams but not the dissertation. Kerlin’s definition of the “ABD phenomena” (1995a) excluded graduate students who had not completed qualifying examinations. Kerlin suggested in his two-part doctoral study that institutions could take steps to assist students, especially ABD’s, by better understanding issues affecting the students’ progress and completion of doctorates, as well as students’ continued success in the years following degree attainment. Kerlin described doctoral graduates from “small public universities” (1995a), as exhibiting a “survival-of-the-fittest” (1995b) mentality in comparison to non-completers. Whatever ABD definition used, Tluczek and Kerlin both concluded that the inability of first-generation graduate students to work independently directly contributed



to the length of time it took to obtain the degree and the longer the graduate student spent in obtaining the degree, the greater the likelihood of attrition.

Golde and Dore (2001), Hurley (2002), Katz (2001), and Syverson (1996) mirrored Kerlin's (1995a, 1995b) and Tluczek's (1995) findings of high attrition rates associated with lengthy time-lines and first-generation status but adopted Kerlin's ABD definition. The National Research Council (1995a, 1995b, 1996, 1998) also supported Tluczek's and Kerlin's findings of negative affects to attrition attributed to lengthy timelines when stating:

Although a longer time-to-degree ...does not necessarily lead to noncompletion [sic] for any individual student, the likelihood of not completing the degree increases with each additional year in doctoral study, based simply on the fact that each additional year of doctoral study carries with it a positive chance that a student will decide to drop out.

(NRC, 1996)

Katz (2001) echoed both Bae et al.'s (1990) and Tluczek's (1995) findings of negative affects to attrition contributed by lengthy graduation timelines but included the lack of finances as another attrition factor. In a study targeting graduate education attrition, Katz submitted surveys to every listed department chair on the American Historical Association's electronic mailing list asking for views and concerns about the future of graduate education. Katz suggested attrition resulted from two primary causes: lack of funding and lack of time

The 2001 National Science Foundation [NSF] Survey of Earned Doctorates targeted time spent on obtaining the graduate degree and was the first survey to base

calculations of time spent on the degree by doctorate recipients' direct responses. Prior to 2001, when collecting responses, the measurement of time graduates spent on the degree relied on use of a mathematical formula that calculated time based upon variables positioned on an educational history grid.

According to doctorate recipients' responses collected for 2003 (Hoffer et al., 2004), the median total time span from baccalaureate to doctorate was shortest in the physical sciences with 7.9 years and longest in education with 18.2 years. Responses for 2003 indicated the field of education included a larger number of enrolled students who had worked full-time before starting their graduate degree programs, and who even continued to work full-time while earning their doctorates. When comparing previous median time-to-degree responses collected between 2001 and 2003, comparisons revealed:

Median time to degree since receipt of the baccalaureate was 10.1 years in 2003, 10.2 years in 2002, 10.0 years in 2001, and 10.3 in 2000. Median time to degree since first enrollment in any graduate program was 7.5 years, in 2003, virtually unchanged since 1997 (Hoffer et al., 2004).

Due in part to NSF's (2001) collection of direct responses, data provided clarifications to earlier National Research Council [NRC] findings (1995a, 1996) that supported evidence of extended time increasing the risk of non-completion. Hoffer et al. (2004) cited the importance of collecting doctoral time-to-degree data by stating:

The amount of time needed to complete a doctorate is a key concern for those pursuing the degree, as well as for the faculties and administrations of the degree-granting institutions and national public agencies and private

organizations that support doctoral study. Time to degree completion is likely to be affected by a number of factors, including individual preferences, economic constraints, labor markets for new doctorate recipients, cultures of the academic disciplines, and institution-specific program characteristics. (p.20)

Both the NSF (2001) and Hoffer et al. (2004) reported the number of graduates in life science, social studies, and education degrees as among the top three doctorate fields attained. However, because of the lack of data available beyond frequencies on doctors of education, this study does not offer a robust literature review reflective of educational doctorate data in comparison to that made available by other doctorate fields studied.

In an effort to include findings more reflective of doctor of education data within this study, post-doctorate literature (Hill et al., 2004; Hoffer et al., 2004; NSF, 2001) and the comparative omission of studies that targeted education were used as evidence among indicated graduate trends.

According to Hoffer et al. (2004):

Just over 70 percent of the new doctorate recipients had definite postgraduation commitments for employment or continued study when they completed the SED survey. Of those, 67 percent planned to work and 33 percent planned to continue their studies as postdoctorates. For the graduates with definite commitments to work in the U.S., 55 percent noted higher education as their intended work sector, while 21 percent indicated industry or self-employment, and 7 percent had definite plans for government work.

Although this study included post-doctoral studies among literature reviewed , neither doctoral nor post-doctoral literature yielded additional relationships specific to doctors of education beyond attainment totals (Golde & Dore, 2001; Hill, 2002; Hill et al., 2004; Hoffer et al., 2004; Katz, 2001; Kerlin 1995a, 1995b; NCES, 1998c; NRC, 1995a, 1995b, 1996, 1998; NSF, 2001, 2002a, 2002b, 2003; Scientists and Engineers Statistical Data System, 2002, 2004a, 2004b). However, Hoffer et al. and the NSF offered attainment rates stratified by gender and reported males earned the bulk of doctorates conferred. Moreover, both reported this was in contrast to differential majority status that existed when disaggregating disciplines.

The NSF (2003) supported this theme of subjective majority status when it stated, “[In 2002] women received 45 percent of the total doctorates awarded. [However, it] was the first year in history that women earned the majority of research doctorates awarded to U.S. Citizens”. One year later, Hoffer, et al. echoed NFS’ summation of subjective majority by stating, “In 2003, 51 percent of all doctorates awarded to U.S. citizens went to women ... marking the second consecutive year U.S. women were awarded more doctorates than their male counterparts” (Hoffer et al., 2004).

Although described as small, gains in non-white doctorate attainment rates were observed as a trend. Hoffer et al.(2004) and the NSF(2002b, 2003) reported that when comparing doctorate attainment rates among racial/ethnic groups, non-white doctorate recipients in 2002 accounted for only 10% of the total doctorate degrees attained but the percentage almost doubled the following year in 2003. The NSF (2003) also supported the thematic attainment gain when reporting African Americans and Latinos’ attainment

growth rates made small gains in 2002. Similar non-white minority gains were acknowledge when Hoffer, et al.'s report stated,

Nineteen percent of all doctorates awarded to U.S. citizens in 2003 were earned by U.S. racial/ethnic minority groups. This is the largest percentage ever, and [continued] a steady upward trend. ...The broad fields with the largest percentages of minorities were education, in which blacks were the predominant minority group. (section: Highlights)

In addition to attainment trends, first-generation trends were explored for supportative secondary trends. First-generation trends follow.

#### First-generation

Since 1963, the SED has asked new doctorate recipients to report their father's and mothers' levels of educational attainment. ...Parental education backgrounds of male and female 2003 doctorate recipients differed little with respect to both fathers' and mothers' background. Female doctorate recipients were slightly more likely than their male counterparts [sic] to have a father and a mother who attended college or who earned an advanced degree. (Hoffer et al., 2004, p.20)

Chatman (1994), Hayes (1997), Hsiao (1992), Hurley (2002), Inman and Mayes (1999), Khanh (2002), London (1992, 1996), Mitchell (1997), NCES (1998b), Norfles and Mortenson (2002), and Padron (1992) also described first-generation students as the enrollment minority when comparing between first-generation students and their non-

first-generation counterparts, especially in both education and humanities' doctorate degreed fields.

When comparing the number of first-generation doctorates between the fields of education and humanities, Hoffer et al. (2004) hinted that the number of first-generation doctorates was larger in the field of education compared to the field of humanities when stating:

There is considerable variation in parental education attainment by race/ethnicity, citizenship status, and broad field of study. .. Doctorate recipients in the humanities displayed the highest percentages of both fathers (45 percent) and mothers (28 percent) with advanced degrees. The lowest percentages of advanced degrees by fathers or mothers were within the education doctorate recipients, 22 percent and 14 percent, respectively. These two broad fields are also the least and most represented, correspondingly, with regard to the fraction of parents whose formal education ended at high school or before. (p. 20)

When seeking other graduate literature similar to the quantitative design demonstrated by the SED summary offered by Hoffer et al. (2004) of first-generation data, this researcher failed to find robust evidence of other quantitative first-generation graduate studies, especially for education degrees. First-generation graduate studies existed (Chatman, 1994; Hurley 2002; Norfles & Mortenson, 2002) but were comparatively fewer than first-generation undergraduate studies (Hayes, 1997; Hsiao, 1992; Inman & Mayes, 1999; Khanh, 2002; London, 1992, 1996; McConnell, 2000; Mitchell, 1997; NCES, 1998b; Norfles, 2003; Terenzini et al., 1996; Willett, 1989).

Because of the limited availability of first-generation graduate studies, literature that focused on undergraduates was included in this review.

A consensus of untimely degree completion existed among literature reviewed as a negative thematic affect when comparing findings between graduate or undergraduate first-generation studies (Chatman, 1994; Hayes, 1997; Hsiao, 1992; Hurley, 2002; Inman & Mayes, 1999; Khanh, 2002; London, 1992, 1996; McConnell, 2000; Mitchell, 1997; NCES, 1998b; Norfles, 2003; Norfles & Mortenson, 2002; Terenzini et al., 1996; Willett, 1989). However, neither graduate nor undergraduate first-generation studies targeted education specifically,

The NCES (1998b) collected first year undergraduate college data and attributed negative affects to both attainment and enrollment from participants' first-generation status. According to NCES:

Whether or not a student attained a degree or ... enrolled in postsecondary education was strongly associated with his or her parents' education level.... As parental education levels rose, so did the likelihood of persistence...from 55 percent for first-generation students to 65 percent for students whose parents had some college, and to 76 percent for those whose parents had a bachelor's degree or higher. (p. 36, para. 1)

Inman and Mayes (1999) studied characteristics of first-generation community college students and sought to answer the question of whether students who are the first in their immediate family to go to college were different from those whose parents had attended college. Inman and Mayes reported first-generation undergraduates were less prepared academically and psychologically for college and cited differences in academic,

economic, and psychological preparedness. Inman and Mayes concluded first-generation community college students' lack of preparation, commitment, and support, negatively affected attrition.

In a study on community colleges, McConnell (2000) found that most community colleges encountered first-generation majority enrollment status. When discussing the need for intervention programs for first-generation student McConnell stated,

...Any endeavor to improve the classroom experience has great merit because the students are already in class. If improved teaching methods and strategies can be used to optimize the learning that transpires in the classroom, students might need less time outside of the classroom to master the course content. This could make it easier for them to manage the conflicting roles of student, employee, and family member, and could result in high persistence and degree attainment.

The recommendations that colleges attempt to find more campus employment opportunities for first-generation students also has great merit. Students who work on campus are more familiar with campus policies and procedures, and are more likely to stay focused on school-related issues, to feel connected to the institution, and to develop meaningful relationships on campus. Thus, they are more likely to be academically and socially integrated into the campus. (p. 84-85)

Khanh (2002) recommended campus first-generation support programs for students to foster attainment success similar to recommendations made by Kerlin (1995a, 1995b), McConnell (2000), and Tluczek (1995). According to Khanh, additional support



during college acclimatization for first-generation students was required to counteract negative effects to future graduate enrollment, degree attainment, and lower elevated job status. Khanh cited, “To help out their families” as the initial reason given by most first-generation undergraduate students for pursuing higher education. According to Khanh, first-generation undergraduates viewed helping the family as a more important reason to attend college compared to non-first-generation counterparts. Khanh’s findings repeated McConnell’s recommendation that future first-generation studies include support data.

Swail (2002) echoed Khanh (2002) and McConnell (2000) by suggesting additional first-generation intervention programs be established. Swail described first-generation undergraduate students as among the underserved populations targeted for attention, especially in recruitment, from colleges and universities. According to Swail, motivation for study beyond undergraduate level was lacking in first-generation students and promoted problems well into graduate school when coupled with the lack of preparation for post-secondary levels. Swail concluded that large gaps still exist in who goes where and who completes degree programs and first-generation students, as well as students of color, are less likely to attend four-year institutions and to persist through degree completion.

Hurley (2002) repeated Inman and Mayes’ (1999) attribution of negative effects to attainment resulting from first-generation status, especially in diminished graduate school preparation. Hurley reported that as a direct result of first-generation status, students were 24 % less likely to attend graduate school within nine years after college entry. Hurley stated that early intervention was important to universities in developing doctoral students among first-generation students as an effort to counteract negative

affects. Hurley, like McConnell (2000) and Swail (2002), recommended additional study be completed on first-generation students.

Norfles and Mortenson (2002) cited concerns to the negative affects attributed to first-generation status, especially the lack of financial support. According to Norfles and Mortenson, increased attrition rates among first- generation graduate students resulted from the lack of finances. In their longitudinal Ronald McNair study, Norfles and Mortenson reported only 52 % of the first-generation alumni who, as juniors, had intended to enroll in graduate study had done so with 91 % of all McNair alumni doctoral students receiving financial assistance compared to 65 % of all other doctoral students. Norfles and Mortenson summarized:

McNair alumni are much more likely to be younger, more ethnically diverse... less affluent than graduate students (are) as a whole...and less likely to immediately enter doctoral programs than other graduate students. ... McNair alumni are more likely to receive financial aid than other graduate students (are) and are more likely to receive aid than students from the same ethnic and racial background. (pg. 3)

Khanh (2002), Swail (2002), Hurley (2002), McConnell (2000), and Norfles and Mortenson (2002) targeted the lack of first-generation student's commitment and first-generation students' financial assistance needs as detrimental barriers to attainment and associated the barriers with more than skill-based difficulties. When comparing findings among Khanh, Swail, Hurley, McConnell, and Norfles and Mortenson an earlier Inman and Mayes (1999) summary stated best the consensus. Inman and Mayes' summary read:

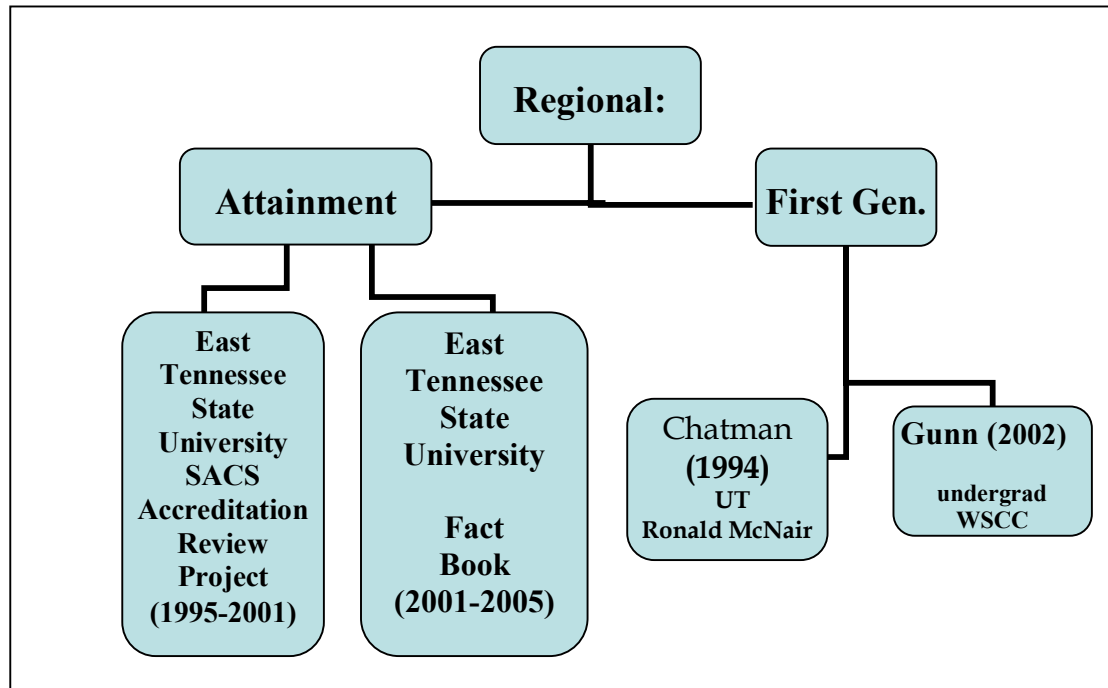
First-generation college students typically come from poorer families,...[are] more likely female and more likely to be older than the median age....First-generation students ...families' incomes are substantially lower, and they have more financial dependents than non-firsts. The data also seem to indicate that these firsts are more likely to be women with families of their own who are not entering college immediately out of high school. (para. 31)

While searching for primary trends among national literature, this researcher discovered accompanying secondary trends that included:

1. More available studies focused on life science and engineering degree attainment than the field of education, with white males dominating the doctorate attainment rates compared to females , and
2. Undergraduate first-generation students' data were more available than graduate, but whether undergraduate or graduate data, first-generation students were less likely to attempt graduate courses than their counterparts were.

In order to compare collective trends, this researcher reviewed regional literature after completing the search among national literature.

## Regional Trends



*Figure 2.* Flow Chart of Regional Literature Reviewed

The bulk of regional literature reviewed was from East Tennessee State University (1998, 1999a, 1999b, 2000a, 2000b, 2003a, 2003b, 2003c, 2003d, 2004a, 2004b, 2004c, 2004d, 2004e, 2005a). Moreover, East Tennessee State University's Southern Association of Colleges and Schools Accreditation Review Project (2004d) along with East Tennessee State University's 2004-2005 Fact Book were the two most used pieces of literature by this researcher for regional data sources. These two single sources provided an 11-year inclusive time interval spanning 1995 through 2005 for East Tennessee State University's data review. As East Tennessee State University doctoral students' data were not stratified to reflect subgroups specific for first-generation in either publication, studies that did report first-generation data although not specific of

East Tennessee State were included among area literature reviewed (Chatman, 1994; Gunnin, 2002).

First-generation doctoral literature specific to first-generation East Tennessee State University was not available for review. Because of the lack of regional first-generation doctoral literature, this researcher did not discover a comparison trend that supported first-generation East Tennessee State University students as less likely to attempt graduate courses than non-first-generation students. In contrast, East Tennessee State University's data (2004d, 2005a) did promote comparisons that revealed the following:

1. While nationally more life science doctorates were conferred than in any other field (NSF, 2001; Hoffer et al., 2004), East Tennessee State University conferred more medical doctorates than any other field, and
2. While nationally white male doctorate recipients are the majority (NSF, 2001; Hoffer et al., 2004), East Tennessee State University white female doctorate recipients tied the number attained by male counterparts.

The deviations of regional trends from national trends are more fully discussed in the sub-headings of attainment and first-generation below.

### Attainment

East Tennessee State University conferred 4,289 graduate degrees spanning the 11-year time interval of 1995-2005. (East Tennessee State University 2004d, 2005a, sections 5.1, 5.2, 5.4, & 5.5). Of the graduate degrees attained, 750 doctorates included 512 doctorates of medicine, 210 doctorates of education, and 28 doctorates of philosophy

degrees. When comparing the number of doctorates attained between yearly graduation totals, a 63.15 % increase in degree attainments among educational doctorates contrasted sharply to a 9.84 % decrease in medical doctorates attained, while there was no noted change in the number of philosophy doctorates attained.

Regional attainment data supporting differential male and female majority status among graduate degree fields mirrored differentiable national data (Hoffer et al., 2004). During the 11-year time interval of 1995-2005, of the 750 doctorates conferred by East Tennessee State University (2004d, 2005a, section 5.4 & 5.5) the 375 doctorates earned by females tied the number earned by the 375 male doctoral recipients. However, comparisons of majority status between males and females attainment data across academic fields revealed female majority status was subjective to the academic field reviewed. Females earned 43.16 % of the doctorates of medicine, 64.28 % of the doctorates of philosophy, and 64.76 % of the doctorates of education degrees attained.

When comparing the total of all East Tennessee State University degrees conferred by race between 1996 and 2004, findings reveal a 5.5 % gain among the non-white graduate attainment (East Tennessee State University, 2004d, 2005a, section 5.6). According to attainment data, East Tennessee State University conferred 46 graduate degrees of a total 419 earned to non-whites in 1996 and conferred 83 graduate degrees of a total 501 earned in 2004. Because of the lack of literature available containing race/ethnicity sub-group stratification for doctors of education, this researcher could not compare the total numbers of degrees attained among ethnicity subgroups between doctors of education and doctors of medicine.

## First-Generation

Efforts by this researcher failed to obtain first-generation studies specific to East Tennessee State University that excluded undergraduate data. A review of first-generation East Tennessee State University literature (1998a, 1999a, 1999b, 2000a, 2000b, 2004b, 2004d, 2005a) did reveal that either the literature combined first-generation graduate data with undergraduate data when reporting or excluded first-generation graduate data in its entirety. Because of the lack of East Tennessee State University regional literature that supported separated findings between undergraduate data and graduate data, first-generation undergraduate literature was included within this subheading.

When comparing first-generation enrollment rates between regional (East Tennessee State University, 1998a, 1999a, 1999b, 2000a, 2000b, 2004b, 2004d, 2005a) and national data (Hoffer et al., 2004), East Tennessee State University first-generation students' enrollment's majority status contrasted starkly to first-generation students' enrollment's minority status nationally. Yet, according to an East Tennessee State University newsletter (1998a, p.1), similarity to East Tennessee State University students to students represented by the national norm group was very high.

East Tennessee State University's March 2000 newsletter reported 52 % of undergraduates were first-generation, meaning that neither parent of the student had graduated from college. Although, the first-generation majority status was slightly over half of the student population, the University's first-generation enrollment majority status contradicted that expected from the first-generation enrollment minority status nationally (Hoffer et al., 2004).

Other regional literature (Chatman, 1994; Gunnin, 2002) associated with the East Tennessee area but not specific to East Tennessee State University, also supported the existence to contradictions of first-generation minority status within the East Tennessee region. Both Gunnin's and Chatman's studies supported the positive theme of success for first-generation students and contrasted to the negative national themes of attrition attributed to first-generation status. Gunnin's study targeted differences between first-generation undergraduates from the Appalachian region enrolled at Walters State Community College and their counterparts. Gunnin reported:

Many of the findings of this study concur with the review of the literature in that socio-economic and generational status play a role in Appalachian students' college experience. This study, unlike the review of literature, found that the families of many first-generation students not only recognize the value of a college education, but also fully support the academic endeavors of their college students.

Although a community college's study, Gunnin's findings (2002) supported Chatman's (1994) claim of first-generation four-year university graduates persistence in contrast to national norms of attrition attributed to first-generation status. Chatman studied differences between the University of Tennessee Ronald McNair Post-Baccalaureate Achievement Program's first-generation participants who went on to graduate school and those who did not. According to Chatman, first-generation enrichment programs had positive effects on first-generation graduates' decision-making and because of decisions made by first-generation University of Tennessee Ronald



McNair alumni, 70 % of those who were eligible to apply to graduate school had enrolled.

### Literature Review Conclusion

In an attempt to make reliable assumptions about East Tennessee State University's Doctors of Education, this researcher reviewed both regional literature (East Tennessee State University, 1998, 1999a, 1999b, 2000a, 2000b, 2003a, 2003b, 2003c, 2003d, 2004a, 2004b, 2004c, 2004d, 2004e, 2005a, 2005b; Gunnin, 2002) and national literature (Bae et al., 1990; Baird, 1993; Bowen, 1991; Curran, 2001; Golde & Dore, 2001; Hill, 2002; Hill et al., 2004; Hoffer et al., 2004; Hurley, 2002; Katz, 2001; Kerlin, 1995a, 1995b; National Association of Graduate-Professional Students, 2001; NCES, 1998b, 1998c; NRC, 1996,1998; NSF, 2001, 2002b, 2003; Syverson, 1996; Tluczek, 1995). And when comparing differences among first-generation doctors of education and their non-first-generation counterparts, both regional and national literature offered literature that targeted first-generation undergraduate students and their non-first-generation counterparts (East Tennessee State University, 1998a, 2000a, 2000b; Hayes, 1997; Hsiao, 1992; Inman & Mayes, 1999; Khanh, 2002; London, 1992, 1996; McConnell, 2000; Mitchell, 1997; NCES, 1998b; Padron, 1992; Terenzini et al.,1996; Willett, 1989). Yet, when seeking similar first-generation literature on graduate students, comparatively few first-generation graduate studies (Chatman, 1994; Hurley, 2002; Norfles & Mortenson, 2002) were available and none targeted education.

London (1992, 1996), Hayes (1997), Hsiao (1992), Inman and Mayes (1999), Padron (1992), and Terenzini et al., (1996) asserted first-generation undergraduates

typically had lower grade-point-averages, had not been part of the honors programs, faced a variety of nonacademic challenges, usually came from poorer families, were often geographically constrained, and were very concerned with having a college close to home. McConnell (2000) and Khanh (2002) reiterated similar findings that supported odds favoring attrition when comparing first-generation undergraduate students to non-first-generation counterparts and repeated earlier pronouncements that offered evidence of negative affects attributable to first-generation status(London, 1992, 1996; Hayes, 1997; Hsiao, 1992; Inman & Mayes, 1999; Padron, 1992; Terenzini et al., 1996). According to McConnell and Khanh, first-generation undergraduates reported lack of finances and time as barriers toward degree attainment and suggested colleges offer support programs to help with meeting specific needs experienced by first-generation students.

In contrast to studies that focused on undergraduates, Chatman (1994), Hurley (2002), Norfles and Mortenson (2002) offered studies relative to first-generation graduate students. However, unreliable assumptions of general equality between the universities studied by Chatman, Hurley, Norfles and Mortenson, and East Tennessee State University resulted when attempting to extrapolate and fit their findings to first-generation East Tennessee State University's Doctors of Education. Because of the lack of literature available, this study seeks primarily to complete survey research on first-generation East Tennessee State University's Doctors of Education persistence that can promote a statistical fit when attempting to transfer findings from data examined. Secondary to the rationale for conducting the proposed research, this study offers

resultant findings as additional empirical research targeting first-generation doctors of education graduates.

Chapter 3 explains survey research and the ensuing analysis that targeted first-generation East Tennessee State University's Doctors of Education.

## CHAPTER 3

### METHODOLOGY

This chapter details the study's purpose, population, design, elements, data collection, survey quality measures, research hypotheses, and research measures.

#### Purpose

This study examined direct responses to questions about characteristics, attitudes, and behaviors, including first-generation status collected from a survey of East Tennessee State University's Doctors of Education for exploring relationships between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts. Gall, Borg, and Gall (1996) indicated survey research matched well a quantitative designed study intending generalization to a population. According to Gall et al.:

The purpose of a survey is to use questionnaires ... to collect data from participants in a sample about their characteristics, experiences, and opinions in order to generalize the findings to a population that the sample is intended to represent. This focus on generalizing to a population is characteristic of quantitative research, but not of qualitative research.

(p.289)

Gall et al. further suggested that a survey's questionnaire collected information that was not directly observable and, therefore, promoted conservation of both the researcher's time and finances in processing. Gall et al. pointed out when asking the same questions of all sampled individuals by a written instrument, questionnaires could allow respondents

to fill out the questionnaire at their convenience, answer the items in any order, take more than one sitting to complete it, make marginal comments, skip questions, or give unique responses.

According to Gall et al. (1996), when comparing between a survey questionnaire and an interviewer, although less probing and less capable of modification after distribution, a survey questionnaire promotes reduction in researcher bias possible to interviewer's mannerisms and personality. Because of the standardization and a highly structured design compatible to the quantitative approach as described by Gall et al., this study used survey questionnaire methodology to assist in identifying barriers and facilitators to first-generation doctorate attainment.

The Survey of ETSU Doctors of Education (Appendix B) was divided into three parts labeled A, B, and C. Part A of the survey contained 18 questions on respondents' educational backgrounds that targeted community college attendance, degrees held at time of doctorate program entrance, association to educational cohorts, and perceived facilitators and barriers encountered.. Part B of the survey contained five questions on respondents' postgraduation experiences that included employment, residential environment, and pursuit of other academic study. Part C of the survey contained 11 questions on respondents' general demographics that included both age at the time of doctorate program entry and current age, citizenship, ethnicity, marital status, and first generation status. Appendix B displays a copy of the survey distributed to the East Tennessee Doctors of Education and Appendix D provides the summation of the collected responses.

## Population

East Tennessee State University's Doctors of Education (N = 397) who attained their degree prior to 2004 were the population studied. Data maintained by the East Tennessee State University's Department of Educational Leadership and Policy Analysis assisted in contacting the population.

In addition to the initial desire to understand more about first-generation East Tennessee State University's Doctors of Education, additional descriptors discovered during the initial literature review reinforced the population's selection. A robust target resulted because the population chosen exhibited:

1. First-generation status - according to East Tennessee State University (2000b) the majority of enrollment is first-generation and because of the inclusion of both graduate and undergraduates within first-generation majority status reported, there exists a likelihood that the graduate subgroup will also include first-generation participants; and
2. Graduate status - the targeted population represents educational doctorate data currently limited in availability or unavailable compared to undergraduate findings.

## Design

The NSF's Survey of Earned Doctorates [SED] (2005) was the model chosen for developing the Survey of ETSU Doctors of Education [SEDE] instrument. Both national and regional surveys offered models for use when considering the usefulness in collecting both closed and open-ended information. Models included for consideration were the

College Student Experiences Questionnaire (Gonyea et al., 2003), surveys available in the 10<sup>th</sup> Mental Measurement's Yearbook (McCammon, 1989), the National Association of Graduate-Professional Students' Survey (2001), NSF's Survey of Earned Doctorates (2001, 2005), and an East Tennessee State University student survey (East Tennessee State University, 2004f).

Use of SED materials, including the survey instrument as a model, was allowed through public domain parameters identified in NORD Summary Report, 2003 (Hoffer et al., 2004). Although the SED was initially chosen as a model by this researcher because of extensive use in post-baccalaureate data collection (NSF, 2005), modifications to the SED facilitated collection of reflections and opinions more specific to first-generation East Tennessee State University Doctors of Education. A copy of the SED is included in Appendix A in its original form for comparison to modifications implemented.

Modifications to the SED included:

1. Deleting SED questions A2-A4 and A8 regarding the type of institution,
2. Deleting the SED specialties list and congratulations letter,
3. Transferring from the SED's Web based format to a written survey more suitable for mailing,
4. Changing the SED's reference to "at the time this survey was taken" to read "at the time of graduation",
5. Combining SED questions A5-A7 and B5 regarding type of support used in program but expanding the list of available choices,

6. Deleting SED question A9 regarding money owed for undergraduate and graduate education that repeats questions targeting graduates' support networks,
7. Retaining SED questions A10-A12 regarding time to degree but changing the format from rounding years to requesting specific date,
8. Combining SED questions B1-B2 and B4-B7 regarding post-graduate experiences but expanding the list of available choices,
9. Expanding SED question B3 regarding available residence choices,
10. Deleting SED question C1 regarding gender because of repetitious data collection,
11. Expanding SED questions C2-C5 regarding marital status, dependents, parents' education level and place of birth, and the list of available choices,
12. Retaining SED question C6 regarding date of birth,
13. Retaining SED questions C7-C8 regarding citizenship but expanding the list of available choices,
14. Deleting SED question C9 regarding high school attendance,
15. Deleting SED questions C10-C11 regarding presence of disabilities,
16. Combining SED questions C12-C14 regarding ethnicity but expanding the list of available choices,
17. Deleting SED question C15 requesting U.S. Social Security number,
18. Retaining SED questions C16- C17 regarding current address and including request for email address,



19. Retaining SED question C18 requesting signature but making request optional, and
20. Adding to the SEDE proposed questionnaire questions regarding Appalachian native status (Gunnin, 2002), community college experience (Inman and Mayes, 1999; McConnell, 2000), cohort experience, TTD (NRC, 1996), first-generation status (Hayes, 1997; Hsiao, 1992; Hurley, 2002; Inman & Mayes, 1999; Khanh, 2002; London, 1996; Mitchell, 1997; NCES, 1998b; Terenzini et al., 1996), and the ranking of limitations and facilitators perceived specific.

After making modifications, Part A of the Survey of ETSU Doctors of Education contained 18 questions on respondents' educational backgrounds that included community college attendance, degrees held at time of doctorate program entrance, association to educational cohorts, and perceived facilitators and barriers encountered. Part B contained five questions on respondents' postgraduation experiences that included employment, residential environment, and pursuit of other academic study. Part C contained 11 questions on respondents' general demographics that included both age at the time of doctorate program entry and current age, citizenship, ethnicity, marital status, and first generation status.

A copy of the resultant modified Survey of ETSU Doctors of Education is contained in Appendix B to this study. The following entitled sub-category elements identify the modified questions and targeted variables as found in the Survey of ETSU Doctors of Education instrument.

## Elements/Variables

The Survey of ETSU Doctors of Education (Appendix B) focused on three different areas: demographical, educational, and post-graduation backgrounds. Original SED variables retained in the SEDE questionnaire, the related question, and the modifications, if any, included:

1. Age – SEDE C1 and C6 was modified from SED C6 to reflect the graduates’ age at time of graduation,
2. Citizenship status – SEDE C4 was modified from SED C7 to reflect status at the time of graduation rather than at time of survey,
3. Educational history – SEDE A7 and A8 was modified from SED A10 and A11 to include entering class registration and exiting degree conferment dates rather than the subjective measurement phrase “How many years...” and SEDE A1 added to include community college participation (Inman & Mayes, 1999)
4. Financial support – SEDE A12, A13, and A14 was modified from SED A5, B5 and A6 to combine questions regarding financial support while expanding list of available choices,
5. First-generation status – SEDE C9 and C10 was modified from SED C4 to include a simplified listing that targets educational attainment of mother and father based upon their partial attendance or graduation of four-year college histories rather than multiplicity of degrees listed,
6. Marital status – SEDE C2 and C3 was modified from SED question C2 to include marital /relationship status changes during the doctorate program,

7. Number of dependents – SEDE A14 was modified from SED questions C3 to include financial support rather than the number of dependents,
8. Place of birth – SEDE C12 was duplicated from SED C5 to name specifically a city and state,
9. Post-graduate employment - SEDE B1 was modified from SED B4 and B6 to include actual post-graduate field of employment rather than projected field of employment,
10. Postgraduate study – SEDE B4 was modified from SED questions B1 and B4 to target additional training or study rather than projected or planned study
11. Race – SEDE C5 was modified from SED C12, C13, and C14 to include a category of Hispanic and Native American rather than multiple descriptions among Hispanic and Native American origins,
12. Residence – SEDE B2,B3, and B5 was modified to include both where and with whom rather than only state of postgraduate residence and SEDE C7-C8 will be modified to include similar pre-degree enrollment modified from SED B3,
13. Time-to-degree – SEDE A2-A9 was modified from SED questions A10 -A12, to include specific beginning and ending dates for degree programs rather than rounding to whole years, and expansion of variables will include stratification by attainment of an education specialist degree (Ed.S.)

Newly added variables to the proposed SEDE questions included:

14. Appalachian native status –SEDE C11 was added to extend demographic stratification

15. Cohort association – SEDE A10-A11 was added to extend educational background stratifications,
16. Community college attendance - SEDE A1, was added to extend educational background stratifications, and
17. Facilitators and barriers – SEDE A15-A18 was added as targeted variables to specifically identify factors affecting first-generation persistence both positively and negatively.

### Hypotheses

The quantitative null hypotheses statistically tested for this study and targeted SEDE variables include:

1. There is no difference in demographic characteristics between first-generation and non-first-generation East Tennessee State University's Doctors of Education at the time of graduation.
2. There is no difference in time-to-degree between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts.
3. There is no difference in educational backgrounds between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts.
4. There is no difference in registered-time-to-degree between East Tennessee State University's Doctors of Education who entered with an education specialist's degree and those who did not.

5. There is no difference in registered-time-to-degree between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts.
6. There is no difference in ranked facilitators to graduation between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts. Moreover, first-generation respondents' ranked 1, 2, and 3 facilitator's central location (median) equals the non-first-generation respondents' ranked 1, 2, and 3 facilitator's central location (median).
7. There is no difference in ranked barriers to graduation between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts. Moreover, first-generation respondents' ranked 1, 2, and 3 barrier's central location (median) equals the non-first-generation respondents' ranked 1, 2, and 3 barriers central location (median).
8. There is no association or difference in demographic characteristics and ranked facilitators among East Tennessee State University's Doctors of Education.
9. There is no association or difference in demographic characteristics and ranked barriers among East Tennessee State University's Doctors of Education.

10. There is no association or difference among East Tennessee State University's Doctors of Education educational histories and ranked facilitators.
11. There is no association or difference among East Tennessee State University Doctors' of Education educational histories and ranked barriers.

### Data Collection

This study collected responses from East Tennessee graduates who graduated prior to June 2004. Graduates on record in East Tennessee State University's Department of Educational Leadership and Policy Analysis received a copy of the Survey of ETSU Doctors of Education (Appendix B) through regular US Mail. Each survey had a cover letter (Appendix C) informing East Tennessee State University's Doctors of Education of the study's purpose and explaining the recipient's inclusion to the population. A self-addressed postage paid returned envelope was included with each survey. In order to identify nonrespondents, a check off method assisted in verifying if respondents returned surveys. For the protection of respondents' privacy, upon return of each survey and after any needed clarifications, personal identifiers were destroyed. Potential participants whose mail was undeliverable, returned, and marked deceased or unknown, were coded as unavailable for participation, and the potential participants name deleted from the database. Copies of the postings' texts are included in Appendix C.

Timelines for the proposed survey application were as follow:

Week 1: US MAIL POSTING - Initial contact cover letter and survey with a self-addressed postage paid returned envelope mailed to members of the population notifying recipients of survey's intent, researcher's contact information, and request for updates of individual respondent's membership data,

Week 5: NON-RESPONSE LETTER - Letter sent by US Mail to all non-responding graduates stressing significance and importance of responses,

Week 5: EMAIL – Letter sent by electronic posting by researcher's committee chair to non-respondent colleagues as sub-set of the population stressing significance and importance of responses,

Week 7: CLOSING POSTCARD - Postcard sent by US Mail and email where applicable to non-responding graduates reminding them again of importance of each responder's reply and ending date for submission of responses,

Week 10: Survey submission of responses timeline ended, and

Week 11: Analysis of collected responses began.

Responses received after week 10, but prior to week 12, were included within this study for analysis. However, once analysis had begun, responses received were marked as untimely, not included within the proposed study for analysis, and personal data deleted from the database.

### Survey Quality Measures

According to Gall et al., (1996), to increase both internal and external validity pretesting of the survey instrument is necessary. A pilot test of the proposed survey using East Tennessee State University doctoral students and professors as content specialists was completed in an attempt to detect faulty design and increase validity. Findings of this study do not include data collected during the piloting of the survey instrument.

Piloting of the survey by 15 former and current East Tennessee State University doctorate students resulted in modifications to two survey questions. Seven respondents did not complete questions requesting their specific age. Therefore, age intervals and less intrusive statements regarding a respondent's age were used. Six respondents requested the map of Appalachia be enlarged and it was. Informed consent statements were also included as required by the East Tennessee State Internal Review Board (IRB).

According to Hill (2002), when a survey targets an entire population no sampling, no variability, and no estimation techniques are necessary and therefore were not included within this study. This researcher does acknowledge that limited coverage error might exist because of the number of missing or no responses present among variables; however, where possible those numbers are noted. Steps in data collection were included within this study detailing follow-up contact as an attempt to conduct the survey in a manner to assure maximum response of targeted graduates.

### Research Measures

After data collection occurred, coding enabled both descriptive and inferential statistical analysis. Chapter 4 details analysis of the Survey of ETSU Doctors of



Education's three distinct sections under demographic, educational, and post-degree background sub-headings with Appendix D displaying the summations of collected responses as frequencies.

For testing of differences between first-generation and non-first-generation East Tennessee State University's Doctors of Education, responses from Part C, questions C9 through C11 received coding for determining first-generation and Appalachian status. To categorize first-generation respondents and their non-first-generation counterparts, a response of no to question C10, "Did either of your parents complete a four-year college" prompted coding as non-first-generation. Similar filtering to question C9, "Did either of your parents attend any college" received first-generation coding. Only if a respondent did not have a parent or parents to graduate from a 4-year university or college did they receive coding as non-first-generation. A response of yes to question C1, "Were you born in the Appalachian Mountain region", prompted coding as Appalachian.

### Data Analysis

This study employed an alpha level of .05 in testing the null forms of the following 11 hypotheses.

#### Hypothesis 1:

Crosstabs with Pearson's Chi-Square tested for differences between two groups using categorical variables of gender and variables from SEDE questions of C1-age, C3-marital status, C5-ethnicity, B2- residence, C11-Appalachian native status, and C10-first/generation status tested Hypothesis 1 to determine if there was a difference between the proportions of first-generation East Tennessee State University Doctors of Education

and their non-first-generation counterparts. The Pearson Chi-Square with asymptotic distributions provided comparisons to the established significance level of alpha .05 in each variable's cross tabulation with first-generation degreed respondents and their non-first-generation counterparts.

When using chi-square to test null hypothesis 1, the categorical variables of marital status, ethnicity, and Appalachian native status breached the 20% reliability parameters. Recoding promoted a 2X2 cell configuration of analysis that provided passage of reliability parameters. Recoding of variables included marital status: 1 = married, 0 = not married; ethnicity: 1 = white, 0 = non-white; and Appalachian native status: 1 = Appalachian, 0 = non-Appalachian.

Although recoded, ethnicity cells compared did not meet parameters of chi-square assurance of reliability; therefore, comparison of ethnicity proportions relied upon frequency counts and mathematical percentages rather than testing by chi-square. Examination of frequency counts revealed of the eight respondents (3.9%) who reported non-white status, seven were first-generation compared to the lone representative of non-first-generation. When tested by chi-square, the single case prompted 1 cell (25%) to have an expected count less than 5 with a minimum expected count as 2.04 and prompted removing ethnicity from the chi-square test.

### Hypothesis 2:

Variables from SEDE questions of A2- baccalaureate year, A8- doctorate year, and C10-first-generation status tested hypothesis 2. A *t*-test for two independent samples tested null hypothesis 2 for difference in time-to-degree between first-generation and

non-first-generation East Tennessee State University's Doctors of Education based upon the need to compare the means of two different groups using a variable measured on an interval (years). Collected responses from survey questions A2- baccalaureate attainment year and A8- doctorate attainment year provided the time interval between the baccalaureate and doctorate degree attainments. After computing the mathematical difference between A8 and A2 to determine the time interval in years, a comparison of time-to-degree between first-generation and non-first-generation variables as obtained from recoding information gathered in C10- parents' university completion and C9 - parental college attendance occurred.

### Hypothesis 3:

Crosstabs with Pearson's Chi-Square tested proportional differences between first-generation doctors and their counterparts by educational background. This involved analysis of comparisons among categorical data derived from collected responses to survey questions: A1- community college attendance, A6 – master's university type, A9- education specialist degree attainment, A10 – association with cohort, A11 – accessibility of cohort, and C10- first-generation status.

Because of breaching of cell parameters requiring a minimum of five responses, it was necessary to recode variables A9- Entered with Ed.S: 0 = No, 1 = Yes and A10- Cohort Association to 0 = No, 1= Yes. After recoding, zero cells held proportions based on a count of less than 5 to assure reliability of assumptions and no comparison held an asymptotic significance no less than .05.

#### Hypothesis 4:

A *t*-test for two independent samples tested null hypothesis 4 based upon the need to compare the means of two different groups, those having an education specialist degree and those who did not, using a variable measured on an interval (years). Collected responses from survey questions A7 – doctorate registration year, and A8- doctorate attainment year, provided the time interval between registration and doctorate degree attainment.

After computing the mathematical difference between A7 and A8 to determine the time interval in years, a new variable called registered-time-to-degree was compared to another newly created variable obtained from recoding information gathered in A9- education specialist degree. Respondents who reported they had not completed an education specialist degree received the code 1 = no education specialist and those who responded that they had entered with an education specialist degree received the code 0 = yes, education specialist. Recoding was slightly different for this variable because of construction of the categories provided in the survey. Survey question A9, choice number one was, “No, I did not enter into doctoral work with an Ed.S.” ; therefore, the filtering of the variable and assistance toward recoding was already markedly pronounced lending the code of 1 for no rather than the usual code transference of yes as demonstrated in other recodes.

For the purpose of this study, registered-time-to-degree is a time interval measurement in years between the respondent’s East Tennessee State University doctor of education program’s first doctorate class registration and doctorate degree conferment. A *t*-test for comparison of means between two independent samples with a confidence

level of 95% tested responses from survey questions A7 – education doctorate registration, A8- education doctorate attainment, and A9- education specialist attainment.

Hypothesis 5:

Collected responses from survey questions A7 – doctorate registration year, and A8- doctorate attainment year, provided the time interval between registration and doctorate degree attainment. A t-test for two independent samples used both the registered-time-to-degree variable obtained from the computation of mathematical difference between A7 and A8 obtained from testing of the previous hypothesis question 4 and the first-generation status variable obtained when testing hypothesis question 1.

Hypothesis 6:

A non-parametric, 2 independent samples test with Mann-Whitney *U* statistic, tested null hypothesis 6 for differences among the most significant facilitators ranked by respondents (ordinal level measurement) between first-generation East Tennessee State University Doctors of Education and their non-first-generation counterparts. Variables tested came from responses to SEDE survey questions A15- facilitators, A16- ranked facilitators, and C10-first generation status.

To prepare responses for testing using the Mann-Whitney test, variables representing the 27 facilitators listed (Appendix B) for question A16 – ranked facilitators were coded from 1= cost to 27 = other. Comparison of respondents' rankings between central location in distribution of medians in-group one – first-generation and group two – non-first-generation produced mean and summation ranks.

### Hypothesis 7:

A non-parametric, two independent samples test with Mann-Whitney  $U$  statistic, tested null hypothesis 7 for differences among the most significant barriers ranked by respondents (ordinal level measurement) between first-generation East Tennessee State University Doctors of Education and their non-first-generation counterparts. Variables tested came from responses to SEDE survey questions A17- barriers, A18- ranked barriers, and C10-first generation status.

To prepare responses for testing using the Mann-Whitney  $U$  test, variables representing the 27 barriers listed (Appendix B) for question A18 – ranked barriers were coded from 1= cost to 27 = other. Comparison of respondents' rankings between central location in distribution of medians in-group one – first-generation and group two – non-first-generation produced mean and summation ranks.

### Hypothesis 8:

Bivariate correlations (two-tailed) with a Spearman rank coefficient tested null hypothesis 8. Nominal variables of a categorical nature included gender and variables from SEDE questions C1-age at doctorate attainment, C2- marital status doctorate enrollment, C3- marital status doctorate attainment, C4-citizenship status, C5-ethnicity, C6- current age, C7 – residence location, C8-residence members, C9 – parental college attendance, and C10- first-generation-status, C11- Appalachian native status, and A16 – ranked facilitators . The two-tailed bivariate correlation test with Spearman rank correlation coefficient indicated if monotone associations (relationships) existed between ranked facilitators and demographic variables (nominal data) as coordinate pairs.

Paired coordinates of variables and rankings transformed significant correlations of less than the alpha .05 for plotting on a scatter plot. If present, resultant monotone relationships, as one variable increases or decreases the other does too, targeted associations among paired coordinates as straight lines (zero slopes) but did not provide increasing or decreasing values beyond percentages attribute to variance.

#### Hypothesis 9:

Bivariate correlations (two-tailed) with a Spearman rank coefficient tested null hypothesis 9. Nominal variables of a categorical nature included gender and variables from SEDE questions C1-age at doctorate attainment, C2- marital status doctorate enrollment, C3- marital status doctorate attainment, C4-citizenship status, C5-ethnicity, C6- current age, C7 – residence, C8-residence members, C9 – parental college attendance, and C10- first-generation-status, C11- Appalachian native status, and A18 – ranked barriers.

Paired coordinates of variables and rankings transformed significant correlations of less than the alpha .05 for plotting on a scatter plot. If present, resultant monotone relationships, as one variable increases or decreases the other does too, targeted associations among paired coordinates as straight lines (zero slopes) but did not provide increasing or decreasing values beyond percentages attribute to variance.

#### Hypothesis 10:

Bivariate correlations (two-tailed) with a Spearman rank coefficient tested hypothesis 10 and indicated if monotone relationships of significance less than .05

existed between ranked facilitators (ranked data) and demographic variables (categorical data). Nominal variables of a categorical nature were examined from SEDE questions A1- community college, A5- masters' college location, A6 – masters' college type, A9 – education specialist degree, A10 – cohort association, A11 – cohort accessibility, A12 – primary support, A13 – secondary support, B1 – Employment post doctorate, B2 – residence post doctorate, B3 – with whom lived post doctorate, B4 – formal study post doctorate, B5 – high school environment, and A 16 – ranked facilitators.

Paired coordinates of variables and rankings transformed significant correlations of less than the alpha .05 for plotting on a scatter plot. If present, resultant monotone relationships, as one variable increases or decreases the other does too, targeted associations among paired coordinates as straight lines (zero slopes).

#### Hypothesis 11:

Bivariate correlations (two-tailed) with a Spearman rank coefficient tested null hypothesis 11. Nominal variables of a categorical nature were examined from SEDE questions A1- community college, A5- masters college location, A6 – masters college type, A9 – education specialist degree, A10 – cohort association, A11 – cohort accessibility, A12 – primary support, A13 – secondary support, B1 – Employment post doctorate, B2 – residence post doctorate, B3 – residence members, B4 – post doctorate formal study, B5 – high school environment, and A 18 – ranked barriers .

Paired coordinates of variables and rankings transformed significant correlations of less than the alpha .05 for plotting on a scatter plot. If present, resultant monotone relationships, as one variable increases or decreases the other does too, targeted



associations among paired coordinates as straight lines (zero slopes) but did not provide increasing or decreasing values beyond percentages attribute to variance.

The following chapters build on Chapter 3's methodology. Chapter 4 presents the results of tests as described above while Chapter 5 presents the summations and conclusions of this study.

## CHAPTER 4

### ANALYSIS OF DATA

#### Introduction

This study examined data for statistical differences and the magnitude of relationships among variables as reported between first-generation East Tennessee State University doctoral graduates and their non-first-generation counterparts. A survey (Appendix B) was employed to collect responses (Appendix D) on general demographic, educational, and post-graduation backgrounds of East Tennessee State University's Doctors of Education who attained their degree prior to 2004. Quantitative descriptive analysis aided the statistical measure of responses in order to assess the existence of differences or associations on variables of interest using frequency tables, crosstabs with chi-square, t-tests for independent samples, non-parametric two independent samples with Mann-Whitney, and non-parametric bivariate correlations with Spearman rank coefficient. This chapter details results obtained through the reporting of respondents' demographic descriptions followed by testing of 11 null hypotheses.

#### Respondents

In order to determine if the survey's respondents were a representative sample of the population of the East Tennessee State University's Doctors of Education, gender and degree attainment years were compared between survey participants and the population. The population was 54.4% female; participants were 54.1% female. Both groups had a median attainment year of 1992. Given that respondents did not vary substantially from

the population on these two key variables, the sample appeared to be representative of the population; therefore, participants of the study would acceptably represent the population.

Of the 397 doctors contacted using methods described in chapter three, 209 (53%) responded. The respondents were predominantly Appalachian (66%), white (95.2), and female (54.1%) with 60% over the age of 40 at degree attainment (see Table 1). The mean age of respondents at the time of survey completion was 55.7 (range = 35 – 79).

Table 1

*Frequency (f) Table of Respondents' Demographic Characteristics*

Response	f	% (N=209)
Appalachian native		
Yes	138	66.0
No	67	32.1
Don't know	2	1.0
Ethnicity		
American Indian or Alaskan Native	1	0.5
Asian or Pacific Islander	1	0.5
Black or African American	6	2.9
Caucasian	199	95.2
Age at degree attainment		
30-34	27	12.9
35-39	45	21.5
40-44	39	18.7
45-49	50	23.9
50 or older	40	19.1

## Demographic Background

Additional key demographic responses indicated that at the time of degree attainment, the majority of respondents were U. S. Citizens (97.6%), married (82.3%), and first-generation (73.7%). Respondents received first-generation status coding if and only if both parents had not finished a 4-year university (see Table 2) and a response of some parental attendance to college did not preclude assignment to first-generation status inclusion.

Table 2

*Frequency (f) Table of First-Generation Status Determinants*

Response	f	% (N=209)
Parents finished 4-year university		
No	154	73.7
Yes-both	14	6.7
Yes- Father only	17	8.1
Yes- Mother only	21	10.0
Don't know	1	0.5
No response	2	1.0
Parents attended college		
No	124	59.3
Yes-both	34	16.3
Yes- Father only	21	10.0
Yes- Mother only	29	13.9
No response	1	0.5

### Educational Background

Upon entrance to East Tennessee State University's doctoral program, the majority of respondents had neither attended a community college (84.7%), nor joined a doctoral cohort (66.5%), nor attained an education specialist degree (71.3%). Moreover, only 33% reported masters' degree attainment from an out-of-state university in comparison to nearly half (48.8%) of the respondents reporting masters' degree attainment from East Tennessee State University. The overwhelming majority (88%) of respondents reported attendance of public college as compared to private (10.5%).

As a part of the doctoral program, cohort membership was available as a common practice to doctoral students beginning in 1994 (East Tennessee State University, 2004c). Of the 139 respondents who attained their degree after 1989, 46.8% (n=65) acknowledged association with a cohort in comparison to 20.1% of the respondents who reported that although perceived available, they chose not to join. Moreover, of the respondents reporting cohorts as not available to them, 15.8% reported they would not have joined a cohort if given the opportunity. Of the respondents reporting they entered into the doctorate program after 1989 with an education specialist degree (n= 36) half (50%) reported they had not been associated with a cohort.

When respondents identified facilitators that positively affected doctorate attainment, the largest percentages of responses included faculty (73.2%), driving distance (69.9%), class schedule (54.5%), and spouse or partner (49.8%). As shown in Table 3, when asked to prioritize or rank the three most significant facilitators, respondents ranked as the number 1 facilitator - their spouse or partner.

Table 3

*Frequency (f) Table of Respondents' Ranked Facilitators*

Facilitator Rank	f	% (N=209)
Number 1		
Spouse/ partner	43	20.6
Faculty	27	12.9
Driving distance	24	11.5
Number 2		
Driving distance	27	12.9
Faculty	27	12.9
Class schedule	17	8.1
Number 3		
Faculty	31	14.8
Class schedule	21	10.0
Employer	18	8.6

When respondents identified barriers that negatively affected doctorate attainment, the largest percentages of responses included both non-listed encounters collectively labeled as other (28.7%) and listed encounters that included costs (26.8%), driving distance (18.7%), and children (13.4%). Table 4 displays the itemization of the 57

explanations offered by respondents. Moreover, when asked to rank the three most significant barriers, respondents ranked as number 1 - other, number 2 - costs, and number 3 – faculty (See Table 5).

Table 4  
*Explanation of “Other” by First-Generation and Non-First-Generation Respondents*

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First Generation	
<ol style="list-style-type: none"> <li>1. Being away from home during residency</li> <li>2. Cohort was not available in higher education program</li> <li>3. Desire to quit during dissertation</li> <li>4. Dissertation phase was extremely difficult</li> <li>5. Dissertation Topic</li> <li>6. -7 Family responsibilities/obligations</li> <li>8. Family tragedy</li> <li>9. Father had terminal illness</li> <li>10. Finances</li> <li>11. Full-time job/stress</li> <li>12. Full time employment</li> <li>13. Going to work and church at same time</li> <li>14. Graduate Office</li> <li>15. -16 Health</li> <li>17. Home Responsibilities</li> <li>18. Inadequate instructors</li> <li>19. Lack of time with three children</li> <li>20. Moved to another state</li> </ol>	<ol style="list-style-type: none"> <li>21. Myself...I moved away to take a job before finishing</li> <li>22. Nitpicking by dean of graduate studies</li> <li>23. No On-line class accommodations</li> <li>24. Offices losing papers and dates being changed</li> <li>25. Out of State Tuition</li> <li>26. Personal motivation to complete program</li> <li>27. Poor health</li> <li>28. Pressure</li> <li>29. -39 Residency required</li> <li>40. Switching to a new job during doctorate program</li> <li>41. -44 Time</li> <li>45. Time factor: Balancing job, family, and classes</li> <li>46. Time spent away from family</li> <li>47. Time; not enough job opportunities</li> <li>48. Worked full-time; family illness</li> </ol>
Non-First Generation	
<ol style="list-style-type: none"> <li>49. Department was short staffed</li> <li>50. Fellowship money was not...enough</li> <li>51. Not applicable</li> <li>52. Personal issues raising family with 3 young children</li> </ol>	<ol style="list-style-type: none"> <li>53. Program could have been more intellectually stimulating</li> <li>54. -55 Residency</li> <li>56. -57 Time</li> </ol>

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Table 5

*Frequency (f) Table of Respondents' Ranked Barriers*

Barrier Rank	f	% (N=209)
Number 1		
Other	39	18.7
Costs	31	14.8
None	30	14.4
Number 2		
Driving distance	17	8.1
Costs	15	7.2
Other	11	5.3
Number 3		
Costs	11	5.3
Schedule of classes	10	4.8
Employer	8	3.8

Postgraduation Background

The largest percentage (31.1%) of respondents reported they had lived within a 20-mile radius of East Tennessee State University while enrolled in the doctorate



program. However, nearly half (48.7%) reported they resided more than 50 miles from campus after degree attainment.

This study did not collect employment data of respondents prior to graduation. However, the four largest percentages of respondents' employment fields after degree attainments included U. S. public schools with pre-kindergarten through 12th grade environments (44.5%), post secondary schools (20.6%), non-East Tennessee State 4-year colleges (13.4%), and East Tennessee State University (10%).

The largest percentage (67.3%) of respondents who reported employment by 4-year colleges was also first-generation. Among the 21 respondents who reported post-doctorate degree employment by East Tennessee State University, 13 respondents received coding as first-generation while among the 28 respondents who reported post-doctorate degree employment by other 4-year colleges, 20 respondents received coding as first generation.

### Hypotheses Testing

Null hypotheses targeted differences and associations between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts. Shown below are the results of testing the 11 null hypotheses.

#### Hypothesis 1:

Null hypothesis 1: There is no difference in demographic characteristics between first-generation and non-first-generation East Tennessee State University's Doctors of Education respondents at the time of graduation.

Testing of null hypothesis 1 used crosstabs with chi-square. To assure chi-square assumptions remained reliable, no more than 20% of the comparison cells for this hypothesis should have an observed frequency of no less than five, and an expected frequency of no less than one for each cell. Although two cells (16.7%) in the chi-square had an expected frequency of fewer than five, the total number of cells did not exceed 20%, and violation of the assumptions of chi-square for this hypothesis did not occur.

More first-generation respondents were of Appalachian native status than expected. As shown in Table 6, first-generation respondents reporting Appalachian native status when compared to expected and observed counts was nine more than expected, while the non-first-generation difference of count was nine less. In this comparison, the 2X2 cell chi-square yielded a moderate significance factor ( $\Phi = .210$ ) indicating the existence of a relationship between Appalachian native status and first-generation status.

Additionally, a difference in the frequency count of first-generation respondents who were between the ages of 45 – 49 years at the time of graduation when compared to expect and observed counts was nine more than expected, while non-first-generation was nine less. Conversely, the difference in the frequency counts of first-generation respondents who were 50 years of age or older was 4 less than expected, while the non-first-generation respondents count was 4 more. The multiple celled chi-square yielded a moderate significance factor (contingency coefficient = .238) indicating that both proportions of first-generation respondents who were between 45-49 years of age and of non-first-generation respondents who were 50 years of age or older, was more than could occur by chance.

Table 6

*Chi-Square Test of Non-First-Generation and First-Generation by Demographics*

Demographic variable	F	f <sub>e</sub>	f	f <sub>e</sub>	$\chi^2$
		Non-first-generation	First-generation		
Age					
25-29	2	1.3	3	3.7	
30-34	10	6.9	17	20.1	
35-39	12	11.0	31	32.0	
40-44	10	10.0	29	29.0	
45-49	4	12.6	45	36.4	
50 or older	14	10.2	26	29.8	12.191*
Gender					
Female	33	28.3	79	83.7	
Male	19	23.7	75	70.3	2.318
Marital Status					
Not married	9	9.1	27	26.9	
Married	43	42.9	127	127.1	.001
Appalachian Native					
Not Appalachian	26	17.2	42	50.8	
Appalachian	26	34.8	112	103.2	9.08 *

Indicates results significant beyond the .05 level ( $p < .05$ )

Decision: Chi-square testing yielded significant differences in counts among age-intervals and Appalachian status between first-generation and non-first-generation

respondents indicating relationships of moderate strength. Therefore, rejection of null hypotheses 1 occurred.

Hypothesis 2:

Null hypothesis 2: There is no difference in time-to-degree between first-generation and non-first-generation East Tennessee State University's Doctors of Education.

A *t*-test for independent samples tested null hypothesis 2. As shown in Table 7, results comparing mean time intervals that elapsed from the respondents' receipt of the baccalaureate until doctorate attainment between first-generation respondents and their non-first-generation counterparts revealed both groups averaged approximately 19 years to degree attainment.

Table 7

*Descriptive Statistics for Time-to-Degree between First-Generation and Non-First-Generation Degreed Respondents*

<i>Group</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>% (N=209)</i>
First-Generation	153	19.33	7.60		
Non-First-Generation	55	18.76	8.51	.456	.380

Decision: Retention of null hypothesis 2 occurred after a *t*-test did not reveal significant differences in time-to-degree between first-generation respondents and their non-first-generation counterparts.

### Hypothesis 3:

Null hypothesis 3: There is no difference in educational backgrounds between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts.

Crosstabs with chi-square tested null hypothesis 3. To assure chi-square assumptions remained reliable, no more than 20% of the comparison cells for this hypothesis should have an observed frequency of no less than five, and an expected frequency of one, for each cell. As shown in Table 8, zero cells violated reliability assumptions when comparing proportions of observed or expected frequencies.

Frequencies between first-generation respondents did not appear significant to warrant rejection of the null hypothesis 3 (see Table 8); however, this researcher did observe that 23 of the 31 respondents who reported they had attended community college also received first-generation status coding. Moreover, 98 of the 140 first-generation respondents reported either they had joined or desired to join a cohort when perceived available, compared to 26 of 47 non-first-generation respondents. Fifty of the 153 first-generation respondents reported they were associated with a cohort compared to 17 of 34 non-first-generation respondents who reported association to a cohort.

When comparing proportions of respondents who held an education specialist degree upon entering their doctorate program between first-generation and non-first-generation respondents, of the 153 first-generation respondents, 46 reported they had entered their doctorate program with an Ed.S. This was in comparison to 11 of the 41 non-first-generation respondents.

Table 8

*Chi-Square Test of First-Generation and Non-First-Generation by Educational**Background*

Education Variable	f	f <sub>e</sub>	f	f <sub>e</sub>	$\chi^2$
	Non-First-		First-Generation		
Community college attendance					
No	44	44.1	130	129.9	
Yes	8	7.9	23	23.1	.004
Cohort accessibility					
Available –did not join	9	7.8	22	23.2	
Available – did join	17	17.1	51	50.9	
Not available – not desired	12	10.6	30	31.4	
Not available – desired	9	11.6	37	34.4	1.238
Cohort association					
No	34	34.3	103	102.7	
Yes	17	16.8	50	50.3	.007
Education specialist degree					
No	41	37.5	107	110.5	
Yes	11	14.5	46	42.5	1.535
Masters college type					
Public	45	45.7	137	136.3	
Private	6	5.3	15	15.7	.148

Decision: After crosstabs with chi-square failed to yield significant differences among proportions when comparing observed and expected frequencies between first-

generation respondents and their non-first-generation counterparts by educational background, retention of null hypothesis 3 occurred.

Hypothesis 4:

Null hypothesis 4: There is no difference in registered-time-to-degree between East Tennessee State University’s Doctors of Education who entered with an education specialist’s degree and those who did not.

Table 9

*Descriptive Statistics for Registered-Time-to-Degree Intervals between Respondents with an Education Specialist Degree and Those without*

<i>Group</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>% (N=209)</i>
EDS	52	3.98	2.68		
No EDS	138	4.96	2.50	2.370	.019*

\*  $p < .05$

A *t*-test for independent samples tested null hypothesis 4. As shown in Table 9, on average, respondents having an education specialist degree completed their doctorate almost one year earlier (mean = 3.98), than non-education specialist degree counterparts’ average of almost 5 years (mean = 4.96). Education specialist degreed respondents’ median registered-time-to-degree of 3 years was also 1 year less than their non-education specialist degreed counterparts’ median of 4 years. The difference between education specialist degreed respondents’ time-interval means and their non-education specialist

degreed counterparts produced an asymptotical significance of .019 and indicated there was less than a two percent probability that the findings were by chance.

Upon discovery of significant differences of registered-time-to-degree intervals' means between respondents with an education specialist degree when entering their doctorate program and their non-education specialist degreed counterparts, this researcher examined more closely the variable of education specialist degree. Review of doctorate timelines required of respondents by East Tennessee State University (2003c) revealed students entering with education specialist degrees are required to complete a minimum of 42 semester-credit program within five years of registration as compared to a 66 semester-credit program that must be completed within seven years of registration for students not holding an education specialist degree.

Comparisons of mean completion time intervals to compulsory program timelines revealed differing completion ratios between education specialist degreed respondents and their non-education specialist degree counterparts. Non-education specialist degreed respondents' ratio of 4.96 years mean completion time to the 7 years allocated for completion (.71) was comparatively less than education specialist degreed respondents' ratio of 3.98 years means completion time to the 5 years allocated for completion (.80).

Decision: Rejection of null hypothesis 4 occurred after comparison of ratios, means, and computations of asymptotic significance through a *t*-test for independent samples demonstrated evidence that the registered-time-to degree intervals are different between respondents who entered with an education specialist degree and those who did not.



Hypothesis 5:

Null hypothesis 5: There is no difference in registered-time-to-degree between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts.

Testing of null hypothesis 5 consisted of a *t*-test for comparison of means between two independent samples (first-generation and non-first-generation) with a confidence level of 95%. Values of the *t* statistic (see Table 10) computed and compared with a standard *t*-table produced no asymptotical significance (.40) below the acceptable alpha level. This indicated that there was no significant difference beyond a normal chance occurrence that the registered-time-to degree intervals are different between first-generation respondents and their non-first-generation counterparts.

Table 10

*Descriptive Statistics for Registered -Time-to-Degree between First-Generation and Non-First-Generation Respondents*

<i>Group</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>% (N=209)</i>
First Generation	141	4.64	2.66		
Non- First-Generation	48	5.00	2.26	.843	.400

After testing in hypothesis 4 revealed compulsory degree completion time intervals were dependent upon education specialist degree status at the time of a respondent's entrance to their doctorate program, additional *t*-testing occurred in hypothesis 5. As shown in Table 11, resultant asymptotical differences of .334 for the

education specialist degreed respondents and .181 for the non-education specialist degreed respondents did not produce evidence of significant difference between first-generation and non-first-generation respondents with an education specialist degree and not beyond that attributed to by chance within a 95% confidence level.

Table 11

*Descriptive Statistics for Registered -Time-to-Degree between First-Generation and Non-First-Generation Respondents Stratified by Education Specialist Degree Status*

<i>Group</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>% (N=209)</i>
Education Specialist Degreed					
First Generation	41	4.22	2.89		
Non- First-Generation	10	3.30	1.34	-.977	.334
Non-Education Specialist Degreed					
First Generation	99	4.81	2.57		
Non- First-Generation	38	5.45	2.25	1.346	.181

Decision: Retention of null hypothesis 5 occurred after *t*-tests of two independent samples failed to reveal significant differences when comparing group means between first-generation respondents and their non-first-generation counterparts to warrant rejection.

### Hypothesis 6:

Null hypothesis 6: There is no difference in ranked facilitators to graduation between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts. Moreover, first-generation respondents' ranked 1, 2, and 3 facilitator's central location (median) equals the non-first-generation respondents' ranked 1, 2, and 3 facilitator's central location (median).

A Mann-Whitney  $U$  test for ranked variables tested null hypothesis 6. When the size of the samples for both groups is greater than 20 ( $n_1 = n_2 > 20$ ), the sampling distribution of  $U$  approaches the normal distribution. Therefore, if the computed  $z$  value exceeds the critical value of less than a .05 asymptotical significance, rejection of the null hypothesis should occur.

As shown in Table 12, comparison of central tendencies among ranked facilitators between first-generation respondents and their non-first-generation counterparts did not produce asymptotic significances from  $z$  values below the acceptable alpha level .05. This indicated no significant differences existed beyond those created by normal chance occurrences. Moreover, the distribution of the ranked facilitator's central location of first-generation respondents equaled the distribution of the ranked facilitator's central location of non-first-generation respondents.

Table 12

*Mann Whitney U Test Results for Ranked Facilitators' Central Location Disbursement between First-Generation and Non-First-Generation Respondents*

Facilitator	Group	n	Mean Rank	z	% (N=209)
Rank 1					
	Non-First-Generation	51	105.82		
	First-Generation	153	101.39	-.468	.640
Rank 2					
	Non-First-Generation	51	98.85		
	First-Generation	150	101.73	-.306	.759
Rank 3					
	Non-First-Generation	51	104.23		
	First-Generation	147	97.86	-.686	.493

Decision: Retention of null hypothesis 6 occurred after a Mann Whitney *U* test with computed *z* values failed to show evidence of significant differences in dispersion of central tendencies among ranked facilitators between first-generation respondents and their non-first-generation counterparts.

Hypothesis 7:

Null hypothesis 7: There is no difference in ranked barriers to graduation between first-generation East Tennessee State University's Doctors of Education and their non-

first-generation counterparts. Moreover, first-generation respondents' ranked 1, 2, and 3 barrier's central location (median) equals the non-first-generation respondents' ranked 1, 2, and 3 barriers central location (median).

A Mann-Whitney  $U$  test for ranked variables tested null hypothesis 7. As shown in Table 13, computed  $z$  values compared with a standard  $z$ -table produced no asymptotical significances below the acceptable alpha level of .05. This indicated no significant differences exist in the distributions of the central locations among ranked barriers between first-generation respondents and their non-first-generation counterparts beyond that of normal chance occurrences. Moreover, the central locations of barrier ranks by first-generation respondents equaled the central locations of barrier ranks by non-first-generation respondents.

While approximately one seventh of both first-generation (14.9%) and non-first-generation (13.5%) respondents reported no barriers encountered to degree attainment, respondents collectively offered 57 explanations (Appendix E) for barriers they had encountered but the survey did not list. Of the number of explanations offered for non-listed barriers under the heading of *other*, the bulk (82.4%) was from first-generation respondents who mentioned residency requirements (21.1%) and time (12.7%) as the two largest percentages.

Among all first-generation respondents ( $n=154$ ), when residency as a significant barrier was examined collectively from both the 57 explanations for the sub-heading *other* and the 27 listed in the survey, 7.1% of first-generation respondents ( $n=154$ ) ranked residency as number 1. This meant that residency ranked slightly less than that of

driving distance (9.1%) and costs (13.6%) among barriers ranked as number 1 or most significant overall.

Table 13

*Mann Whitney U Test Results for Ranked Barriers' Central Location Disbursement between First-Generation and Non-First-Generation Respondents*

Barrier Rank	Group	n	Mean Rank	z	% (N=209)
Rank 1	Non-First-Generation	49	89.19		
	First-Generation	146	100.96	-1.273	.203
Rank 2	Non-First-Generation	31	64.13		
	First-Generation	87	57.85	-.881	.378
Rank 3	Non-First-Generation	25	36.02		
	First-Generation	59	45.25	-1.590	.112

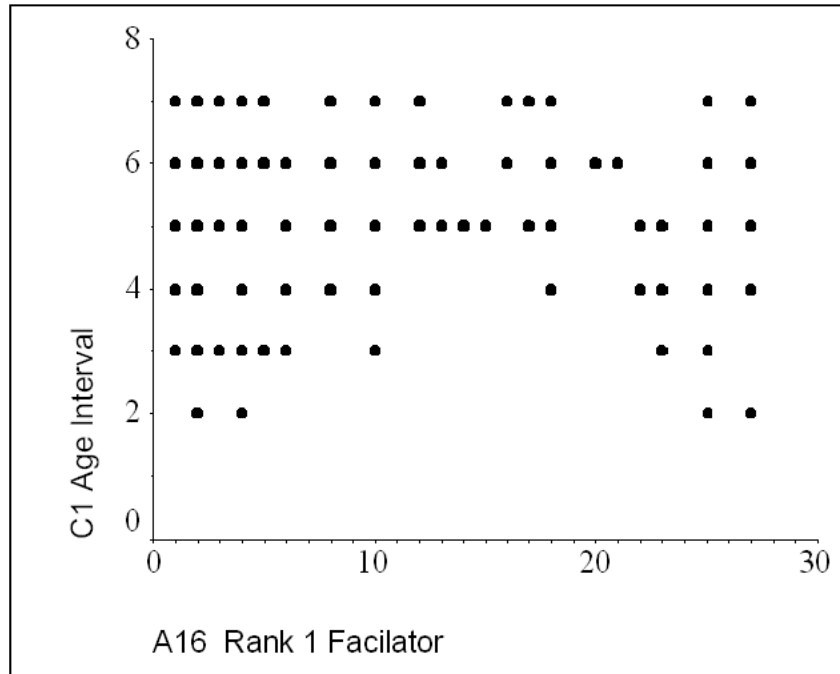
Decision: Retention of null hypothesis 7 occurred after a Mann Whitney *U* test with computed *z* values did not show evidence of significant differences among ranked barriers with respect to dispersion of central tendencies between first-generation respondents and their non-first-generation counterparts

### Hypothesis 8:

Null hypothesis 8: There is no association or difference in demographic characteristics and ranked facilitators among East Tennessee State University's Doctors of Education.

Bivariate correlations with Spearman rank coefficient tested null hypothesis 8. If monotone relationships are present, flat lines (zero slopes) created from clustered coordinates should result in scatter plots. When plotted, the most complete lines existed at the intersections representing the paired coordinates of no parent had attended college and facilitators ranked as number 2, and the paired coordinates of the age interval 40-44 years and facilitators ranked as number 1.

Ranked facilitators as number 1 from survey question A16 received codes established in hypotheses 6 testing from 1 = costs to 27 = other and the seven age-intervals found in C1 received codes that included 1 = 24 or younger, 2 = 25-29, 3 = 30-34, 4 = 35-39, 5 = 40-44, 6 = 45-49, and 7 = 50 or older (Appendix B). As shown in Figure 3, the scatter plot generated from plotting asymptotical significant ( $p < .05$ ) pairs among these demographic variables of age and facilitators ranked as number 1 depicted flat line clusters (zero slopes) and provided evidence of association. The most complete flat line observed was at the intersections of paired coordinates generated by the age interval response number 6 (45-49 years of age) and number one ranked facilitators. Squaring of the bivariate correlation's Spearman rank coefficient ( $r_s = -.157$ ) indicated the association to a respondent's age at the time of degree attainment could explain approximately 3% (.025) of the variance among facilitators ranked as number 1.



*Figure 3.* Scatter Plot of Significant Bivariate Coordinate Pairs Comparing Respondents' Ages at Time of Degree Attainment and Facilitators Ranked as Number 1

Ranked facilitators as number 2 from survey question A16 received codes established in hypothesis 6 testing from 1 = costs to 27 = other and the five responses to parental college attendance available in survey question C9 received codes that included 1 = None, 2 = Both, 3 = Father only, 4 = Mother only, and 5 = Don't know. As shown in Figure 4, the second scatter plot created depicts additional flat line clusters (zero slopes) among paired coordinates of respondents' parental college attendance and facilitators ranked as number two. The most complete flat line observed was at the intersections of coordinate pairs between parental college attendance question C9 response number 1 (none) and facilitators ranked as number 2. Squaring of the correlation's Spearman rank coefficient ( $r_s = .149$ ) indicated the association to respondents' parental college



attendance could explain approximately 2% (.022) of the variance among facilitators ranked as number 2.

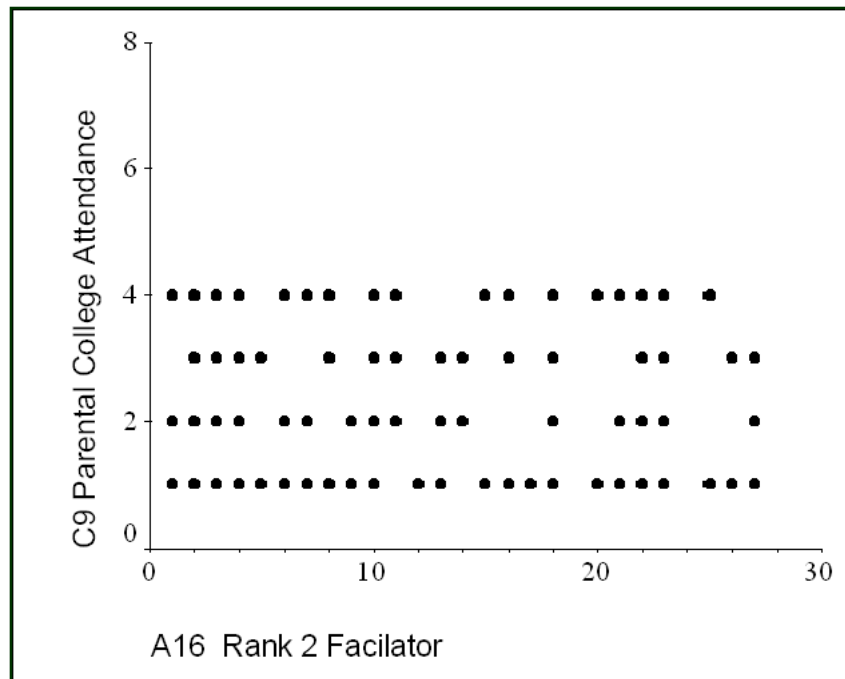


Figure 4. Scatter Plot of Significant Bivariate Coordinate Pairs Comparing Respondents' Parental College Attendance and Facilitators Ranked as Number 2

Decision: Rejection of null hypothesis 8 occurred after scatter plots provided evidence of two monotone associations; the first between respondents' ages at the time of degree attainment and their ranking of facilitators as number 1 significance, and the second among respondents' parental college attendance and the ranking of facilitators as number 2 significance. Although slight (.02 and .03), the presence of monotone associations supported rejection of the null.

### Hypothesis 9:

Null hypothesis 9: There is no association or difference in demographic characteristics and ranked barriers among East Tennessee State University's Doctors of Education.

Bivariate correlations (two tailed) with Spearman rank coefficient tested null hypothesis 9. Ranked barriers from survey question A18 received codes established in hypothesis 7 testing from 1 = costs to 27 = other, and the five available responses in C3 (marital status at the time of graduation) included 1 = not married or partnered, 2 = married or partnered, 3 = separated from spouse or partner, 4 = divorced from spouse or partner, and 5 = spouse or partner deceased. As shown in Figure 5, the scatter plot generated from plotting asymptotical significant ( $p < .05$ ) pairs among respondents' marital status and barriers ranked as number 2 resulted in flat line clusters (zero slopes) with the most complete shown between rank 2 barriers and C3 response number 2 (married or partnered) coordinates. Squaring of the bivariate correlation's Spearman rank coefficient (.194) indicated an association to a respondent's marital status at the time of graduation could explain approximately 4% (.038) of the variance among barriers ranked as number 2.

Decision: Rejection of null hypothesis 9 occurred after a scatter plot provided evidence of a monotone association between marital status at time of degree attainment and barriers ranked as number 2. Although slight (.04), the monotone association supported rejection of the null.

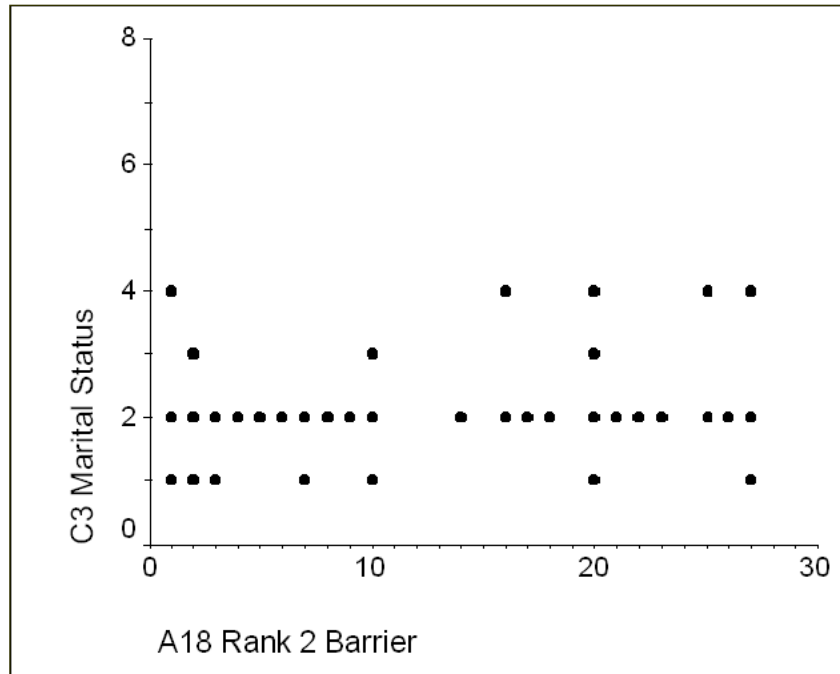


Figure 5. Scatter Plot of Significant Bivariate Coordinate Pairs Comparing Barriers

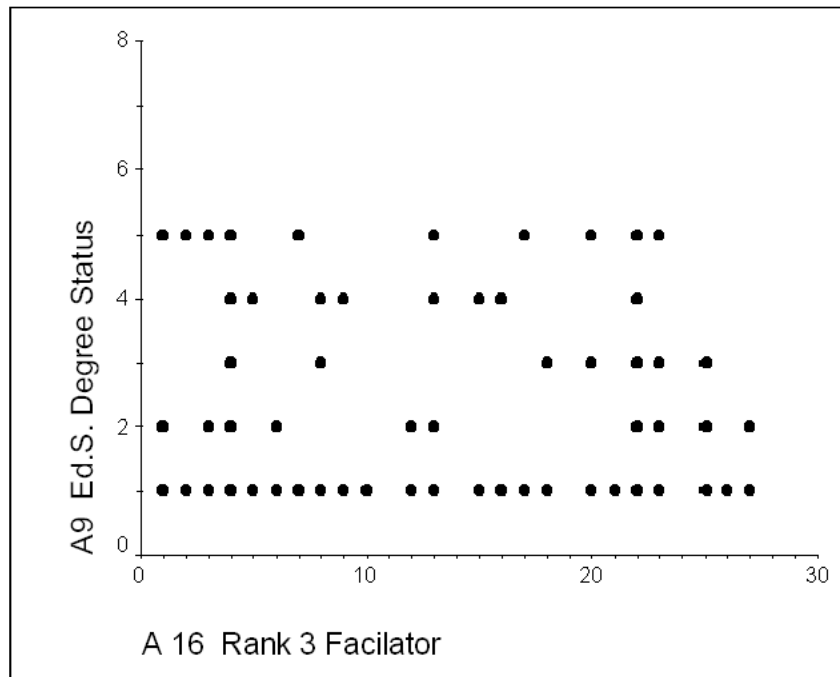
Ranked as Number 2 and Respondents' Marital Status at the Time of Degree Attainment

Hypothesis 10:

Null hypothesis 10: There is no association or difference in educational histories and ranked facilitators among East Tennessee State University's Doctors of Education.

Bivariate correlations (two-tailed) with a Spearman rank coefficient tested null hypothesis 10. Rank 3 facilitators received coding established in hypothesis 6 from 1 = costs to 27 = other while the seven available responses from survey question A9 were coded as 1 = No, I did not enter into doctoral work with an Ed.S., 2 = Yes, I attained my Ed.S. from ETSU, 3 = Yes, I attained my Ed.S. from another in-state public university, 4 = Yes, I attained my Ed.S. from another in-state private university, 5 = Yes, I attained my Ed.S. from an out-of-state public university, 6 = Yes, I attained my Ed.S. from an out-of-

state private university, and 7 = Yes, other. As shown in Figure 6, the scatter plot generated from plotting asymptotical significant ( $p < .05$ ) pairs among education specialist degree status and rankings of facilitators as number 3 depicted flat line clusters indicating evidence of a monotone association. The most complete flat line observed was at the intersections of coordinates between facilitators ranked as number 3 and response number 1 (No, I did not enter into doctoral work with an Ed.S.) from education specialist degree survey question A9. Squaring of the bivariate correlation's Spearman rank coefficient (.160) indicated an association to a respondent entering with an education specialist degree could explain approximately 3% (.026) of the variance among facilitators ranked as number 3.



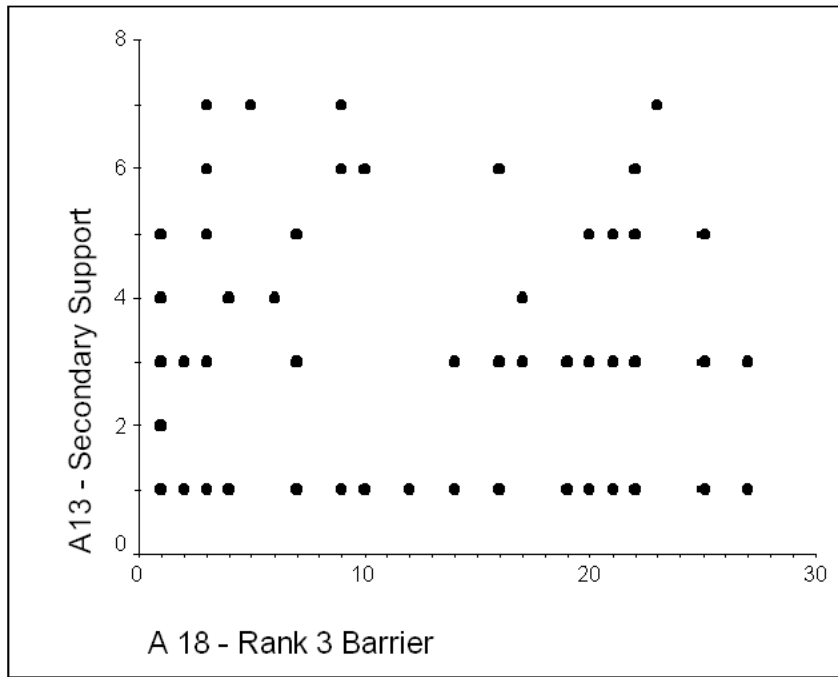
*Figure 6:* Scatter Plot of Significant Bivariate Coordinate Pairs Comparing Facilitators Ranked as Number 3 and Respondents' Education Specialist Degree Status

Decision: Rejection of null hypothesis 10 occurred after a scatter plot provided evidence of a monotone association between education specialist degree status and rankings of facilitators as number 3. Although slight (.03), the monotone association supported rejection of the null.

#### Hypothesis 11:

Null hypothesis 11: There is no association or difference in educational histories and ranked barriers among East Tennessee State University's Doctors of Education.

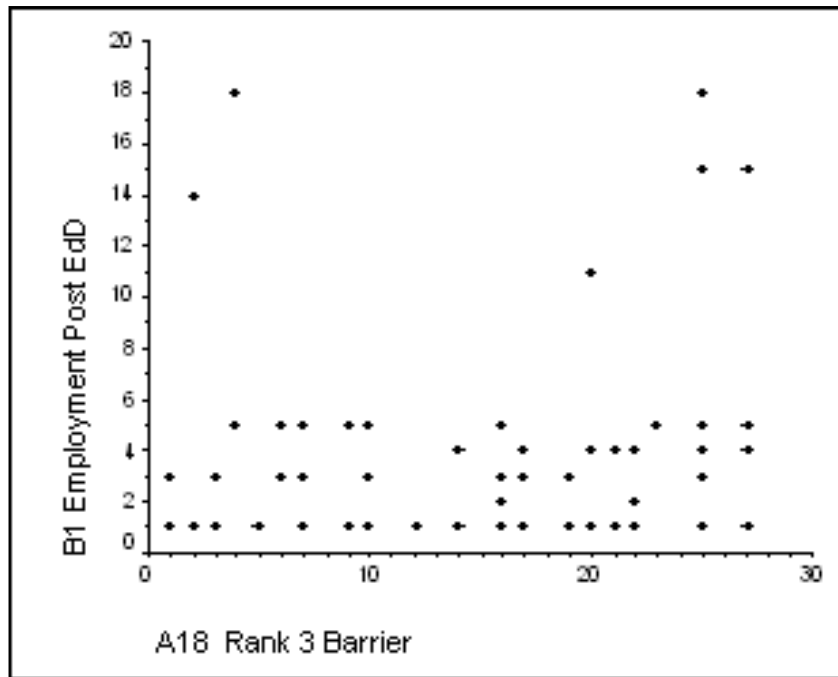
Bivariate correlations (two-tailed) with Spearman rank coefficient tested null hypothesis 11. Rank 3 barriers received coding established in hypothesis 7 from 1= costs to 27 = other and responses from survey question A13 received codes that included 1 = Self, 2 = Parents, 3 = Spouse or partner, 4 = Employer's training or educational program, 5 = Fellowship, scholarships and/or grants other than employer's, 6 = Loans, and 7 = Other. As shown in Figure 7, the scatter plot generated from plotting asymptotical significant pairs ( $p < .05$ ) between variables of secondary support and barriers ranked as number 3, depicted flat line clusters and provided evidence of an existent monotone association. The most complete flat line observed was at the intersection between coordinates of rank 3 barriers and secondary support question A13 response number 1 (self). Squaring of the bivariate correlation's Spearman rank coefficient (-.242) indicated the association to a respondent's secondary support could explain approximately 6% (.059) of the variance among barriers ranked as number 3.



*Figure 7.* Scatter Plot of Significant Bivariate Coordinate Pairs Comparing Facilitators Ranked as Number 3 and Respondents' Secondary Support

This researcher observed in other comparisons of educational variables, additional evidence of an association to coded rank 3 barriers and post-degree employment variables. Employment responses from question B1 received coding that included 1 = U.S. public preschool, elementary, or secondary school, 2 = U.S. private preschool, elementary or secondary school, 3 = U.S. 2-year junior, community college, or technical institute, 4 = ETSU (non-student status), 5 = U.S. 4-year college or university other than ETSU ... 11 = Nonprofit organization, 12 = Self-employment (home-based) ... and 18 = other. As shown in Figure 8, a second scatter plot generated from plotting asymptotical significant ( $p < .05$ ) pairs between respondents' post doctorate employment and barriers ranked as number 3 also depicted clusters of flat lines and provided additional evidence of an association. The most complete flat line observed in this association was between

the intersections of barriers ranked as number 3 and employment after degree attainment question B1 response number 1 (U.S. public preschool, elementary, or secondary school). Squaring of the bivariate correlation's Spearman rank coefficient (.234) indicated the association to a respondents' post doctorate employment could explain approximately 6% (.055) of the variance among ranked barriers as number 3.



*Figure 8.* Scatter Plot of Significant Bivariate Coordinate Pairs Comparing Barriers Ranked as Number 3 and Post Doctorate Employment

Decision: Rejection of null hypothesis 11 occurred after scatter plots provided evidence of two monotone associations; the first between a respondent's secondary support source and barriers ranked as number 3, and the second among post doctorate employment and barriers ranked as number 3. Although both were slight (.06), the presence of associations supported rejection of the null.

## CHAPTER 5

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Introduction

This chapter is the summation of responses collected and null hypotheses tested in Chapter 4. Although summations, conclusions, and recommendations represent those for East Tennessee State University's Doctors of Education only, the findings presented are in two distinct sections. Summations and conclusions presented in the first section precede recommendations in the second. Moreover, following the pattern established in Chapter 4, under the subheading of demographic and educational findings, this chapter presents general demographic summations and conclusions prior to hypotheses findings.

Because of the absence of data from comparable studies, there was no reason to attempt a comparison with other data. However, this researcher does offer alternate explanations of possible statistical abnormalities for consideration and comparisons to trends observed among literature reviewed in Chapter 2 (see Figures 1 and 2).

#### Summations and Conclusions

##### Demographic, Educational, and Postgraduation Background Findings

Previous East Tennessee State University literature and studies (1998, 1999a, 1999b, 2000a, 2000b, 2003a, 2003b, 2003c, 2003d, 2004a, 2004b, 2004c, 2004d, 2004e, 2005a) revealed that first-generation students not only composed the bulk of East Tennessee State University's campus enrollment, but also were among the largest percentages reaching doctorate attainment, especially in education. A composite profile



of East Tennessee State Doctors of Education is predominately female (54.1%), white (95.2%), first-generation (73.7%), not associated with a cohort (66.5%), did not attend a community college (84.7%) or enter their doctorate program with an education specialist degree (71.3%).

The primary reasons for this study were the desire to know who the East Tennessee State University's Doctors of Education are, and how they succeeded against odds favoring attrition (Khanh, 2002; Swail, 2002; McConnell, 2000). Direct responses (see Appendix D) representing the demographic, educational, and postgraduation backgrounds of East Tennessee State University's Doctors of Education who attained their degree prior to 2004 and analysis using descriptive statistics and frequency sums assisted in drawing the following conclusions.

Ethnicity and First-generation. The majority of respondents (95.2%) was white and mirrored the national trend of predominately-white doctorate recipients observed in literature reviewed (see Figure 1). However, unlike the predominate minority status of first-generation respondents encountered nationally by Inman and Mayes (1999), NCES (1998b), and Norfles and Mortenson (2002), this researcher observed the overwhelming majority (73.7%) of respondents to the Survey of ETSU Doctors of Education were first-generation. This researcher concluded first-generation East Tennessee State University's Doctors of Education persist in stark contrast to national trends that suggest first-generation status as a degree attainment barrier.

This researcher concurred with Swail (2002) that there are few students of color in 4-year degree programs after reviewing local data (East Tennessee State University,

2004f). The proportion of responding non-white doctors were comparatively less than those returned by white doctors were. Moreover, mathematical ratios between ethnicity and first-generation responses to the SEDE produced a lone statistical case of a non-white, first-generation respondent. After re-categorizing resulted in the deceptive statistic of a single first-generation non-white case to use in representing the total non-white doctors, this researcher concluded too few minorities responded ( $n = 8$ ) for reliable and meaningful comparisons. However, data sets representing overall doctorate attainment (East Tennessee State University, 2004f) support the conclusion of minority status existing among non-white East Tennessee State University Doctors of Education.

Cohort Membership. This researcher excluded responses prior to 1990 in an attempt to examine more closely the time interval when East Tennessee State University (2004c) promoted cohorts as a common offering. After filtering of responses that limited examination to the targeted time-interval, frequencies indicated that slightly less than one-half (46.8%) of the respondents who had perceived cohort accessibility as available, reported association with a cohort. Moreover, 27.3% of respondents who graduated between the time interval of 1990 and 2004 ( $n=139$ ), described cohorts as not available. Fifty percent ( $n=36$ ) of the respondents who entered their doctorate program with an education specialist degree during the same time interval reported association with a cohort. Of the 18 education specialist degreed doctors who reported they were not associated with a cohort, 38% reported they did not perceive cohorts as available. This researcher concluded respondents did not always perceive cohorts available although East

Tennessee State University promoted cohorts as commonly available since the mid 1990s.

Post-Degree History. After attaining their doctorate, an overwhelming majority of respondents (88.5%) reported employment in an educational environment with 23.4% reporting employment by 4-year colleges. Reoccurring patterns existed among respondents who reported employment by 4-year colleges. The percentage (23.9%) of respondents who completed other formal study after their doctorate mirrored the percentage (23.4%) of respondents reporting employment by four-year colleges. Moreover, although slightly less, the percentage (67.3%) of respondents who reported post-degree employment by 4-year colleges who were first-generation nearly mirrored the percentage (74.4%) of respondents who completed additional formal study beyond their doctorate who were first-generation.

Unlike Khanh (2002), Swail (2002), and McConnell (2000) who collectively suggested few first-generation students persisted to degree attainment and of those who did, fewer enrolled in further study. This researcher concluded, although the doctorate degree was a terminal degree for most respondents (76.1%), almost one fourth (23.9%) of the respondents who already had demonstrated persistence by attaining their doctorate, demonstrated an extension of persistence by completing additional formal study beyond the doctorate. Moreover, of the respondents who demonstrated this extended persistence, the majority (74.4%) was first-generation.

Facilitators and Barriers Encountered to Degree Attainment. When asked to identify positive factors encountered to degree attainment, 73.2% of the respondents

identified East Tennessee State University's faculty as the foremost-recognized facilitator to degree attainment. When asked to prioritize identified facilitators as most significant, the largest percentage (20.6%) of respondents ranked their spouse or partner as the number 1 facilitator. However, faculty tied with driving distance for the rank of the second most significant facilitator between the largest percentages (12.9%) of respondents' rankings and was the single largest percentage (14.8%) among respondents' rankings as the third most significant facilitator.

In contrast, when asked to identify negative factors encountered to degree attainment, the largest percentage (28.7%) of respondents chose the listing of *other* to describe barriers. Of the 57 explanations offered for the listing of *other* as a barrier, the largest percentage (22.0%) mentioned residency requirements and slightly over one eighth (13.9%) of the respondents wrote the word *none*. Among explanations offered for the term *none*, four respondents suggested attainment of the degree negated any barrier, if the term barrier defined a measure that prevented something from occurring.

This researcher concurred with Inman and Mayes (1999) who stated that lack of family support and finances negatively affected degree attainment. This researcher observed that among barriers offered for selection on the survey excluding the term *other*, the largest percentage (26.8%) of respondents identified costs as a barrier. Although costs was the single most identified barrier among respondents as a collective group, nearly one-half (48.3%) of the respondents who reported themselves as the primary source of support in meeting expenses associated with their doctorate identified costs as among facilitators.

This researcher concluded that East Tennessee State University Doctors of Education encountered more facilitators than barriers, and although reported as both a facilitator and a barrier to degree attainment, when asked to prioritize, respondents' perceived costs more as a significant barrier (14.8%) than facilitator (8.6%). Moreover, although faculty was the most recognized facilitator, respondents perceived faculty comparatively less significant than a spouse or partner when prioritizing.

### Hypotheses Findings

Hypothesis 1: Demographic Differences. Two-by-two cell configurations of chi-square tests revealed two significant differences exist among demographics between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts. Testing revealed approximately three fourths (72.7%) of the first-generation doctors were Appalachian natives as compared to one half (50%) of non-first-generation. Moreover, among first-generation respondents, when comparing age intervals at the time of degree attainment, testing revealed the largest percentage (36.4%) attained their degree when 45-49 years of age while the largest percentage (26.9%) for non-first-generation was over 50 years of age.

This researcher concurred with Gunnin (2002) who reported first-generation Appalachian community college graduates persisted in contrast to national norms of attrition attributed to first-generation status. This researcher concluded that although there were more non-first-generation doctors than expected who were 50 years of age or older at the time of their graduation, first-generation East Tennessee State University's Doctors

of Education were significantly younger at the time of degree attainment and more were Appalachian natives than their non-first-generation counterparts were overall.

Hypothesis 2: Time-to-Degree Differences. A *t*-test for two independent samples revealed both groups averaged 19-years between baccalaureate and doctorate attainment. Specifically, first-generation respondents' took 19 years and 4 months, which was slightly less than 7 months (.57 year) longer than their non-first-generation counterparts' average of 18 years and 9 months. Although first-generation respondents' median time-to-degree of 19 years was 2 years more than non-first-generation, this researcher concluded there are no significant differences in time-to-degree intervals between first-generation East Tennessee State University's Doctors of Education and their non-first-generation counterparts.

This researcher concurred with Hoffer et al. (2004) who stated that time-to-degree completion is likely to be affected by a number of factors including individual preferences, economic constraints, labor markets for new doctorate recipients, cultures of the academic disciplines, and institution-specific program characteristics. However, unlike Bae et al. (1990) who concluded the more time spent in obtaining the doctorate, the more likely the student was to quit, this researcher observed persistence among East Tennessee Doctors of Education although their time-to-degree was almost 10 months longer than the longest reported nationally of 18.2 years. Moreover, unlike Bae et al. (1990) who listed increased age at time of entry as the most negatively affecting variable to degree attainment, costs associated with the degree was reported as the most restrictive barrier.

Hypothesis 3: Educational Background Differences. Two-by-two and multiple celled chi-squares compared proportions of educational background variables between first-generation respondents and their non-first-generation counterparts. The majority of each group neither attended community college, nor was associated with a cohort, nor held an education specialist degree upon entering their doctoral program. Moreover, both groups reported principal enrollment within public universities.

This researcher concluded that even through the largest percent (74.1%) of respondents having community college experience were first-generation, no significant differences existed between first-generation and non-first generation East Tennessee University's Doctors of Education when comparing educational backgrounds.

Hypothesis 4: Education Specialist Degree Differences. A *t*-test for independent samples revealed on average, respondents entering with an education specialist degree completed their doctorate program almost 1 year earlier (mean = 3.98) than respondents who did not enter with an education specialist degree (mean = 4.96). However, comparisons of respondents' program time remaining at degree conferment revealed non-education specialist degreed respondents had on average 29% of their allocated completion time remaining compared to education specialist degreed respondents having 20.4% remaining.

This researcher concluded, although initial *t*-tests produced evidence that respondents who entered the doctorate program with an education specialist degree experienced a significantly shorter interval of time from first doctorate class registration until degree conferment than their non-education specialist degreed counterparts did,

non-education specialist degreed respondents spent less time proportionately within time allocated to finish.

Hypothesis 5: Registered-Time-to-Degree Differences. A t-test for independent samples revealed first-generation respondents reported both the longest (18 years) and shortest (1 year) registered-time-to-degree intervals, and averaged slightly less than 4 years 8 months (mean = 4.64 years) to complete the time interval that passed between registering for the first doctorate class to conferment of their degree. However, the 4 months earlier completion by first-generation respondents as compared to their non-first-generation counterparts (mean = 5 years) did not promote evidence of a significant difference.

Unlike Hurley (2002), Inman and Mayes (1999), and Khanh (2002) who reported first-generation status promoted untimely degree completion., this researcher concluded although first-generation respondents completed an average of 4 months earlier than their non-first-generation counterparts did, no significant differences existed. Moreover, whether first-generation or non-first-generation, most respondents finished in 3 years (mode = 3 years).

Hypothesis 6: Facilitator Ranking Differences. A Mann-Whitney independent sample test for ranked variables revealed rankings of the top three facilitators were not significantly different between first-generation and non-first-generation respondents. Both first-generation (18.8%) and non-first-generation (23.1%) groups reported the most significant facilitator to degree attainment as their spouse or partner. Both first-generation (13%) and non-first-generation (13.5%) ranked as the second most significant facilitator



driving distance. Both first-generation (16.2%) and non-first-generation (9.2%) selected faculty as the third most significant facilitator. This researcher concluded that facilitator rankings between first-generation respondents and their non-first-generation counterparts were not significantly different.

Hypothesis 7: Barrier Ranking Differences. A Mann-Whitney independent sample test for ranked variables revealed both first-generation and non-first-generation (19.2%) agreed costs were the most significant barrier to degree attainment. First-generation respondents ranked costs (13.6%), driving distance (9.7%), and scheduling of classes (5.2%) respectively as the top three barriers to degree. Non-first-generation respondents ranked costs as the single most significant barrier to all three ranks (1=19.2%, 2=9.2%, 3=9.6%). Although some diversification among rankings by first-generation respondents existed, this researcher concluded that barrier rankings between first-generation respondents and their non-first-generation counterparts were not significantly different.

Hypothesis 8: Ranked Facilitators and Demographic Associations. Scatter plot graphs produced by plotting significant coordinate pairs of bivariate correlations between facilitators' rankings and respondents' demographic variables depicted two monotone associations. Although weak, both the first association among parental college attendance ( $r_s = .149$ ) and the second among age intervals ( $r_s = -.157$ ) were observable and offered evidence of associations. This researcher concluded that the more likely a respondent's parents had not attended college, the more likely the respondent was to rank driving distance as the second most significant facilitator. Moreover, the more likely a respondent

was between 40 and 44 years of age at the time of degree attainment, the more likely the respondent was to rank faculty the most significant facilitator. .

Hypothesis 9: Ranked Barriers and Demographic Association. A scatter plot graph produced by plotting significant coordinate pairs of bivariate correlations between barriers' rankings and respondents' demographic variables depicted the presence of a monotone association. Although weak ( $r_s = .149$ ), the association was observable between marital status at the time of degree attainment and the ranking of the second most significant barrier. This researcher concluded that the more likely a respondent was to be married at the time of degree attainment, the more likely the respondent ranked children or spouse as the second most significant barrier.

Hypothesis 10: Ranked Facilitators and Educational History Association. A scatter plot graph produced by plotting significant coordinate pairs of bivariate correlations between facilitators' rankings and variables representing respondents' educational histories depicted the presence of a monotone association. Although respondents reported faculty (14.8%), scheduling of classes (10%), driving distances (8.6%), and the respondent's employer (8.6%) among the largest percentages for the rank of third most significant facilitator, a weak monotone association ( $r_s = .160$ ) was observable when testing between the ranking of faculty and respondents who reported they had entered with an education specialist degree. This researcher concluded that the more likely a respondent entered their doctorate program without an education specialist degree, the more likely the respondent ranked faculty as the third most significant facilitator.

Hypothesis 11: Ranked Barriers and Educational History Associations. A scatter plot graph produced by plotting significant coordinate pairs of bivariate correlations between barriers' rankings and variables representing respondents' educational histories depicted the presence of two monotone associations. Although weak monotone associations, both the first association among secondary sources of income ( $r_s = -.242$ ) and the second among post-degree employment environments ( $r_s = .234$ ) were observable and offered evidence of existent associations. This researcher concluded that the more likely respondents identified themselves as the secondary source of meeting expenses associated with their doctorate, the less likely the respondents were to rank costs as the third most significant barrier. Moreover, the more likely a respondent's post degree employment was in public pre-kindergarten through grade 12 educational environments, the more likely the respondent was to rank costs the third most significant barrier.

### Recommendations

It is the intent of this study to offer additional empirical research about first-generation doctors of education in order to reduce the comparative inequity observed by this researcher of no studies completed on first-generation doctors of education. This study offers itself as a benchmark reference. However, for this study to serve as a benchmark, comparisons to future study are necessary. Recommendations for increased effectiveness of future study follow in sub-headings of design changes and departmental suggestions.

## Study Design

In consideration of any future study that seeks to either replicate or use as a model this study's design, changes are recommended to possibly encompass questions raised within this study there were not answered and to ensure a more effective return procedure. Described changes include, but are not limited to the following:

1. Add questions to the survey targeting income status at the time of degree attainment. Norfles and Mortenson (2002) cited concerns to the negative affects attributed to first-generation status, especially the lack of financial support and while there were some questions present in the Survey of ETSU Doctors of Education that identified the sources of primary and secondary support, more specific questions are suggested to provide clarity.
2. Use an interactive website to host the survey instead of relying on the US Postal Service.
3. Complete a survey every 5 years to ensure data reflects perceptions more closely at the time of actual degree attainment. Although the University conducts annual graduate surveys, this researcher recommends continuation of this study or one similar that targets specifically first-generation doctors of education to counteract the comparative lack of information available empirically.
4. Expand the survey to include non-successful doctoral students; especially those who withdraw or are consider ABD's (All But Dissertation). Tluczek (1995) and Kerlin (1995a, 1995b) both

concluded that the lack of self-discipline and commitment among ABD students contributed to dissertation non-completion.

According to Tluczek and Kerlin, the inability of first-generation graduate students to work independently directly contributed to the length of time it took to obtain the degree and the longer the graduate student spent in obtaining the degree, the greater the likelihood of attrition. Exclusion of non-successful doctoral students was a barrier to analysis of ABD within this study.

5. Expand this study of first-generation graduates to other fields beyond that of education. Although first-generation doctors of education were the target of this study, this researcher observed the potential for expansion because of the comparatively few studies available in any field targeting first-generation degreed doctors.

### Departmental

This study targeted specifically East Tennessee State University's Doctors of Education and their degree attainment from the University's Department of Educational Leadership and Policy Analysis. As this study collected direct responses, recommendations to the University's Department of Educational Leadership and Policy Analysis include but are not limited to the following:

1. Replicate this study to target specifically non-responsive doctors in order to ensure maximum representation of the population prior to 2004. Post cards mailed to addresses of record not returned for lack

of deliverability or response indicates that 42% of the addresses were current but for whatever reason went unanswered. This researcher recommends additional saturation by repetition of the survey for more complete coverage.

2. Expand the methods used to disseminate information about cohort availability for the doctor of education program. Although East Tennessee State University (2004c) promoted cohorts through listed offerings among graduate catalogs from the mid 1990s, 27.3% of respondents who graduated between the time interval of 1990 and 2004 (n=139), described cohorts as not available.
3. Designate an ombudsman/liaison person for first-generation graduate students. This researcher acknowledges that the population of successful doctors she studied appears to have persisted in stark contrast to the thematic negative affects attributed to first-generation status; however, successful first-generation doctors identified a need for intervention when identifying barriers existed. Khanh (2002) suggested additional support during college programs for first-generation students was required to counteract negative effects to future graduate enrollment and degree attainment. The existence of barriers supports the recommendation of a needs-based position to be established.

4. Extend this study into the related masters and education specialist degree programs along with targeting of both degreed and dropout first-generation students. According to Swail (2002) who echoed Khanh (2002) and McConnell(2000) in their findings, motivation for study beyond undergraduate level was lacking in first-generation students and promoted problems well in to graduate school when coupled with the lack of preparation for post-secondary levels. This researcher did not collect responses representative of respondents' masters and education specialist degrees beyond attainment years and types of university attended.

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## APPENDICES

### Appendix A. Survey of Earned Doctorates

#### INSTRUCTIONS

Thank you for taking the time to complete this questionnaire. Directions are provided for each question. Because not all questions will apply to everyone, you may be asked to skip certain questions.

- If you have not already done so, please print your name on the front cover.
- Please print all responses; you may use either a pen or pencil.
- When answering questions that require marking a box, please use an "X."
- If you need to change an answer, please make sure that your old answer is either completely erased or clearly crossed out.
- On page 7 (inside the back cover) is a Specialties List for classifying your field(s) of specialization in questions A2 and A8.

#### PART A - Education

A1. What is the title of your dissertation?

- Please mark (X) this box if the title below refers to a performance, project report, or a musical or literary composition required instead of a dissertation.

Title \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

A2. Using the Specialties List (page 7), please write the name and number of the primary field of your dissertation research.

Name of Field \_\_\_\_\_  
 Number of Field

If you had a secondary field for your dissertation research, list the name and number.

Name of Field \_\_\_\_\_  
 Number of Field

A3. Please name the department (or interdisciplinary committee, center, institute, etc.) of the university that supervised your doctoral program.

- Mark (X) box if none

\_\_\_\_\_  
 \_\_\_\_\_  
 Department/Committee/Center/Institute/Program

A4. Please name the school or college within the university that supervised your doctoral program.

- Mark (X) box if not applicable

\_\_\_\_\_  
 \_\_\_\_\_  
 School or College within University

A5. Which of the following were sources of support during graduate school?

Mark (X) Yes or No for each

	Yes	No
a. Fellowship, scholarship	1 <input type="checkbox"/>	2 <input type="checkbox"/>
b. Dissertation grant	1 <input type="checkbox"/>	2 <input type="checkbox"/>
c. Teaching assistantship	1 <input type="checkbox"/>	2 <input type="checkbox"/>
d. Research assistantship	1 <input type="checkbox"/>	2 <input type="checkbox"/>
e. Traineeship	1 <input type="checkbox"/>	2 <input type="checkbox"/>
f. Internship or residency	1 <input type="checkbox"/>	2 <input type="checkbox"/>
g. Loans (from any source)	1 <input type="checkbox"/>	2 <input type="checkbox"/>
h. Foreign (non-U.S.) support	1 <input type="checkbox"/>	2 <input type="checkbox"/>
i. Personal savings	1 <input type="checkbox"/>	2 <input type="checkbox"/>
j. Earnings during graduate school (from sources listed above)	1 <input type="checkbox"/>	2 <input type="checkbox"/>
k. Family or partner's earnings or savings	1 <input type="checkbox"/>	2 <input type="checkbox"/>
Employer reimbursement/assistance	1 <input type="checkbox"/>	2 <input type="checkbox"/>
Other - Specify _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>

A6. Which TWO sources listed in A5 provided the most support? Enter letters of primary and secondary sources

1. \_\_\_\_\_ Primary source of support  
 Mark (X) if no primary source
2. \_\_\_\_\_ Secondary source of support  
 Mark (X) if no secondary source

A7. If you received full or partial tuition remission (waiver) for your doctoral studies, was it:

- 0  I did not receive any tuition remission
- 1  for less than 1/3 of tuition
- 2  between 1/3 and 2/3 of tuition
- 3  more than 2/3 of tuition

**A8.** Please list below, chronologically, all colleges (including 2-year) and graduate institutions you have attended and each degree earned (if any). Be sure to give the years attended for **ALL** institutions attended. INCLUDE YOUR DOCTORAL INSTITUTION(S) AND DOCTORAL DEGREE AT THE END.

Mark (X) box if bachelor's degree (or equivalent) was never received.  Mark (X) box if master's degree (or equivalent) was never received.

Institution and Location			Years Attended		Field of Study		Degree (if any)		
					Use specialties List, page 7		Granted		
Institution	Branch or City	State or Province Country (if not U.S.)	From	To	Field Name	Number	Title	Mo.	Yr.
Indian Institute of Technology	Madras	India	1990	1992	Mathematics	498	--	--	--
University of California	Berkeley	CA	1993	1995	Mechanical Engineering	345	B.S.	6	1995
University of California	Berkeley	CA	1997	2000	Mechanical Engineering	345	M.S.	6	2000

Institution and Location			Years Attended		Field of Study		Degree (if any)		
					Use specialties List, page 7		Granted		
Institution	Branch or City	State or Province Country (if not U.S.)	From	To	Field Name	Number	Title	Mo.	Yr.

If you have attended more than six institutions of higher education, please continue this list in the "Comments" section on the back cover. Remember to include your doctoral institution and degree.

A9. When you receive your doctoral degree, how much money will you owe that is directly related to your undergraduate and graduate education?

Mark (X) one in each column

Undergraduate

Graduate

- |  |  |
|--|--|
| 0 <input type="checkbox"/> None                | 0 <input type="checkbox"/> None                |
| 1 <input type="checkbox"/> \$5,000 or less     | 1 <input type="checkbox"/> \$5,000 or less     |
| 2 <input type="checkbox"/> \$5,001 - \$10,000  | 2 <input type="checkbox"/> \$5,001 - \$10,000  |
| 3 <input type="checkbox"/> \$10,001 - \$15,000 | 3 <input type="checkbox"/> \$10,001 - \$15,000 |
| 4 <input type="checkbox"/> \$15,001 - \$20,000 | 4 <input type="checkbox"/> \$15,001 - \$20,000 |
| 5 <input type="checkbox"/> \$20,001 - \$25,000 | 5 <input type="checkbox"/> \$20,001 - \$25,000 |
| 6 <input type="checkbox"/> \$25,001 - \$30,000 | 6 <input type="checkbox"/> \$25,001 - \$30,000 |
| 7 <input type="checkbox"/> \$30,001 - \$35,000 | 7 <input type="checkbox"/> \$30,001 - \$35,000 |
| 8 <input type="checkbox"/> \$35,001 - or more  | 8 <input type="checkbox"/> \$35,001 - or more  |

A10. How many years were there between the date you first entered graduate school in any program or capacity and the date your doctorate was granted?

Years:   Round to whole years

A11. How many years were you taking courses, exams required for or related to your doctorate?

Years:   Round to whole years

A12. How many years did you spend on dissertation (non-course related preparation, research, writing and defense)?

Years:   Round to whole years

### PART B - Postgraduation Plans

B1. How definite are your immediate (within the next year) postgraduate plans?

Mark (X) one

- 0  Am returning to, or continuing in, predoctoral employment
- 1  Have signed contract or made definite commitment for other work or study
- 2  Am negotiating with one or more specific organizations
- 3  Am seeking position but have no specific prospects
- 4  Other - Specify

GO TO B2

SKIP TO B3

B2. Please name the organization and geographic location where you will work or study.

SKIP TO B4

Name

City State Country (if U.S.) (if not U.S.)

B3. In what state or country do you intend to live after graduation (within the next year)?

0  in U.S. → State

1  not in U.S. → Country

B4. What best describes your immediate (within the next year) postgraduate plans?

Mark (X) one

- 0  Training or employment
- 1  Postdoctoral fellowship
- 2  Postdoctoral research associateship
- 3  Traineeship
- 4  Other study - Specify

GO TO B5

Career Employment

- 4  Employment (other than 0, 1, 2, 3)
- 5  Military service
- 6  Other - Specify

SKIP TO B6

B5. What will be the main source of financial support for your postdoctoral study/research within the next year?

Mark (X) one

- 0  U.S. Government
- 1  Industry/Business
- 2  College or university
- 3  Private foundation
- 4  Nonprofit, other than private foundation
- 5  Other - Specify
- 6  Unknown

SKIP TO C1

B6. For what type of employer will you be working within the next year?

Mark (X) one

**EDUCATION**

- a.  U.S. 4-year college or university other than medical school
- b.  U.S. medical school (including university-affiliated hospital or medical center)
- c.  U.S. junior or community college or technical institute
- d.  Preschool, elementary, or secondary school in the U.S.
- e.  Foreign educational institution

**GOVERNMENT**

- f.  Foreign government
- g.  U.S. federal government
- h.  U.S. state government
- i.  U.S. local government

**PRIVATE SECTOR**

- j.  Nonprofit organization
- k.  Industry or business
- l.  Self-employed

**OTHER**

- m.  Other - Specify \_\_\_\_\_

B7. From the list below, please indicate what your primary and secondary work activities will be by entering the numbers of your selections in the appropriate boxes.

- a.  Primary Activity
- b.  Secondary Activity

- 0 Research and development
- 1 Teaching
- 2 Administration
- 3 Professional services to individuals
- 4 Other - Specify \_\_\_\_\_

**PART C - Background Information**

C1. Are you -

- 1  Male
- 2  Female

C2. What is your marital status?

Mark (X) one

- 1  Married
- 2  Living in a marriage-like relationship
- 3  Widowed
- 4  Separated/divorced
- 5  Never married

C3. Not including yourself (or your spouse/partner), how many dependents do you have - that is, how many others receive at least one half of their support from you?

Mark (X) but if none

- |                           |                          |
|---------------------------|--------------------------|
|                           | <b>Number</b>            |
| 5 years of age or younger | <input type="checkbox"/> |
| 6 to 18 years             | <input type="checkbox"/> |
| 19 years or older         | <input type="checkbox"/> |

C4. What is the highest educational attainment of your mother and father?

Mark (X) one for each parent

	a. Mother	b. Father
Less than high school/primary school	1 <input type="checkbox"/>	1 <input type="checkbox"/>
High school/some college graduate	2 <input type="checkbox"/>	2 <input type="checkbox"/>
Some college	3 <input type="checkbox"/>	3 <input type="checkbox"/>
Associate degree	4 <input type="checkbox"/>	4 <input type="checkbox"/>
Bachelor's degree	5 <input type="checkbox"/>	5 <input type="checkbox"/>
Master's degree	6 <input type="checkbox"/>	6 <input type="checkbox"/>
Doctoral degree	7 <input type="checkbox"/>	7 <input type="checkbox"/>

C5. What is your place of birth?

\_\_\_\_\_

State (if U.S.)

OR

\_\_\_\_\_

Country (if not U.S.)

C6. What is your date of birth?

Month   Day   Year  1  9

C7. What is your citizenship status?

Mark (X) one

**U.S. Citizen:**

- 0  Native Born → SKIP TO C9
- 1  Naturalized → SKIP TO C9

**Non-U.S. Citizen:**

- 2  With a Permanent U.S. Resident Visa ("Green Card") → GO TO C8
- 3  With a Temporary U.S. Visa → GO TO C8

C8. (IF A NON-U.S. CITIZEN) Of which country are you a citizen?

\_\_\_\_\_

(Specify country of present citizenship)

C9. In what state or country was the high school/secondary school that you last attended?

State (if U.S.)

OR

Country (if not U.S.)

C10. Are you a person with a disability?

- 1  Yes → GO TO C11
- 2  No → SKIP TO C12

C11. (IF YES) Which of the following categories describes your disability(ies)?

Mark (X) one or more

- a.  Blind/Visually Impaired
- b.  Deaf/Hard of Hearing
- c.  Physical/Orthopedic Disability
- d.  Learning/Cognitive Disability
- e.  Vocal/Speech Disability
- f.  Other - Specify

C12. Are you Hispanic (or Latin American)?

- 1  Yes → GO TO C13
- 2  No → SKIP TO C14

C13. (IF YES TO C12) Which of the following describes your Hispanic origin or descent?

- 1  Mexican American or Chicano
- 2  Puerto Rican
- 3  Cuban
- 4  Other Hispanic - Specify

C14. What is your racial background?

Mark (X) one or more

- a.  American Indian or Alaska Native

Specify tribal affiliation(s)

- b.  Native Hawaiian or other Pacific Islander
- c.  Asian
- d.  Black or African-American
- e.  White

C15. Please fill in your U.S. Social Security number.

C16. In case we need to clarify some of the information you have provided, please list an E-mail address, website address (if applicable), and telephone numbers where you can be reached.

E-mail address

Website address

Daytime telephone

Evening telephone

C17. Please provide your address and the name and address of a person through whom you could always be reached.

Current Address

Number  Street

City  State  Country  Zip or Postal Code

Contact Person

Name

Number  Street

City  State  Country  Zip or Postal Code

Phone Number (including area or country code)

E-mail Address

C18. Please sign and date.

Signature

Date

The Summary Report on this survey is available at <http://www.norc.uchicago.edu/inuse/docdata.htm>

Please use the back cover to make any additional comments you may have about this survey.

Thank you for completing the questionnaire. Please return it to your GRADUATE SCHOOL for forwarding to Survey of Earned Doctorates, The National Opinion Research Center at the University of Chicago, 1 N. State Street, Floor 16, Chicago, IL 60602. If you have questions or concerns about the survey, you may contact us by e-mail at [4300-0ed@norcmail.uchicago.edu](mailto:4300-0ed@norcmail.uchicago.edu) or phone at 1-800-248-9649.

SPECIALTIES LIST

INSTRUCTIONS: The following field listing is to be used in responding to items A2 and A8. If you choose a field marked with an asterisk (\*), please write in your field of specialization in the space provided in those items.

AGRICULTURAL SCIENCES	190	Pharmacology, Human & Animal	435	Geometry	Miscellaneous Physical Sciences	736	Letters, General	874	Mathematics Education
000	195	Physiology, Human & Animal	440	Logic	580	739	Letters, Other*	876	Music Education
002	199	Zoology, Other*	445	Number Theory	585	740	Foreign Languages and Literatures	878	Nursing Education
005	199	Biological Sciences, General	450	Mathematical Statistics	590	743	French	880	Physical Education & Coaching
010	199	Biological Sciences, Other*	455	Topology	595	746	German	882	Reading Education
012			460	Computing Theory & Practice	599	749	Italian	884	Science Education
014			465	Operations Research (See also 363, 930)		749	Spanish	885	Social Science Education
019						752	Russian	887	Technical Education
020						755	Slovak (other than Russian)	890	Trade & Industrial Education
025						758	Chinese	899	Teacher Educ., Specific Acad. & Voc. Prog., Other*
030						762	Japanese		
039						765	Hebrew		
042						768	Arabic		
044						769	Other Language & Literature*		
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**To the Doctorate Recipient:**

Congratulations on earning a doctoral degree! This is an important accomplishment for you. Your accomplishment is also significant for both this nation and others, as the new knowledge generated by research doctorates enhances the quality of life in this country and throughout the world. Because of the importance of persons earning research doctorates, several Federal agencies—listed on the cover—sponsor this Survey of Earned Doctorates.

The basic purpose of this survey is to gather objective data about doctoral graduates. These data are important in improving graduate education both at your home institution and beyond. Often, decisions made by governmental and private agencies to develop new programs, or to support present ones, are based in part on the data developed from this survey. If you have any comments about the survey, please provide them in the space below.

On behalf of the sponsoring Federal agencies, I thank you for your participation in this survey.

Best wishes,

Dr. Lynda Carlson  
National Science Foundation

**Comments About This Survey**

COPY

Please return this questionnaire to your GRADUATE DEAN for forwarding to Survey of Earned Doctorates, NORC at the University of Chicago, 1 N. State Street, Floor 16, Chicago, IL 60602.

If you have questions or concerns about the survey, you may contact us by e-mail at [4800-sed@norcmail.uchicago.edu](mailto:4800-sed@norcmail.uchicago.edu) or phone at 1-800-248-8649.

**OFFICE USE ONLY**

Case ID	Instit. Code:	Grad Date:	Main Disp.:		
PROCESSING					
Receipt		Editing		CADE	
Initials	Date	Initials	Date	Initials	Date
Ver. Adjust		Retrieval		Updates	
Initials	Date	Initials	Date	Initials	Date



Appendix B. Survey of ETSU Doctors of Education

**S E D E**

**Survey of ETSU  
Doctors of  
Education**

**NAME:** \_\_\_\_\_

**First Name      Middle Name      Last Name**

This questionnaire is for the use in partial fulfillment of requirements for the degree of doctor in education from East Tennessee State University. The Survey of Earned Doctorates (SED) used by the National Opinion Research Center (NORC) under NSF Contract No. SRS-9712655 served as the model for this survey.

Use of SED materials, including the survey instrument, was permitted through public domain perimeters identified in NORD Summary Report, 2003 (Hoffer, Selfa, Welch, Williams, Hess, Friedman, Webber, & Guzman-Barron, 2004). Comments or questions concerning this survey should be addressed to:

**Mata J. Banks,  
450 Peach Orchard Lane,  
New Tazewell, TN 37825**

Phone: 423-626-XXXX days  
423-626-XXXX evenings  
Fax: 423-626-XXXX

or emailed to: **banksm@k12tn.net**

*In case I need to clarify some of the information you provide, could you please list corrections to your address and provide an up-dated E-mail address if applicable?*

*If you would like to receive a copy of the findings, please mark an [X] next to the preferred mailing route and a copy will be provided when the dissertation is completed.*

Mailing address:

E -mail address:

**Please note:**

- In an effort to protect your identity, upon your return of this survey personal identifiers will be removed by the researcher.
- Collected responses will be coded for the purpose of quantitative statistical analysis and confidentially kept according to current legal requirements on file for a period of 10 years from the date of return.
- When answering multiple-choice items, please indicate your response by placing an [X] in the blank before the number of the most appropriate answer.
- You may chose not to answer any questions without penalty.

**PART A - Education**

**A1.** Did you attend a **community college**?

1. Yes  
 2. No

If yes, attendance MM/YYYY - MM/YYYY:  
\_\_\_\_\_

**A2.** In what month and year did you attain your **baccalaureate** degree?

(MM/YYYY) \_\_\_\_\_

**A3.** In what month and year did you **register** for the first class in your **master's** degree program?

(MM/YYYY) \_\_\_\_\_

**A4.** In what month and year did you **attain** your **master's** degree?

(MM/YYYY) \_\_\_\_\_

**A5.** Where did you **complete** your **prerequisite master's** program?

1. ETSU  
 2. Another Tennessee university  
 3. Out-of-state university  
 4. International college or university  
 5. Other \_\_\_\_\_

**A6.** In what type of university did you **complete** your **prerequisite master's** program?

1. Public  
 2. Private  
 3. Other: \_\_\_\_\_

**A7.** In what month and year did you **register** for the first class in your **doctoral** program?

(MM/YYYY) \_\_\_\_\_

**A8.** In what month and year did you **graduate** from your **Ed.D.** program?

(MM/YYYY) \_\_\_\_\_

**A9.** Did you attain an **educational specialist degree (Ed.S.)** prior to entering the doctorate program?

1. No, I did not enter into doctoral work with an Ed.S.  
 2. Yes, I attained my Ed.S. from ETSU  
 3. Yes, I attained my Ed.S. from another in-state public university.  
 4. Yes, I attained my Ed.S. from another in-state private university  
 5. Yes, I attained my Ed.S. from an out-of-state public university.  
 6. Yes, I attained my Ed.S. from an out-of-state private university.  
 7. Yes, other: \_\_\_\_\_

**A10.** How would you describe your **association with a cohort** doctorate program?

- 1. I was not associated with a cohort group.
- 2. I did not enter the program in a cohort group but after joining one, I graduated in the group's allotted time.
- 3. I did not enter the program in a cohort group but after joining one, I graduated after the group's allotted time through an extension.
- 4. I entered the program in a cohort group and graduated in the group's allotted time.
- 5. I entered the program in a cohort group but I graduated after the group's allotted time through an extension.

**A11.** How would you describe the **accessibility of cohort groups** at the time of your doctorate program's entrance?

- 1. ETSU utilized cohorts at the beginning of my doctorate program, but I did not join one.
- 2. ETSU utilized cohorts at the beginning of my doctorate program, and I enrolled within one.
- 3. ETSU did not utilize cohorts at the beginning of my doctorate program and I would not have chosen to join one.
- 4. ETSU did not utilize cohorts at the beginning of my doctorate program; however, if available I would have joined one.

**A12.** Which source listed below provided **primary support** in meeting the expenses associated with your Ed.D.?

(Check only one)

- 1. Self (job, personal savings, etc)
- 2. Parents
- 3. Spouse or partner
- 4. Employer (training program, scholarships, grants etc.)
- 5. Fellowship, Scholarships and/or grants (other than employer's)
- 6. Loans
- 7. Other \_\_\_\_\_

**A13.** Which source below provided **secondary support** in meeting the expenses associated with your Ed.D.?

(Check only one)

- 1. Self (job, personal savings, etc.)
- 2. Parents
- 3. Spouse or partner
- 4. Employer's training/educational program
- 5. Fellowship, Scholarships and/or grants (other than employer's)
- 6. Loans
- 7. Other \_\_\_\_\_

**A14.** Did **others** receive at least one-half of their financial support from you while you sought your doctorate of education degree?

*(Check as many as apply under Yes. If no, please select it only.)*

- 1. No
- 2. Yes, a child or children
- 3. Yes, a spouse or partner
- 4. Yes, a parent or parents
- 5. Yes, sibling(s)
- 6. Yes, other relative(s)
- 7. Yes, other(s) \_\_\_\_\_

**A15.** What were the *facilitators* or factors that **positively affected** your doctorate attainment?

(Check all that apply)

- 1. Costs associated with classes
- 2. Driving distance
- 3. Employer
- 4. ETSU faculty
- 5. ETSU off-campus program
- 6. ETSU's geographic location
- 7. ETSU's administration
- 8. ETSU's cohort membership
- 9. Extended family- relatives
- 10. Family support system
- 11. Father or male guardian
- 12. Friends (non-ETSU students)
- 13. Friends who were ETSU students
- 14. Internship
- 15. Mother or female guardian
- 16. My child or children
- 17. Non-full-time/ on-campus study
- 18. Non-residency requirement
- 19. Private loans
- 20. Program timelines
- 21. Savings account
- 22. Scheduling of classes (time slot)
- 23. Scholarship / Grant monies
- 24. Sibling(s)
- 25. Spouse or partner
- 26. Student loans
- 27. Other:

---

---

**A16.** From the list checked in the previous question, what were the **three most significant** *facilitators* encountered?

(Please, select only three and **rank as 1, 2, 3**)

- 1. Costs associated with classes
- 2. Driving distance
- 3. Employer
- 4. ETSU faculty
- 5. ETSU off-campus program
- 6. ETSU's geographic location
- 7. ETSU's administration
- 8. ETSU's cohort membership
- 9. Extended family- relatives
- 10. Family support system
- 11. Father or male guardian
- 12. Friends (non-ETSU students)
- 13. Friends who were ETSU students
- 14. Internship
- 15. Mother or female guardian
- 16. My child or children
- 17. Non-full-time/ on-campus study
- 18. Non-residency requirement
- 19. Private loans
- 20. Program timelines
- 21. Savings account
- 22. Scheduling of classes (time slot)
- 23. Scholarship / Grant monies
- 24. Sibling(s)
- 25. Spouse or partner
- 26. Student loans
- 27. Other:

---

---

**A17.** What were the *barriers* or factors that **negatively affected** your doctorate attainment?

(Check all that apply)

- 1. Costs associated with classes
- 2. Driving distance
- 3. Employer
- 4. ETSU faculty
- 5. ETSU off-campus program
- 6. ETSU's geographic location
- 7. ETSU's administration
- 8. ETSU's cohort membership
- 9. Extended family- relatives
- 10. Family support system
- 11. Father or male guardian
- 12. Friends (non-ETSU students)
- 13. Friends who were ETSU students
- 14. Internship
- 15. Mother or female guardian
- 16. My child or children
- 17. Non-full-time / on-campus study
- 18. Non-residency requirement
- 19. Private loans
- 20. Program timelines
- 21. Savings account
- 22. Scheduling of classes (time slot)
- 23. Scholarship / Grant monies
- 24. Sibling(s)
- 25. Spouse or partner
- 26. Student loans
- 27. Other:

---

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**A18.** From the list checked in the previous question, what were the **three most significant barriers** encountered?

(Please, select only three and **rank as 1, 2, 3**)

- 1. Costs associated with classes
- 2. Driving distance
- 3. Employer
- 4. ETSU faculty
- 5. ETSU off-campus program
- 6. ETSU's geographic location
- 7. ETSU's administration
- 8. ETSU's cohort membership
- 9. Extended family- relatives
- 10. Family support system
- 11. Father or male guardian
- 12. Friends (non-ETSU students)
- 13. Friends who were ETSU students
- 14. Internship
- 15. Mother or female guardian
- 16. My child or children
- 17. Non-full-time / on-campus study
- 18. Non-residency requirement
- 19. Private loans
- 20. Program timelines
- 21. Savings account
- 22. Scheduling of classes (time slot)
- 23. Scholarship / Grant monies
- 24. Sibling(s)
- 25. Spouse or partner
- 26. Student loans
- 27. Other:

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## Postgraduation

**B1.** Since receiving your Ed.D, within what **employment** have you most worked?

- 1. U.S. public preschool, elementary, or secondary school
- 2. U.S. private preschool, elementary or secondary school
- 3. U.S. 2 year junior, community college, or technical institute
- 4. ETSU (non-student status)
- 5. U.S. 4-year college or university other than ETSU
- 6. U.S. medical school (including university-affiliated hospital or medical center)
- 7. Contract program
- 8. Foreign educational institution
- 9. Foreign government
- 10. Industry or business
- 11. Nonprofit organization
- 12. Self-employment (home-based)
- 13. Self-employment (service-based)
- 14. State government
- 15. U.S. federal government
- 16. U.S. local government
- 17. Unemployed
- 18. Other \_\_\_\_\_

**B2.** Where did you **reside** within the next year after you received your Ed.D.?

- 1. Dormitory or other campus housing
- 2. Residence (house, apartment, etc) within walking distance of ETSU
- 3. Residence ( house, apartment, etc.) within 20 miles of ETSU
- 4. Residence (house, apartment, etc.) more than 20 miles but less than 50 miles from ETSU
- 5. Residence (house, apartment, etc.) more than 50 miles from ETSU

**B3.** With **whom did you live** during the majority of time **after** you received your doctorate?

- 1. No one, I lived alone
- 2. Friends (not ETSU students)
- 3. My child or children
- 4. My parent or parents
- 5. My spouse and child(ren)
- 6. My spouse or partner
- 7. One or more ETSU students
- 8. Other relatives
- 9. Other: \_\_\_\_\_

**B4.** Did you complete **formal academic study after** you received your doctorate?

- 1.No, I did not enter any further formal academic study program
- 2.No, I entered another academic study program, but did not complete it
- 3.No, I am currently enrolled in an academic program, but have not completed it
- 4.Yes, I completed an additional educational certificate or professional degree
- 5.Yes, I completed a postdoctoral fellowship, research associate, or trainee program.
- 6.Yes, I completed a professional certificate
- 7. Other: \_\_\_\_\_

**B5.** What bests describes the setting where you **resided** the majority of the time you were in high school?

- 1. Foreign country
- 2. US town or city
- 3. Suburban (within 5 miles of an US town or city's limit)
- 4. Rural (outside 5 mile radius of an US town or city)

**C1.** What was your **age** at the time you graduated with your Ed.D?

- 1. 24 or younger
- 2. 25-29
- 3. 30-34
- 4. 35-39
- 5. 40-44
- 6. 45-49
- 7. 50 or older

**C2.** What was your **marital / relationship status** at the time you *enrolled in the doctorate degree program*?

- 1. not married or partnered
- 2. married or partnered
- 3. separated from spouse or partner
- 4. divorced from spouse or partner
- 5. spouse or partner was deceased

**C3.** What was your **marital / relationship status** at the time you *attained your doctorate degree*?

- 1. not married or partnered
- 2. married or partnered
- 3. separated from spouse or partner
- 4. divorced from spouse or partner
- 5. spouse or partner was deceased

**C4.** What was your **citizenship status** at the time you *attained your doctorate degree*?

- 1. United States, native
- 2. United States, naturalized
- 3. non-United States permanent resident (immigrant, visa)
- 4. non-United States temporary resident (non-immigrant visa)

**C5.** What is your **ethnic identification**?

*(Check all that apply)*

- 1. American Indian or Alaskan Native
- 2. Asian or Pacific Islander
- 3. Black or African American
- 4. White or Caucasian (other than Hispanic)
- 5. Hispanic
- 6. Other \_\_\_\_\_

**C6.** Date of birth: \_\_\_\_\_  
(mm/dd/yyyy)

**C7.** During the majority of time enrolled in your ETSU doctorate work, **where** did you live?

- 1. Dormitory or other campus housing
- 2. Residence (house, apartment, etc) within walking distance of ETSU
- 3. Residence ( house, apartment, etc.) within 20 miles of ETSU
- 4. Residence (house, apartment, etc.) more than 20 miles but less than 50 miles from ETSU
- 5. Residence (house, apartment, etc.) more than 50 miles from ETSU

**C8.** During the majority of time enrolled in your ETSU doctorate work, with **whom** did you live?

- 1. No one, I lived alone
- 2. One or more other students
- 3. My spouse or partner
- 4. My child or children
- 5. My parents
- 6. Other relatives
- 7. Friends who are not students at ETSU
- 8. Other: \_\_\_\_\_

**C9.** Did either of your **parents** *attend* any college?

- 1. No
- 2. Yes, both
- 3. Yes, father only
- 4. Yes, mother only
- 5. Don't know

**C10.** Did either of your **parents** *complete* a four-year college?

- 1. No
- 2. Yes, both
- 3. Yes, father only
- 4. Yes, mother only
- 5. Don't know

**C11.** Were you born in the Appalachian Mountain region? (*Please note white area on map*)

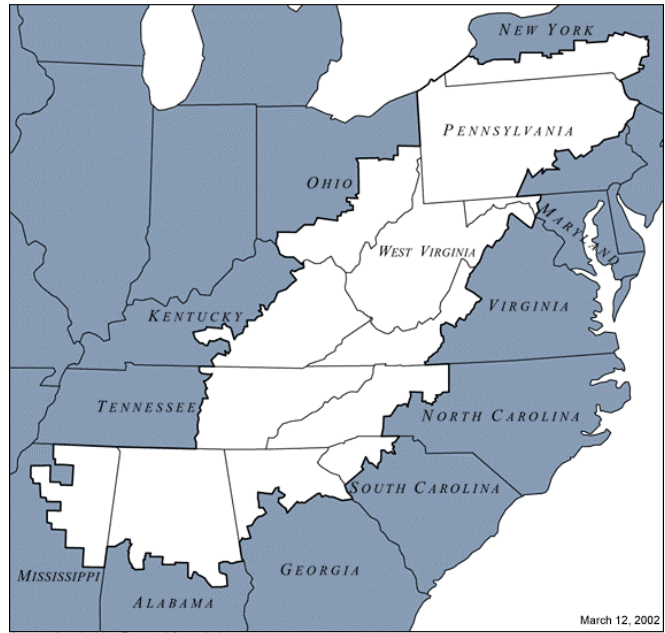
- 1. Yes, I am an Appalachian native
- 2. No, I am a non-Appalachian native
- 3. I am not sure.

**Paragraph of voluntary participation:**

Thank you for your voluntary participation and the valuable time you gave in completing this survey. Your responses are vital for the completion of the report on ETSU's doctors of education. Your responses are also vital in assisting policymakers, administrators, faculty, and other researchers addressing the challenges of institutional governance and should prove very useful in providing empirical data regarding experiences among ETSU doctors of education.

Mata J. Banks

The Appalachian Region



**C12.** Place of birth: (City, State)

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## Appendix C. SEDE Associated Letters and Postcard

### US Mail Posting and Electronic Posting Cover Letter

Dear Graduate,

According to records maintained by East Tennessee State University, you have attained the degree of Doctor of Education. Congratulations. Might you take a few moments and complete a survey regarding your experiences encountered in attaining your Ed.D.?

The attached survey of ETSU Doctors of Education is being conducted for the purpose of partial fulfillment of the requirements for the degree of doctor of education attempted by Mata J. Banks. Entitled: *In Pursuit of the Ed D. – A Study on East Tennessee State University Doctor of Education Graduates, Who They Are and Why They Persisted*, the dissertation and survey is being prepared as a report on ETSU's Ed.D. graduates prior to June 2004. Solicited responses are being collected for the purposes of research and statistical data analysis, preparing scientific reports and articles, and contributing to the amount of doctoral empirical data available for review.

It is important that you read this material carefully and then decide if you wish to be a volunteer in completing the survey. Any information publicly released (such as statistical summaries) will be in a form that does not personally identify you. Your response is voluntary and failure to provide some or all of the requested information will not in any way adversely affect you. The time needed to complete this survey varies according to individual circumstances, but the average is estimated to be 20 minutes.

Your responses and thoughts are valued. Thank you for your consideration and time given toward completing the survey. If I can be of any further assistance or if you have any comments or concerns regarding this study and survey, you may use the information found below to contact me. I eagerly await hearing about your experiences encountered regarding your degree attainment. I also hope to join you among the Ed.D. Ranks soon.

Mata J. Banks

MAIL: XXXXX XXXXXXXX  
XXXXX XXXXXXXX  
ZIP 12345

Phone (XXX) XXX-XXXX ext 1222 work  
(XXX) XXX-XXXX home

Fax (XXX) XXX-XXXX

## Non-Response Letter

:

Dear Dr. Name:

I recently sent you a questionnaire for the Survey of ETSU Doctors of Education (SEDE). If you have already completed and returned the survey, I thank you very much. However, since I had not received your reply as of \_\_ (DATE) \_\_\_\_\_ I am attaching a duplicate copy in case the original was misdirected or lost. Might you take a few moments, fill out the attached copy, and return it? The ending date for response submission is \_\_\_\_\_ and there is still time for your responses to be included.

Because this is a survey of everyone who has completed the requirements for the Department of Educational Leadership and Policy Analysis East Tennessee doctorate prior to June 2004, your responses are very important to the accuracy of the study.

If you have any questions, concerns, or want to contact me personally about completing the survey, feel free to contact me by phone, mail, or email listed below:

Mata J. Banks  
423-XXX-XXXX, FAX: 423-XXX-XXXX  
ADDRESS

E-mail (banksmxxxxxx@XXX.XXX)

## Closing Postcard

Dr. Recipient.

The date of XXXXXXXX has been provided to East Tennessee State University as the close of the Survey of ETSU Doctors of Education. As of the posting of this postcard, no responses have been received representing your doctorate experience.

I would be happy to talk to you about any questions or concerns that you might have about completing your SEDE at 423-XXX-XXXX or through email at banksm@ XXXXXXXXXX

Congratulations again on your doctorate and thank you for your assistance by participating in the study. Your responses are valued.

Mata J. Banks  
ADDRESS

Appendix D. Summary SEDE Responses

A1 - Attended Community College

Response	Frequency	Percent (n=209)
Yes	31	14.8
No	177	84.7
No Response	1	.5

Central Statistics for Questions A2, A3, A4, and A7

		A2 - Year Baccalaureate Attained	A3 -Year Registered for Masters	A4 - Year Masters Attained	A7 - Ed.D. Registration
N	Valid	208	202	206	194
	Missing	1	7	3	15
Median		MAY 1973	MAY 1975	JAN 1978	AUG 1990
Mode		MAY 1976	SEP 1967	AUG 1975	AUG 1990
Minimum		MAY 1949	JUN 1949	AUG 1950	AUG 1961
Maximum		DEC 1995	MAY 1996	DEC 1997	MAY 2001

a Multiple modes exist. The smallest value is shown

<i>Response</i>	<i>Frequency</i>	<i>Percent(n=209)</i>
A5- Masters Program University		
ETSU	102	48.8
Another Tennessee University	33	15.8
Out-of-State University	69	33.0
Other	3	1.4
Did not obtain masters	1	0.5
No Response	1	0.5
A6 - Masters College Type		
Public	184	88.0
Private	22	10.5
No Response	3	1.4
A9- Education Specialist Degree Attainment		
No	149	71.3
Yes - From ETSU	20	9.6
Yes- Other TN Public	9	4.3
Yes - Other TN Private	10	4.8
Yes - Out-of-State Public	20	9.6
No Response	1	0.5

<i>Response</i>	<i>Frequency</i>	<i>Percent(n=209)</i>
A10 -Association with Doctoral Cohort		
Not associated with cohort	139	66.5
Did not enter with cohort but joined - timely finish	4	1.9
Did not enter with cohort but joined – extensions used	1	.5
Entered with cohort – timely finish	61	29.2
Entered with cohort – extensions used	2	1.0
No Response	2	1.0
A11 - Cohort Accessibility		
<i>Offered cohort - did not join</i>	31	14.8
Offered cohort - joined	69	33.0
Not offered cohort - not desired	43	20.6
Not offered cohort - desired	46	22.0
No Response	20	9.6

A15 - Facilitators Encountered toward Degree Attainment

Response	Frequency	Percent (n=209)
Cost	101	48.3%
Driving Distance	146	69.9%
Employer	83	39.7%
Faculty	154	73.7%
Off-Campus Program	24	11.5%
Location	85	40.7%
Administration	34	16.3%
Cohort Membership	51	24.4%
Extended Family	24	11.5%
Family Support System	99	47.4%
Father Figure	17	8.1%
Friends - Non ETSU students	36	17.2%
Friends - ETSU Students	79	37.8%
Internship	33	15.8%
Mother Figure	22	10.5%
Child(ren)	33	15.8%
Non-Full-Time study	28	13.4%
Non-Residency	62	29.7%
Private Loans	5	2.4%
Program Timelines	30	14.4%
Savings Account	19	9.1%
Scheduling of Classes	114	54.5%
Scholarship/Grants	32	15.3%
Sibling(s)	6	2.9%
Spouse	104	49.8%
Student Loans	11	5.3%
Other	33	15.8%

A16 - Number 1 Ranked Facilitator

Response	Frequency	Percent (n=209)
Costs	18	8.6
Driving Distance	25	12.0
Employer	15	7.2
Faculty	27	12.9
Off-Campus Program	4	1.9
Geographic Location	11	5.3
Cohort	7	3.3
Family Support System	13	6.2
Friends (Non-ETSU)	4	1.9
Friends (ETSU)	3	1.4
Internship	1	0.5
Mother/Female Guardian	1	0.5
Child(ren)	2	1.0
Non-full-time /	3	1.4
Non-residency Requirement	12	5.7
Program Timeline	1	0.5
Savings	1	0.5
Schedule of Classes	3	1.4
Scholarship/Grant(s)	3	1.4
Spouse/Partner	43	20.6
Other	12	5.7

A16 - Number 2 Ranked Facilitator

Response	Frequency	Percent (n=209)
Costs	11	5.3
Driving Distance	27	12.9
Employer	12	5.7
Faculty	27	12.9
Off-Campus Program	2	1.0
Geographic Location	10	4.8
Administration	4	1.9
Cohort	8	3.8
Extended Family/Relatives	2	1.0
Family Support System	13	6.2
Father/Male Guardian	3	1.4
Friends (Non-ETSU)	3	1.4
Friends (ETSU)	9	4.3
Internship	3	1.4
Mother/Female Guardian	3	1.4
Child(ren)	4	1.9
Non-full-time / On-Campus Study	3	1.4
Non-residency Requirement	9	4.3
Program Timeline	2	1.0
Savings	4	1.9
Schedule of Classes (time)	17	8.1
Scholarship/Grant(s)	9	4.3
Spouse/Partner	14	6.7
Student Loans	2	1.0
Other	4	1.9
Total cases responding	205	98.1
No Response provided	4	1.9



A16 - Number 3 Ranked Facilitator

Response	Frequency	Percent (n=209)
Costs	15	7.2
Driving Distance	18	8.6
Employer	18	8.6
Faculty	31	14.8
Off-Campus Program	2	1.0
Geographic Location	11	5.3
Administration	2	1.0
Cohort	11	5.3
Extended Family/Relatives	3	1.4
Family Support System	8	3.8
Friends (Non-ETSU)	6	2.9
Friends (ETSU)	10	4.8
Mother/Female Guardian	2	1.0
Child(ren)	2	1.0
Non-full-time or On-Campus Study	5	2.4
Non-residency Requirement	3	1.4
Program Timeline	5	2.4
Savings	2	1.0
Schedule of Classes (time)	21	10.0
Scholarship/Grant(s)	7	3.3
Spouse/Partner	12	5.7
Student Loans	2	1.0
Other	6	2.9
Total cases responding	202	96.7
No Response	7	3.3

A15 and A16 Respondents' Explanations of "Other" as Facilitator

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Acceptance of all masters' degree work toward doctorate

Chairperson and Doctoral committee, Supervisor/mentor

Could enter without a master's program

Dissertation topic

Doctoral fellowships (4)

Dr. Hal Knight

Dr. Russ West

Employment by university in curriculum

GI Bill

God; Prayer

In-State Tuition through Mountain Empire - Waiver of out-of-state fees

Internship not required

Need for doctorate to advance in profession

On-campus housing

Personal Motivation, Internal Drive, Personal Commitment, Desire, or Personal goal

Professor from master's program

Program fit my needs

Residency or residency requirement

State Board of Regents

Tennessee State Career Ladder employment contract

Tutor in statistics

---

A17 - Barriers Encountered toward Degree Attainment

Response	Frequency	Percent (n=209)
Cost	56	26.8
Driving Distance	39	18.7
Employer	23	11.0
Faculty	15	7.2
Off-Campus Program	2	1.0
Geographic Location	9	4.3
Administration	12	5.7
Cohort Membership	2	1.0
Extended Family	6	2.9
Fmaily Support System	8	3.8
Father Figure	1	0.5
Friends - Non ETSU Students	3	1.4
Friends - ETSU Students	0	0.0
Internship	17	8.1
Mother Figure	2	1.0
Child(ren)	28	13.4
Non-Full-Time Study	12	5.7
Non-Residency	5	2.4
Private Loans	6	2.9
Program Timelines	20	9.6
Savings Account	18	8.6
Scheduling of Classes	23	11.0
Scholarship/Grants	4	1.9
Sibling(s)	0	0.0
Spouse	22	10.5
Student Loans	4	1.9
Other	60	28.7
None	29	13.9

A18 -Number 1 Ranked Barrier

Response	Frequency	Percent (n =209)
Costs	31	14.8
Driving Distance	19	9.1
Employer	12	5.7
Faculty	9	4.3
Geographic Location	1	0.5
Administration	5	2.4
Cohort	1	0.5
Extended Family/Relatives	1	0.5
Family Support System	1	0.5
Friends (Non-ETSU)	1	0.5
Friends (ETSU)	1	0.5
Internship	3	1.4
Mother/Female Guardian	2	1.0
Child(ren)	12	5.7
Non-full-time or On-Campus Study	4	1.9
Non-residency Requirement	1	0.5
Private Loans	2	1.0
Program Timeline	6	2.9
Savings	5	2.4
Schedule of Classes (time)	2	1.0
Scholarship/Grant(s)	1	0.5
Spouse/Partner	7	3.3
Student Loans	2	1.0
Other	39	18.7
None	30	14.4
Total cases responding	198	94.7
No Response provided	11	5.3

A18 - Number 2 Ranked Barrier

Response	Frequency	Percent (n=209)
Costs	15	7.2
Driving Distance	17	8.1
Employer	4	1.9
Faculty	5	2.4
Off-Campus Program	1	0.5
Geographic Location	3	1.4
Administration	4	1.9
Cohort	1	0.5
Extended Family/Relatives	2	1.0
Family Support System	5	2.4
Internship	7	3.3
Child(ren)	9	4.3
Non-full-time or On-Campus Study	3	1.4
Non-residency Requirement	3	1.4
Program Timeline	7	3.3
Savings	7	3.3
Schedule of Classes (time)	6	2.9
Scholarship/Grant(s)	2	1.0
Spouse/Partner	8	3.8
Student Loans	1	0.5
Other	11	5.3
Total cases responding	121	57.9
No response provided	88	42.1

A18 - Number 3 Ranked Barrier

Response	Frequency	Percent (n=209)
Costs	11	5.3
Driving Distance	3	1.4
Employer	8	3.8
Faculty	2	1.0
Off-Campus Program	1	0.5
Geographic Location	2	1.0
Administration	3	1.4
Extended Family/Relatives	3	1.4
Family Support System	4	1.9
Friends (Non-ETSU)	1	0.5
Internship	2	1.0
Child(ren)	6	2.9
Non-full-time or On-Campus Study	4	1.9
Private Loans	2	1.0
Program Timeline	8	3.8
Savings	3	1.4
Schedule of Classes (time)	10	4.8
Scholarship/Grant(s)	1	0.5
Spouse/Partner	7	3.3
Other	4	1.9
Total cases responding	85	40.7
No response provided	124	59.3

## A17 and A18 -Respondents' Explanations of "Other" as Barriers

---

Cohort was not available in higher education program

Committee member

Department was short staffed

Desire to quit during dissertation, Dissertation, Dissertation Topic

Family events, illness, responsibilities, tragedy, and obligations

Finances, Fellowship money was not...enough

Full time employment, Full-time job/stress, working full-time (2)

Going to work and church at same time

Graduate Office

Health (3), Father had terminal illness

Home Responsibilities

Inadequate instructors

Moved to (out of state)

Nitpicking by dean of graduate studies

No On-line Class accommodations

Not enough job opportunities

Offices losing papers and dates being changed

Out of State Tuition

Personal issues raising family with 3 young children

Personal motivation to complete program

Pressure

Program could have been more intellectually stimulating

Residency required (14) , Being away from home during residency,

Switching to a new job, I moved away to take a job before finishing

Time (5) , Lack of time with 3 children

---

Response	Frequency	Percent (n=209)
B1-Employment Post EdD		
<i>US Public Schools PK-12</i>	93	44.5
US Private PK-12	4	1.9
US 2 Yr Post Secondary School	43	20.6
ETSU (Non-Student)	21	10.0
US 4 Yr College (non-ETSU)	28	13.4
US Medical School	2	1.0
Foreign Education Institute	1	0.5
Industry/Business	2	1.0
Nonprofit Organization	2	1.0
Self-Employed (Service)	2	1.0
State Gov.	3	1.4
US Federal Gov.	3	1.4
Other	5	2.4
B2 -Post Doctorate Residence		
Residence w/in walking distance of ETSU	7	3.3
Residence 20 miles of ETSU	50	23.9
Residence 20-50 miles of ETSU	52	24.9
Residence 50+ miles of ETSU	100	47.8



<i>Response</i>	<i>Frequency</i>	<i>Percent (n=209)</i>
B3 -Lived with Whom Post Doctorate		
No One – lived alone	24	11.5
Child(ren)	9	4.3
Parent(s)	1	0.5
Spouse and child(ren)	108	51.7
Spouse/Partner	64	30.6
ETSU Students	1	0.5
Other	1	0.5
No response	1	0.5
B4 -Post Doctorate Formal Study		
No - not attempted	159	76.1
No - attempted but not completed	3	1.4
Enrolled - not completed	2	1.0
Yes - educational/professional Degree	13	6.2
Yes - postdoctoral fellowship/scholarship	4	1.9
Yes - professional certificate	14	6.7
Other	12	5.7
No response	2	1.0

<i>Response</i>	<i>Frequency</i>	<i>Percent(n=209)</i>
B5 – High School Residence		
Foreign Country	3	1.4
US Town/City	86	41.1
Suburban <5 miles town	35	16.7
Rural >5 miles town	85	40.7
C1 – Age at Time of Degree Attainment		
25-29	5	2.4
30-34	27	12.9
35-39	45	21.5
40-44	39	18.7
45-49	50	23.9
50 or older	40	19.1
No Response	3	1.4

<i>Response</i>	<i>Frequency</i>	<i>Percent (n=209)</i>
C2 – Marital Status at Time of Registration for Ed.D.		
Not married/partnered	22	10.5
Married/Partnered	170	81.3
Divorced	12	5.7
Spouse/Partner Deceased	1	.5
No Response	4	1.9
C3 - Marital Status at Time of Degree Attainment		
Not married/partnered	13	6.2
Married/Partnered	172	82.3
Separated	5	2.4
Divorced	14	6.7
No Response	5	2.4
C4 -Citizenship at Time of Degree Attainment		
US Native	204	97.6
US Naturalized	2	1.0
Non-US Temporary Resident	2	1.0
No Response	1	.5

<i>Response</i>	<i>Frequency</i>	<i>Percent (n=209)</i>
C5 - Ethnicity		
American Indian/ Alaskan	1	.5
Asian or Pacific Islander	1	.5
Black or African American	6	2.9
Caucasian (Non-Hispanic)	199	95.2
No Response	2	1.0
C6 - Current Age		
35	2	1.0
36	4	1.9
37	2	1.0
38	1	.5
39	1	.5
40	3	1.4
41	2	1.0
42	5	2.4
43	3	1.4
44	1	.5
45	6	2.9
46	4	1.9
47	3	1.4

C6- Current Age Continued

<i>Response</i>	<i>Frequency</i>	<i>Percent (n=209)</i>
48	4	1.9
49	3	1.4
50	7	3.3
51	5	2.4
52	10	4.8
53	11	5.3
54	11	5.3
55	10	4.8
56	6	2.9
57	11	5.3
58	11	5.3
59	7	3.3
60	9	4.3
61	8	3.8
62	10	4.8
63	5	2.4
64	11	5.3
65	1	.5
66	5	2.4

C6- Current Age continued

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67	6	2.9
68	4	1.9
69	4	1.9
71	1	.5
72	1	.5
73	1	.5
74	2	1.0
75	2	1.0
79	1	.5
No Response	5	2.4

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C7- Where Lived During Time Enrolled in Doctorate Program

Campus Housing	7	3.3
Residence w/in Walking Distance ETSU	10	4.8
Residence 20 miles of ETSU	65	31.1
Residence 20-50 miles of ETSU	62	29.7
Residence 50+ miles of ETSU	63	30.1
No Response	2	1.0

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<i>Response</i>	<i>Frequency</i>	<i>Percent (n=209)</i>
<b>C8 – Lived with Whom During Doctorate Enrollment</b>		
No One	26	12.4
Friends (ETSU students)	1	0.5
Spouse/Partner	166	79.4
Child(ren)	1	0.5
Parent(s)	1	0.5
Other	1	0.5
No Response	13	6.2
<b>C8 - Multiple Responses</b>		
Child(ren)	57	27.3
Parent(s)	1	.5
Multiple Response	58	27.8
<b>C9 - Parents Attended College</b>		
No	124	59.3
Yes-Both	34	16.3
Yes- Father Only	21	10.0
Yes- Mother Only	29	13.9
No Response	1	.5

<i>Response</i>	<i>Frequency</i>	<i>Percent (n=209)</i>
C10- Parents Finished 4-Year University		
No	154	73.7
Yes-Both	14	6.7
Yes- Father Only	17	8.1
Yes- Mother Only	21	10.0
Don't know	1	0.5
No Response	2	1.0
C11- Appalachian Native		
Yes	138	66.0
No	67	32.1
Don't Know	2	1.0
No Response	2	1.0



## VITA

MATA J. BANKS

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Marital Status: Married 33 years

Education:            East Tennessee State University, Johnson City, Tennessee;  
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                                 East Tennessee State University, Johnson City, Tennessee;  
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                                 University of Tennessee, Knoxville, Tennessee;  
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                                 Education, A.S., 1978

Work  
Experience:            Secondary Mathematics Teacher, Claiborne Board of Education;  
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                                 Head of the Department of Mathematics Claiborne High School,  
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Other Professional  
Experience:            Discovery Learning Channel Software Mathematics' Item Writer,  
                                 Nashville, Tennessee 2006 Secondary Mathematics

                                 Claiborne High School Improvement Planning Chair/Director -  
                                 New Tazewell, Tennessee, August 2004-May 2006

                                 Claiborne County Consolidated School Improvement Plan -  
Recorder and Component 3 Chair  
                                 New Tazewell, Tennessee, May 2004- June 2005