

STUDENT EXPERIENCES AND EXPECTATIONS RELATED TO THE VERTICAL
TRANSFER PROCESS FROM TWO FEEDER COMMUNITY
COLLEGES OF A SENIOR INSTITUTION

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The purpose of this study was to understand the experiences and expectations of community college students attending Temple College and Central Texas College regarding what they may expect as part of the vertical transfer process in order to improve the likelihood of their persistence to graduation at Texas A&M University-Central Texas (TAMUCT). The target population was approximately 700 students enrolled in two feeder Texas community colleges who had expressed intent to transfer to TAMUCT. The response rate was 19%, and 136 useable surveys were used for analysis. The sample was 74% female, 45% White with the majority minority. To assess the relationships between community college experiences and transfer expectation variables, correlations and logistic regression were used. No linear relationships were found regarding gender, age, ethnicity, highest level of parents' education, the aspirational variables of highest academic degree intend to obtain at any college or university and at TAMUCT, and the feeder community college attended and the two scales. A statistically significant relationship was found between parental income level and reported community college experiences ($F(4, 79) = 2.612, p = .042$) and vertical transfer expectations ($F(4, 52) = 3.318, p = .017$). Community college students from lower socioeconomic backgrounds may utilize the community college to upper-level institution vertical transfer pathway as a way to obtain an affordable baccalaureate degree. Community colleges and university administrators need to continue working together to establish unique and creative ways to create seamless transitions for vertical transfer students utilizing the community college to upper-level institution pathway to degree completion.

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CHAPTER 1

INTRODUCTION

Within the United States, an analysis of data implies that a greater number of students attend more than one institution prior to completing a bachelor's degree each year (Poisel & Joseph, 2011). At least 40% of college freshmen begin their postsecondary pursuits at the community college level (Doyle, 2009). At least 50% and possibly as many as 80% of all incoming community college students seek to transfer and earn a bachelor's degree (Horn & Weko, 2009; Provasnik & Planty, 2008). According to Hossler et al.'s 2012 report on the topic of transfer and mobility, about 33% of all students change institutions at some time before earning a degree. Hossler et al. determined the following for those students who transfer: 37% transfer in their second year, 22% transfer as late as their fourth or fifth years, 25% transfer more than once, 27% transfer across state lines, and 43% transfer into a public two-year college. Such statistics suggest a complex picture of transfer and mobility within the higher education system of today (Hossler et al., 2012).

Further, in the US, a total of five upper-level universities educate students who transfer from lower-division colleges and community colleges. Two of the 5 operate in Texas. These are Texas A&M University (TAMU) at San Antonio and TAMU at Central Texas. The other three are Athens State University in Alabama, Governors State University in Illinois, and John F. Kennedy University in California. These institutions enable students who attended community colleges to complete four year degrees.

Community college students represent about 4 in 10 undergraduates, or about 7.6 million students within the United States. With their open enrollment policies and relatively low cost, community colleges have long provided access to underserved populations, such as students

from low-income families and those who are the first in their family to attend college (Cohen & Brawer, 2003). Student persistence is of concern to higher education researchers and policymakers because large numbers of students who begin their college education in community colleges never persist. For example, among a cohort of first-time freshmen who enrolled in community colleges in 1995-1996, some 48% had either completed a credential (36%) or transferred to a four-year institution (12%) within six years after first enrolling (Hoachlander, Sikora, & Horn, 2003). In contrast, among students who first enrolled in four-year colleges or universities, 63% had completed a bachelor's degree, and another 18% were still enrolled or had completed an associate's degree or certificate (Berkner, He, & Cataldi, 2003). According to the Handel (2011), the transfer process will take on an increasingly vital role in meeting President Obama's goal of 8 million new college graduates by the year 2020. Additionally, Williams and Handel (2012) argued the following:

Among new, first-time community college students, the desire to transfer is especially strong. Recent surveys indicate that as many as eight in 10 community college students want to transfer. Unfortunately, among many of the community college students who indicate that they want to transfer, most do not. (p. 9)

Only about 50% of community college students expressing intent to transfer do so successfully (Doyle, 2006; Handel, 2009). To earn a postsecondary credential, students must first enter a program of study by taking and passing multiple college-level courses in a field. One reason for low community college completion rates that has not received adequate attention is that many students fail to enter a program of study initially (Jenkins & Cho, 2012). Most community colleges offer an impressive array of courses and degree programs. Unfortunately, many new students enroll in community colleges without clear goals for college and future

career aspirations (Gardenhire-Crooks, Collado, & Ray, 2006), and community colleges typically offer little advisement to assist students in selecting and successfully entering a program of academic study (Grubb, 2006; Rosenbaum, Deil-Amen, & Person, 2006). Scott-Clayton (2011) suggested that individuals presented with too many options often do not make solid decisions. There is evidence that community colleges could be more successful in helping students persist to graduation and complete a program of study by providing students with a set of firmly structured degree program options whose requirements and expected outcomes are well-defined (Scott-Clayton, 2011).

When starting a program of academic study at the community college level, many students are distracted by remedial courses, for which they do not receive academic credit (Jenkins & Cho, 2012). In regard to younger students, at least 50% take at least one developmental course (Bailey, 2009). However, community college developmental instruction is more narrowly focused on helping students take and pass college-level math and English courses instead of preparing them for academic success in college-level programs of study more generally. Furthermore, some research studies have indicated that community college developmental education is of questionable effectiveness in achieving even the narrower goal of preparing students to pass college-level courses in math and English (Bailey, Jeong, & Cho, 2010; Calcagno & Long, 2008). As a result, developmental education becomes a dead end for many community college students who never enter a program of study or complete a two-year degree (Jenkins & Cho, 2012).

Even among students who enter a program of study at the community college, many fail to complete for various reasons. For example, information about course requirements and sequences, learning outcomes, and connections between community college programs and

additional education and employment is not clearly explained for students (Rosenbaum et al., 2006). Additionally, courses that students need to take in order to graduate are not offered when students need to take them. And while community college departments intently monitor enrollment in their courses, they sometimes do not know which students are pursuing programs of study in their fields and fail to track students to ensure they complete the prescribed academic programs (Jenkins & Cho, 2012). Newmann, Smith, Allensworth, and Bryk (2001) and Bryk, Sebring, Allensworth, Luppescu, and Easton (2010) observed that institutions achieve greater gains in completion outcomes when cohering enrollments tightly to instructional programs. This tight coherence requires the postsecondary institution to provide interrelated programs to students that operate under a common framework related to the learning climate, degree requirements, instruction, and assessment over a strategic period of time (Bryk et al., 2010; Newmann et al., 2001). Community colleges' academic programs often lack tight instructional program coherence, and this lack of coherence establishes barriers that students seeking postsecondary credentials in those fields must overcome (Jenkins, 2011).

Community college students may transfer to a baccalaureate degree granting institution between any given pair of semesters and need transfer information (Cejda & Kaylor, 2001). Because of this increasing need, two- and four-year institutions continue to systematically develop their respective student services for the increasing transfer student population (Poisel & Joseph, 2011). For example, many institutions of higher learning have created one-stop centers to assist students with transitioning out of and into their institutions of choice as they finesse the pathway to baccalaureate degree completion. These new centers for transfer students introduce them to various types of higher education institutions and academic majors that are novice to their current understanding and knowledge base. Additionally, the centers educate students about

relevant academic support programs and services that will help them achieve their educational goals at their new institutions of choice. These transfer centers are especially important for those students from first-generation or low-income families (Gonzalez, 2009; Poisel & Joseph 2011). Further investigation is needed to better understand and improve the persistence of this unique subpopulation of transfer students.

Statement of the Problem

Higher education administrators and policy makers have argued that four-year colleges and universities represent pivotal gatekeepers in the transfer pathway within the structure of the American higher education system. Both public and private four-year institutions, are responsible for admitting transfer students, evaluating and accepting their transfer course credits, and awarding financial aid (Handel, 2011). Recent events such as the great recession, international competition, and long-predicted demographic shifts have created urgency among these institutions of higher learning to investigate the possibility and the long-term benefits of a more efficient transfer system (Handel, 2011). The problem is that four-year institutions have rarely declared their role in the transfer process. While many researchers have focused on the transfer process over the years, it is important to note that much of their analysis has focused on the challenges associated with two-year institutions. Thus, it is evident from the current research that additional scholarly inquiry needs to be directed to the role of four-year colleges and universities and their role in the success of the vertical transfer process (Handel, 2011). The vertical transfer process has been defined as a process by which “students follow a traditional pattern of transferring from a two-year institution to a four-year institution with the intent of completing a bachelor’s degree” (Poisel & Joseph, 2011, p. x).

Purpose of the Study

The intent of this quantitative, descriptive study was to understand the expectations of community college students attending Temple College and Central Texas College regarding what they may expect as part of the vertical transfer process in order to improve the likelihood of their persistence to graduation at Texas A&M University-Central Texas (TAMUCT). Feeder community college students' thoughts and feelings regarding their current community college experiences and future university experiences at TAMUCT were collected and analyzed through survey methodology.

Statement of the Research Questions

The following research questions guided this study:

1. Are there linear relationships with selected student background variables and community college student expectations as part of the vertical transfer process?
2. Are there linear relationships with selected student aspirational variables and community college student expectations as part of the vertical transfer process?
3. Are there linear relationships with selected student responses between the TAMUCT feeder community college attended and community college student expectations as part of the vertical transfer process?

Significance of the Study

This study is significant for several reasons. For one, information gained from this study might provide a better understanding of feeder community college transfer students' expectations of the vertical transfer process and anticipated adjustment issues once at the receiving upper-level institution as called for by the Texas Higher Education Coordinating Board (2012). This understanding may lead to improvements in the programs and services offered to transfer

students not only at TAMUCT, but also at other four-year or upper-level institutions with large percentages of transfer students. Additionally, information gained from this study may also be used by higher education administrators to develop programs and services that assist with creating a seamless transition from the community college to the senior institution, which continues to be needed (LaClair, 2010).

Kozeracki (2001) stated that transfer studies should be forward thinking so that both community colleges and senior institutions can address potential issues that arise from research findings. That is exactly what also makes this study significant. According to a report on national transfer and mobility by the National Student Clearinghouse Research Center, most researchers have focused on institutions and view transfer student mobility as a simple pattern of entering community college, progressing linearly to the upper level university, and completing or not completing a baccalaureate degree (Hossler et al., 2012). Hossler et al. (2012) stated that students should be the unit of analysis and higher education institutions should be viewed as simply a vehicle to complete a degree along a diverse set of educational pathways. As called for in the recommendations of the Texas Higher Education Coordinating Board (2012), the findings from this study may also help to facilitate a more efficient and collaborative transfer pathway to an affordable baccalaureate degree. More importantly, these research findings may not only provide ideas for educational practitioners and state leaders desiring to increase the numbers of student successes and level of persistence of community college transfer students but also may lead to improvements in the successful transition of vertical transfer students since most universities direct student success programs and services toward first-year, rather than vertical transfer students.

Definitions of Terms

For the purposes of this study, the items operationalized in this study are defined in this section.

Aspirational variables. Aspirational variables were operationalized in this study as the highest academic degree a student intends to obtain at any college or university as well as at TAMUCT.

Background variables. For the purpose of this study, background variables were defined as gender, age, ethnic background, highest level of parents' completed education, and socioeconomic status of the survey respondents.

Community college. A postsecondary institution accredited to confer the two-year academic degree of the Associate in Arts or the Associate of Applied Science (Cohen & Brawer, 1996).

Feeder community college. A feeder community college is a postsecondary institution with an established articulation agreement with an upper-level or four-year institution. Central Texas College and Temple College are two community colleges known as feeder community colleges.

Transfer student. A student who began academic study at a community college and seeks to continue his or her higher educational pursuits at a four-year institution (Poisel & Joseph, 2012).

Upper-level or senior institution. This term involves a “university offering junior and senior-level coursework needed to successfully complete baccalaureate degrees and all coursework leading to the completion of graduate degrees” (TAMUCT, 2013, para. 1).

Vertical transfer process. The process by which “students follow a traditional pattern of transferring from a two-year institution to a four-year institution with the intent of completing a bachelor’s degree” (Poisel & Joseph, 2011, p. x).

Warrior corps. “A comprehensive program designed for community college bound students that make a commitment at the start of their educational journey to pursue their bachelor's degree, and beyond, at A&M-Central Texas” (TAMUCT, 2013, Para. 1).

Assumptions

The current study was based on the following assumptions:

1. I assumed that students answered the survey items truthfully.
2. The selected feeder community colleges represented a sample of vertical transfer students.
3. The Laanan Transfer Student Questionnaire (L-TSQ®) and the Mann Adopted Survey appropriately addressed the issue of vertical transfer student expectations.
4. Survey respondents understood and honestly expressed what their perceptions were.

Limitations

Because a random sample was not utilized, the result’s generalizability was limited. Another limitation of the study was the nature of data collection. This research inquiry relied on self-report data. Self-report data are biased when respondents attempt respond specifically to please the researcher rather than report truth (Gall, Gall, & Borg, 2007). Furthermore, survey participants’ computer skills and abilities to complete the web-based survey were beyond my control.

Delimitations

Two specific feeder community colleges within Bell County of Texas were included in the study. Specifically, survey respondents were delimited to only students contracted with the Warrior Corps program for transferring to TAMUCT at each of the two feeder community colleges and invited to participate in this study. Additionally, the study was conducted over a specified interval of time. Conditions affecting participating students were likely to be unique to the timing of the study and might not have applied to other times and geographies.

Summary

The purpose of the study was to understand the expectations of TAMUCT feeder community college students regarding what they may expect in regards to the vertical transfer process in order to improve the likelihood of their persistence to graduation with a four-year degree. This chapter has provided an introduction to the current study and the research questions. It included a brief overview of the current state of community college data as well as described the statement of the problem of the current study.

Chapter 2 presents the current literature related to vertical community college students. Chapter 3 discusses the methodology of the current study including data collection, instrumentation, adaptation of instrument for the study, site and participant selection, informed consent and data collection. Chapters 4 and 5 present findings of the research study and discussion, recommendations for future study, and conclusions.

CHAPTER 2

LITERATURE REVIEW

The review of the literature provides a good basis for understanding the complexity of the issues associated with transfer students overall. However, limited research as it specifically relates to the vertical transfer process for students moving from community college to upper-level institutions within the higher education system of the United States has been conducted. Additionally, the majority of research studies have been focused on the experiences of community college students after their transfers to four-year universities (Cejda & Kaylor, 1997; Flaga, 2002, 2006; Townsend & Wilson, 2006; Wang, 2009).

The intent of this quantitative study was to understand the experiences of community college students attending Temple College and Central Texas College regarding what they may expect as part of the vertical transfer process in order to improve the likelihood of their persistence to graduation at Texas A&M University-Central Texas (TAMUCT). Chapter 2 provides a general framework for the current study and focuses on the experiences or expectations of community college transfer students transferring from a community college to an upper-level university to acquire a baccalaureate degree. Chapter 2 includes the following topics: a national view of transfer patterns, who transfer students are, the theoretical framework, and factors that impact vertical transfer student success baccalaureate degree completion.

The review of the literature was conducted after key word searches occurred using the following search engines: EBSCO Host, Google Scholar, and ERIC. Key words were used to delimit the search. These words were *factors affecting transfer students, community college to university transfer, vertical transfer, transfer to senior institution, and transfer to upper-level institution*. The literature review was also limited to the past 10 years as a result of federal and

state policy changes, adjustments to definitions of transfer, and most importantly changes in the financial landscape of higher education within the United States.

A National View of Transfer Patterns

An analysis of data implies that a greater number of students attend more than one institution prior to completing a bachelor's degree each year (Poisel & Joseph, 2011). At least 40% of college freshmen begin their postsecondary pursuits at the community college level (Doyle, 2009). At least 50%, and possibly as many as 80%, of all incoming community college students seek to transfer and earn a bachelor's degree (Horn & Weko, 2009; Provasnik & Planty, 2008). According to Hossler et al.'s 2012 report on the topic of transfer and mobility, about 33% of all students change institutions at some time before earning a degree. Hossler et al. determined the following for those students who transfer: 37% transfer in their second year, 22% transfer as late as their fourth or fifth years, 25% transfer more than once, 27% transfer across state lines, and 43% transfer into a public two-year college. Such statistics suggest a complex picture of transfer and mobility within the higher education system of today (Hossler et al., 2012). Given this complexity, a look at who the students transferring between postsecondary institutions are is necessary.

Who are Transfer Students?

To understand the plethora of recent literature and research produced on the topic of transfer students more fully, it is necessary to understand how the transfer student population has been described in recent literature and reports. The term transfer student has been subject to a number of diverse definitions. Kraus and Arvidson (2004) reported on the traditional pattern for a transfer student involving completing an associate's degree then matriculating to the four-year institution. Cutright (2011) appealed for a common definition for transfer students since the

lack of one has established an ongoing dilemma for higher education professionals who rely upon those definitions provided in research reports for their work. Jacobs (2004) noted that as the definition of transfer becomes more accurate and inclusive in depicting student behavior, four domains of transfer students should be considered. According to Jacobs, the four domains of transfer students are the following: (a) community college, (b) quilter, (c) reverse, and (d) peer. These four domains of transfer students are used to organize the review of the literature that follows.

Community College Transfer Students

The community college transfer student represents the traditional perspective on college student transfer. Community college transfer students complete the first two years of study at the community college after which they transfer to a four-year college to pursue a major within a bachelor's degree program (Kraus & Arvidson, 2004; Miller & Hills 2006). This traditional perspective is also referred to as the 2 + 2 model in the literature (Miller & Hills, 2006). In this study, the community college transfer student represents the vertical transfer from a two-year community college to a four-year degree granting upper division or senior institution. In the vertical transfer model, the community college student likely enrolls in remedial classes to gain the skills necessary for college course success then pursues the two-year degree (Sacksteder LaClair, 2010; Wang & Wharton, 2006).

Wolgemuth et al. (2003) suggested that community college students have become less likely to need remediation; however, for about 40% to 50% of the students who begin postsecondary education at the community college, remedial classes are often a necessary part of their curriculum (Wang & Wharton, 2006). Even though no conclusive evidence on the effectiveness of remediation and baccalaureate degree completion for community college

transfers seems to appear in the literature, Pascarella and Terenzini (2005) concluded that remedial intervention promotes persistence and degree completion, particularly for community college transfer students.

The student who would typically enroll in a community college is changing. Miller and Hills (2006) state that the population likely to become community college transfer students has been changing. Originally, such students were first generation students, racially under-represented students, and students in need of remediation. Wolgemuth, Kees, and Safarik (2003) noted that traditionally aged female students use community colleges as an access point for attending postsecondary institutions. Additionally, Wolgemuth et al. concluded that non-traditionally aged women need academic environments that allow them to succeed in the classroom and to attain early success with their collegiate endeavors.

More recently, community college students have become a more affluent group who utilize community college enrollment as a way to contain the costs of attending college prior to transferring to a four-year institution. Because of the growing costs of tuition and the growing number of strong articulation agreements between community colleges and four-year institutions, community colleges have become better able to fulfill the transfer mission (Miller & Hills, 2006). Lauren (2004) reported that half of all states have formalized transfer agreements between two-year and four-year institutions. Unfortunately, fewer than 1 out of 5 states has a mechanism in place by statute or legislative order to enforce articulation agreements to support students transferring from a community college to a university within the state (Miller & Hills, 2006).

Quilter Transfer Students

Jacobs (2004) referred to quilters as “gypsy” students since they enroll in multiple institutions. These transfer students use this vagabond pattern of enrollment to quilt together the required courses for an academic degree. Borland (2004) described the quilter transfer students as those enrolled at one primary institution but taking additional courses at nearby institutions to contain costs, manage convenience, and complete required courses believed to be difficult.

Quilter transfer students may include students who attend universities away from home but return home for the summer to save or earn money and enroll in local colleges for taking classes toward completing a baccalaureate degree or to explore different majors or areas of academic interest (Borland, 2004; Jacobs, 2004). Quilter transfer students may even use online institutions to complete coursework that can be transferred as credit toward earning their undergraduate degrees. Jacobs (2004) described quilters as smart individuals with a keen sense of how to complete a degree program. Jacobs suggested that quilter transfer students are driven to complete a four-year degree and can assemble together an academic program that leads to a four-year degree based on their own abilities and knowledge of academic programs of study. Additional researchers reported that an increasing number of quilter transfer students originally thought to be reverse transfers depart four-year institutions to work full-time and enroll in community colleges to obtain associate’s degrees then in bachelor’s degree programs offered online (Lauren, 2003; McCauley, 2003).

Reverse Transfer Students

Reverse transfer students are those college students who begin their college experiences at four-year institutions then transfer to a community, junior, or technical college (Jacobs, 2004). Research suggests that reverse transfers account for 20% of community college enrollment

(Townsend, 2000; Winter, Harris, & Ziegler, 2001). Kraus and Arvidson (2004) observed that reverse transfer students attend community colleges following baccalaureate degree attainment in order to update their skills and improve their chances for obtaining better paying jobs or jobs with more upward mobility. Winter et al. (2001) concluded that reverse transfer students can be demanding members of the community college community who have family responsibilities, full-time jobs, and a practical, career-focused approach to their courses.

Peer Transfer Students

This subset of the transfer student population may begin their academic studies at one four-year institution and transfer to another four-year institution or at one two-year institution and transfer to another two-year institution. Harrison (1993) noted that this type of transfer student is the most mobile and willing to explore multiple institutions to find coursework, experiences, and tuition costs that meet their needs. Laanan (2004) suggested that peer transfer students show greater potential to experience difficulty when trying to adapt to normal institutional activities such as advising and studying. Carey (2004) and Miller and Hillis (2006) noted that as many as 60% of students graduating from four-year universities have imported academic credit from similar institutions, and only 23% of students who begin their postsecondary education at a four-year institution transfer to another four-year institution. Additional researchers suggested that peer transfer students fail to complete bachelor's degrees because of lapses in time between transferring and enrolling at similar institutions of higher education (Greene & Greene, 2002).

The literature and research on transfer students shows the population is composed of multiple subpopulations within higher education. Therefore, failing to consider the vastness of the transfer student population can create concerns that administrators and policy makers need to

address in order to increase both community college transfer and baccalaureate graduation rates. The transfer student population can be represented by a number of theories, which are addressed as part of the theoretical framework guiding this study.

Theoretical Framework

Grounded upon the previous framework of Frankie Santos Laanan (2007) and Elizabeth E. Sacksteder LaClair (2010), three theoretical considerations guided the current research inquiry: Pace's concept of quality of effort (1980, 1984), Astin's (1984, 1993, 1999) theory of student involvement, and the concept of culture shock (Oberg, 1960). Pace's concept of quality of effort assumes that what a student receives from the college experience is dependent upon the quality of effort that the student puts into the college experience. The concept of quality is based on two viewpoints: (a.) education is both a process and a product and (b.) all forms of learning and development demand a considerable amount of time and effort by the student. Regarding the concept of quality of effort, Laanan (2007) stated the following:

The concept of quality of effort (QE) enables the researcher to measure student's use of campus facilities and opportunities provided by the college for their learning and development. Thus, the QE concept takes away responsibility from the institution of higher learning and holds the student accountable for their respective actions. (p. 40)

Laanan (2007) further argued the importance of the unique environment of the community college and how it differs from a senior institution.

The second theoretical framework that guides this study is Astin's (1984, 1993, 1999) theory of student involvement. Astin upheld the belief that the quality and quantity of students' involvement on campus could account for how the college environment influences students' development. As a result of his extensive research on college students, Astin determined that the

factors contributing to student persistence in college included involvement and those factors that contributed to student attrition suggested lack of involvement. The guiding framework of Astin's theory is that student involvement occurs based on the extent of physical and psychological time and energy students commit to the academic experience. Laanan (2007) stated that an involved student devotes his or her energy to academic pursuits, spends time on the college campus, participates in student life activities and programs, and socially interacts with other members of the campus community including faculty, staff, and other students. Based on Astin's theory of student involvement, one could argue that transfer students who were highly involved socially and academically at a community college were most likely continue to be engaged in similar behavior at a four-year institution and more likely to persist to graduation. This subset of the transfer population has been referred to in the literature as lateral transfer students or rather within sector transfer (Mullin, 2012).

The last conceptual framework that guides this current study is based on Kalvero Oberg's 1960 research on the culture shock phenomenon. Oberg described culture shock as a phenomenon that occurs when a person is transplanted in unfamiliar surroundings. The shock emerges as anxiety ensues as a result of experiencing unfamiliar signs and symbols and unique social interactions. Oberg also characterized culture shock as moving from an original place of origin, such as a community college, to a foreign setting, such as a university. Thus, in this scenario, people would have to adjust or adapt to the new signs and symbols of the unfamiliar environment (Laanan, 2007). Similarly, when community college students transfer from a 2-year college to an upper-level university, they experience the described phenomenon of culture shock and have to adjust to their new environment and surroundings. It is important for vertical transfer students to successfully negotiate the stress associated with the transition into a new

college environment and utilize their respective coping skills to overcome culture shock and succeed at the university.

All three of the theoretical frameworks emphasize the critical role of the student regarding their success upon transfer (Laanan, 2007). In other words, Astin's (1984) theory of student involvement and Pace's (1980,1984) concept of quality of effort suggest that what a student does once he or she arrives at an institution of higher education defines the degree to which he or she attains a successful adjustment experience. Thus, the theories can be used in connection to one another by higher education administrators to address effectively the complexities of the adjustment process faced by vertical transfer students.

Factors That Affect Vertical Transfer Student Degree Completion

Researchers have examined a number of factors that impact the baccalaureate degree completion of vertical transfer students. As early as 1995, Knoell and Medsker investigated more than 7,000 junior college students transferring to four-year institutions. Knoell and Medsker determined that economics played a significant role in the students' decision making processes for choosing to begin their higher educational journeys at two-year institutions. Knoell and Medsker also confirmed that delaying enrollment negatively impacted student success. More specifically, after three calendar years following vertically transferring to a senior institution, 62% of the 7,000 students had received a baccalaureate degree, 9% remained enrolled at the senior institution to which they had vertically transferred, and 4% had transferred to another institution (Knoell & Medsker, 1995).

In subsequent research on vertical transfer students, Henry and Knight (2003) investigated the relationships between students demographic characteristics and their baccalaureate degree attainment. Henry and Knight determined that age was a significant factor

relating to baccalaureate degree completion and found that traditional-aged students persisted to graduation at a higher rate than nontraditionally aged students. Monroe and Richtig (2002) demonstrated the significance of geography in impacting vertical transfer students' attainment of baccalaureate degrees. Students from rural areas have lower vertical transfer and four-year degree attainment rates (Monroe & Richtig, 2002).

Just as geography can represent a risk factor for failure to complete the bachelor's degree, other risk factors impact the success of vertical transfer students. Horn and Premo (1995) identified several key risk factors that significantly affect baccalaureate completion of community college transfers. The factors Horn and Premo identified follow: (a) delayed enrollment into postsecondary education, (b) lack of a high school diploma, (c) part-time attendance, (d) being financially independent from parent's, (e) having a dependent other than a spouse, (f) being a single parent, and (g) having a full-time job. Horn and Premo implied that as the number of risk factors increased, the probability of success at the community college and subsequent success of a vertical transfer to the senior-level institution decreased. Hoachlander, Sikora, and Horn (2003) surveyed vertical transfer students to determine the obstacles associated with transferring from a community college to a baccalaureate degree granting institution. Hoachlander et al. found that 55% of students with no risk factors reported expecting to receive the baccalaureate degree compared to 32% of the vertical transfer students with one or more risk factors.

According to the research reviewed, the process of successful vertical transfer involves integrating both institutions' structural and individuals' processes and attributes. Individual factors such as educational aspirations (Livingston & Wirt, 2003), academic preparation (Dougherty, 1992), and intent to transfer (Harbin, 1997) have been associated by researchers

with students successfully transferring from community colleges into senior institutions. While students' personal attributes have been associated with students' successful vertical transfers from community colleges to four-year institutions, structural and intra-institutional factors may impact baccalaureate degree attainment (Anderson, Sun, & Alfonso, 2006; Goldhaber, Gross, & DeBurgomaster, 2008).

Structural factors reviewed in the research included community college governance systems, articulation agreements and formalized partnerships between community colleges and four-year institutions. Keith (1996) conducted a national study of statewide community college systems and showed a correlation between community college transfer rates and a state's structure and governance of its community college system. States with more formal and centralized community college structures and transfer articulation agreements demonstrated higher transfer rates than states with decentralized community college systems and transfer articulation policies. Ignash and Townsend (2000) viewed articulation agreements as an important mechanism for promoting and facilitating the successful transfer of community college students. Alternatively, Anderson et al. (2006) suggested that articulation agreements did not improve the community college student transfer rate. In a study of 12 states with statewide transfer articulation agreements, Anderson et al. found no relationship between the existence of a statewide transfer articulation agreement and the probability of students transferring from two-year colleges to four-year colleges.

Dual admission and transfer program partnerships between community colleges and baccalaureate degree granting institutions were designed to encourage vertical transfer into the four-year institution. Kisker (2007) explored how levels of trust and the quality of relationships between administrators at two-year and four-year institutions impacted the effectiveness of

community college-university transfer partnerships. Kisker concluded the following: (a) faculty at the two-year institution are key players in determining course content and course equivalencies and should be included in transfer partnership discussions; (b) the levels of trust felt by faculty and administrators inversely impact territorialism between institutions; if high levels of trust are felt, the level of territorialism felt is lower; and (c) in order for the program to be sustained, faculty and administrators at both institutions must believe that the transfer partnership is essential to enhancing the transfer function of the community college. An example of broken trust which impacted the relationship between regional two-year community colleges and a former upper-level institution in the North Dallas area occurred when The University of Texas at Dallas (UTD) decided to deviate from their original founding mission and added lower-division student enrollment to become a four-year institution. Originally, founded as an upper-level, public university in the 1960s to serve the North Dallas area of Texas in partnership with the Collin County Community College District, UTD negatively impacted the relationship with their local community college partners by deciding in January of 1990 to grow their own undergraduate programs in science, technology, engineering and math with downward building of academic programs.

Conclusion

The literature review included a national view of transfer student mobility, theoretical frameworks and concepts associated with the current study, previous research on transfer students as defined with the four domains of transfer based on mobility type, as well as a review of the factors shown to affect transfer baccalaureate degree completion. The majority of research studies were focused on the experiences of community college students after their transfers to four-year universities (Cejda & Kaylor, 1997; Flaga, 2002, 2006; Townsend & Wilson, 2006;

Wang, 2009). In conclusion, because of the relationships between the feeder community colleges and the upper-level institution involved in the current study, the following chapters provide methods, results, and conclusions regarding the data student respondents offered regarding the vertical transfer student research agenda in addition to shedding light on the vertical transfer process from community colleges to upper-level institutions.

CHAPTER 3

PROCEDURES FOR THE COLLECTION AND ANALYSIS OF DATA

This chapter outlines the research inquiry's process. The intent of this quantitative, descriptive study was to understand the perceptions of central Texas community college students (Temple College and Central Texas College) regarding what they might expect as part of the vertical transfer process in order to improve the likelihood of their persistence to graduation with a four-year degree. The chapter includes how data were collected, what instruments were employed, how the survey instruments were used, as well as how the data were collected and analyzed.

Research Design

Survey methodology was used to collect and analyze the community college students' expectations regarding their current community college experiences and future university experiences at Texas A&M University - Central Texas (TAMUCT). Survey methodology is typically utilized in research:

To answer questions that have been raised, to solve problems that have been posed or observed, to assess needs and set goals, to determine whether or not specific objectives have been met, to establish baselines against which future comparisons can be made, to analyze trends across time, and generally, to describe what exists, in what amount, and in what context. (Isaac & Michael, 1997, p. 136)

Kraemer (1991) identified three distinguishing characteristics of survey research (p. xiii). First, survey research is used to describe specific aspects of a given population quantitatively. These aspects often involve examining the relationships among different variables. Second, the data required for survey research are collected from people and are, thus, subjective in nature.

Finally, survey research uses a selected portion of the population from which the findings can later be generalized back to the general population. Furthermore, survey research is “a form of descriptive investigation that involves collecting information about research participants’ beliefs, attitudes, interests, or behavior through questionnaires” (Creswell, 2005, p. 533). Therefore, the current study utilized an online questionnaire to discern feeder community college students’ experiences and perceptions prior to transferring to TAMUCT.

Sample

The volunteering participants were recruited through purposeful sampling (Morse, 1991; Coyne, 1997). According to Morse (1991), purposeful sampling is appropriate to use in research methodology when the researcher targets participants according to the needs of the study. Furthermore, purposeful sampling is used to select participants who have a broad knowledge of the topic at hand (Morse, 1991). The sample was recruited using directory information found in databases provided by the respective Warrior Corps academic advisors located at Central Texas College and Temple College respectively. The prospective student volunteers received emails inviting them to participate in the study.

The minimum estimated sample size for those completing the online survey is 120 Warrior Corps students from Central Texas College and Temple College, which represents an acceptable 15% response rate for an Internet distributed survey (Tabachnick & Fidell, 2007). The preferable computed sample size for representing the population of 700 was 254 respondents (Krejcie & Morgan, 1970), representing a higher response rate of 35%. If the response rate reached 60%, which was considered very good, the sample size would have been 432 (Instructional Assessment Resources, 2007). Since no incentives for participation were offered, the response rate was likely to be a sample of 120 participants.

Site and Participant Selection

Two feeder community colleges for Texas A&M - Central Texas were selected for the current study. Approximately 700 area community college students who completed a Warrior Corps contract (i.e., two plus two [2 + 2] articulation agreement) with their respective TAMUCT transfer academic advisor at Central Texas College or Temple College prior to Spring 2013 were invited to participate in the study through an email describing the study with a link to the survey provided in the email. It is important to note that survey participants were “self-selected” and all indicated an intent to transfer to TAMUCT by completing a Warrior Corps contract with an academic advisor at either Temple College or Central Texas College. While Carnegie Basic Classifications, enrollment, and demographic information for each institution involved in the current study is provided below, it is also important to review the mission of each participating higher education institution as well.

The Basic Carnegie Classification Categories for Temple College, which is located in Temple, Texas, is Public Rural-serving Medium. The Fall 2011 demographics for Temple College’s total enrollment of 5,692 included 67% female, 33% male, 53% White, 21% Black or African American, 21% Hispanic or Latino, 2% Asian; and 56% of students enrolled were 24 years of age and under. The mission of Temple College is to foster student success for our diverse community by providing quality lifelong learning and enrichment experiences (Temple College, 2010). The Basic Carnegie Classification Categories for Central Texas College, which is located in Killeen, Texas, is Public Special Use. The Fall 2011 demographics for Central Texas College’s total enrollment of 26,995 were 47% female, 53% male, 42% White, 28% Black or African American, 18% Hispanic or Latino, 3% Asian; and 63% of students enrolled were 25 years of age and older. Central Texas College, a public, open-admission community college,

provides education for a global community through responsive, innovative instruction and educational services for diverse student populations (CTC, n.d.).

Texas A&M University-Central Texas, one of the newest universities in the state, is located in Killeen, Texas. The university serves a regional population of approximately 390,000 citizens within the Central Texas region, including the free world's largest military installation at Fort Hood. Total enrollment for the Fall Semester 2012 was 2,253, with the Spring Semester 2013 enrollment of 2,460. Because TAMUCT is an upper-level university, all of its undergraduate students transfer from other institutions. Approximately 70% of its students are undergraduates with 46% of all students on military active duty, veterans, or members of military families. The average age of the student body is 34, and they compose the most broadly diverse student body in The Texas A&M University System. Although more than 90% of TAMUCT students enroll part-time, the students are highly motivated toward the completion of their degrees, with almost one third of those enrolled in Fall 2009 graduating by Summer 2010. Texas A&M University-Central Texas offers junior and senior-level coursework needed to successfully complete baccalaureate degrees and all coursework leading to the completion of graduate degrees. TAMUCT is committed to high quality, rigorous, and innovative learning experiences, and prepares students for lifelong learning through excellence in teaching, service, and scholarship (Office of the President, 2013).

Instruments

The instrumentation used in the current study is grounded upon earlier work of Frankie Santos Laanan (2004, 2007) and Elizabeth E. Sacksteder LaClair (2010). The survey instrument was adapted and updated, for the purpose of the current quantitative study, to evaluate the experiences and expectations of community college students attending two community colleges

feeding vertical transfer students into TAMUCT. The survey was adapted from Dr. Frankie Santos Laanan's Transfer Student Questionnaire (L-TSQ®) and from the adaptation of the L-TSQ by Dr. Beth Sacksteder LaClair (2010) known as the Mann Adopted Survey. Laanan (2004) field tested the L-TSQ® on the campus of a large, urban public research university in Southern California. He collected data from more than 700 students who transferred from more than 64 California community colleges to the southern California university between 1994 and 1995. Laanan's 304-item survey measures transfer students' non-cognitive or affective traits. Coefficient alphas were calculated for each factor. In the winter of 1996, 25 students were administered the first administration of the L-TSQ®. One week later, Laanan administered the same questionnaire for a second time to the same group of students. A correlation coefficient was calculated and the stability estimate yielded a .75 correlation coefficient (Laanan, 2004). In regard to establishing the validity of the L-TSQ®, Laanan employed extensive techniques which resulted in concluding the instrument held content and construct validity.

LaClair (2010) altered the L-TSQ® 2008 version (Laanan & Ebbers, 2008) for the purpose of her basic, descriptive study. Written permission from Elizabeth E. Sacksteder LaClair (2010), creator of the Mann Adopted Survey, was obtained on December 3, 2012, and is provided in Appendix A. The survey items of the current study are measured via a Likert-type 4-point scale and conclude with open-ended questions for in-depth data collection. For the purpose of the current study, "TAMUCT" replaced the terms of "four-year college/university" and "four-year school" regarding students' expectations, activities, and general perceptions. Just like LaClair's 2010 L-TSQ® modified instrument, the current survey asked students to anticipate their future experiences with vertical transfer to TAMUCT. Students were asked to respond according to a series of items pertaining to their expectations for transferring to TAMUCT.

The adapted instrument contains 42 items and collects information on the following categorical areas: demographic information of respondents, community college information, current community college experience, activities, and satisfaction. Additionally, the adapted survey includes sections related to anticipated TAMUCT expectations regarding advising, activities and general student perceptions about the meditational transition to TAMUCT. As defined by Beach (1999), meditational transitions occur in educational settings that have not yet occurred or have not yet been experienced. According to Sacksteder LaClair (2010), “Beach associates meditational transitions to adult or vocational educational experiences where participants are negotiating where they will be going” (p. 121). The instrument concludes with six open-ended questions related to the community college to baccalaureate degree granting institution as a part of the vertical transfer pathway.

Procedures

The approximately 700 area community college students who have completed a Warrior Corps contract with their respective TAMUCT transfer academic advisor at Central Texas College or Temple College prior to Spring 2013 were invited to participate in the quantitative, descriptive study following approval to conduct the study by the University of North Texas Institutional Research Board (Appendix B). I sent three email messages to the Warrior Corps students 7 to 10 days apart with a SurveyMonkey® link to the online survey. The initial invitation to participate in the research study was sent on March 13, 2013 (Appendix C). The second email message was sent on March 25, 2013 and the last invitation for participation was sent on approximately April 2, 2013. To complete the survey, students clicked on the link found in the email, read the informed consent statements, chose the agree option, and entered the survey. Students who did not choose the agree option were directed to a window thanking them

for their time. Surveys were anonymously and voluntarily completed. No identifying information was requested of the respondents. Students who chose not to complete the survey exited the window at any time. After the deadline period for data collection passed, the link for accessing the survey was disabled in SurveyMonkey®. This event occurred on approximately April 8, 2013.

Data Analysis

Survey data were downloaded from my password protected Survey Monkey® account. The responses were imported into IBM's SPSS® 21.0 for statistical analysis. General summary data included the appropriate use of frequencies and measures of central tendency in order to describe the sample and the data. Because Sacksteder LaClair (2010) analyzed the data from the survey item by item, for this study's purpose, the survey items underwent reliability analysis to ensure that they represented the two sections of content (community college experiences and vertical transfer expectations) as hypothesized by Sacksteder LaClair. If the items could be grouped into the experiences and expectations scales with adequate reliability, then the analysis of the research questions was planned to be conducted using these two composite variables as scales. To answer the research questions, the data for each research question were analyzed according to the nature of the research question. The analysis for the three research questions occurred as described in the following subsections.

Research Question 1

This question was: For each of the scales, are there linear relationships with selected student demographic variables (gender, age, ethnic background, highest academic degree intended to obtain, highest level of parents' completed education, socioeconomic status) and community college student expectations? The *t*-test was appropriate to test for differences for

gender. The analysis of variance (ANOVA) test was appropriate to test for differences between the demographic variables composed of three or more categories.

Research Question 2

This research question was: For each of the scales, are there linear relationships with selected student aspirational variables (highest academic degree intended to obtain at any college or university, highest academic degree intended to obtain at TAMUCT) and community college student expectations? The analysis of variance (ANOVA) test was appropriate to test for differences between the aspirational variables composed of three or more categories.

Research Question 3

The third research question was: Are there linear relationships with selected student responses based on Central Texas community college attended? The *t*-test was used to compare students' responses to the scales based on the feeder community college attended.

CHAPTER 4

RESULTS

The intent of this quantitative, descriptive study was to understand the experiences of community college students attending Temple College and Central Texas College regarding what they may expect as part of the vertical transfer process in order to improve the likelihood of their persistence to graduation at Texas A&M University-Central Texas (TAMUCT). Feeder community college students' thoughts and feelings regarding their current community college experiences and future university experiences at TAMUCT were collected and analyzed through survey methodology. Survey data were downloaded from my password protected SurveyMonkey® account. The responses were imported into IBM's SPSS® 21.0 for statistical analysis. The results for the three research questions are presented in this chapter following the description of the participants' characteristics.

Participants' Characteristics

There were 138 respondents to the current survey. Two surveys were left out of the analysis because the respondents indicated that they did not intend to transfer to TAMUCT. The remaining sample was 136. The survey response rate for the population of 700 potential Warrior Corps transfer students was 19%. While this rate appears to be low, for an Internet distributed survey, this response rate was adequate as it was above 15% (Instructional Assessment Resources, 2007; Tabachnick & Fidell, 2007). The sample was 74% female ($n = 97$). The respondents' ages ranged from 18 through 61; the mean age was 31.9 years old with a standard deviation of 11.2. When age was categorized for research question analysis, the majority of the sample was younger than 48 years old, as seen in Figure 1.

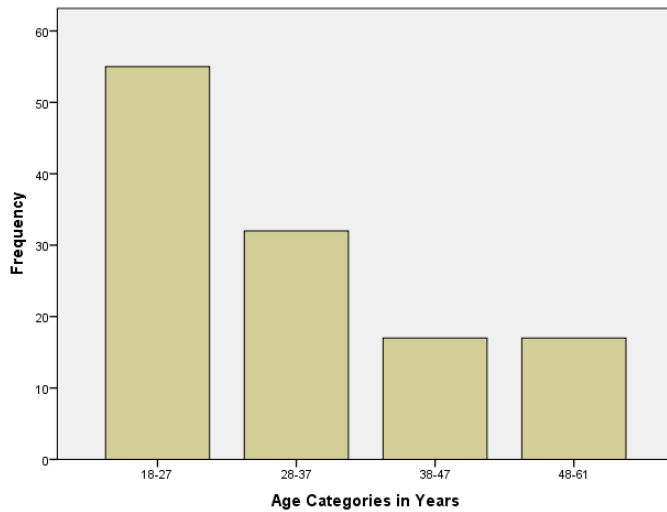


Figure 1. Respondents' ages by category.

The majority of the sample (67%, $n = 89$) reported living too far from their campuses to walk to class, and 22% of the respondents ($n = 29$) reported living with their parents. Only 7% reported living in homes that they owned. Figure 2 displays the ethnic composition of the sample, of which 129 respondents indicated an ethnicity. The sample was 45% White, and majority minority (for more, see the ethnicity discussion under Research Question 1 section below).

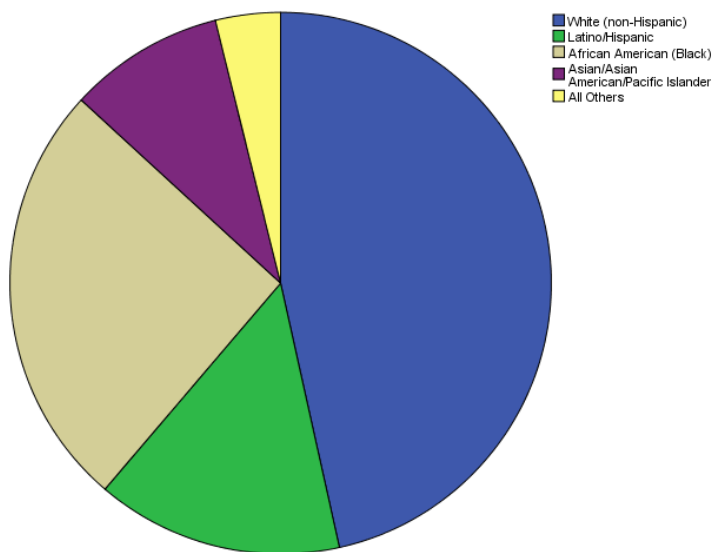


Figure 2. Pie chart indicating ethnicities for respondents of the sample.

Reliability for the Dependent Variables

Sacksteder LaClair (2010) analyzed the data from the survey item by item. For this study's purpose, the survey items underwent reliability analysis for each of the two major scales, community college experiences and vertical transfer expectations, to verify that the content for each scale represented its labeled scale as hypothesized by Sacksteder LaClair (2010). For the 63 community college student experiences items, Cronbach's α was .909. For the 58 vertical transfer student expectations items, Cronbach's α was .918. The two groups of items generated excellent reliability as both emerged well above the minimally adequate .7 value (Pallant, 2007; Tanner, 2012). Because of the nature of the scales, rather than report the scores for the two scales as averages, I report the descriptive statistics for the total scores for each scale (Table 1). Additionally, the skewness and kurtosis statistics indicated that the scores for both groups of items represented normal distributions and were appropriate for use with parametric statistical testing (Salkind, 2011).

Table 1

Descriptive Statistics for Community College Students' Responses to the Survey's Community College Experiences and Vertical Transfer Expectations Scales

Item Group	<i>n</i>	Min.	Max.	<i>M</i>	<i>SD</i>	Variance	Skewness	Kurtosis
Community College Experiences	93	133	248	193.66	26.03	677.42	-.159	-.430
Vertical Transfer Expectations	65	106	205	159.23	20.90	436.84	.058	.342

The analysis of the research questions was conducted using community college student experiences and vertical transfer student expectations as the two scales. To answer the research questions, the data for each research question were analyzed based on the type of variables

represented by the independent variables. The level of significance was set to be α less than .05. The results for the three research questions appear in the following three subsections.

Research Question 1 Results

This question was: Are there linear relationships with selected student background variables and community college student experiences as part of the vertical transfer student process? For Research Question 1, two general hypotheses were tested, one for each scale from the survey. Hypothesis 1A was: No linear relationships with selected student background variables and community college student experiences will occur. Hypothesis 1B was: No linear relationships with selected student background variables and vertical transfer student expectations will occur. ANOVAs were used for testing differences between the background variables' factors of age (categorized into four groups), ethnicity (categorized into five groups), highest level of education by mother and by father (education categories), and socioeconomic status (income groupings) and each of the two scales, community college student experiences and vertical transfer student expectations. For assessing differences between gender and each of the two scales, a *t* test was used.

Gender

As seen in Table 2, respondents demonstrated lower scores for the vertical transfer student expectations than regarding their community college student experiences. However, no relationships between gender and neither community college student experiences nor vertical transfer student expectations were observed. Thus, the null hypotheses were retained.

Table 2

Descriptive Statistics for Each Scale by Gender

	Gender	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>t</i>	<i>df</i>	<i>p</i>
Community College Experiences	Male	23	189.87	26.185	5.460	-.930	90	.355
	Female	69	195.62	25.516	3.072			
Vertical Transfer Expectations	Male	16	156.13	26.513	6.628	-.682	63	.498
	Female	49	160.24	18.935	2.705			

Age

Of the 136 respondents, 121 reported their ages. Table 3 displays the distribution of age groups for the ANOVA test. The mean age was 31.9 years; the range was 43 years. Table 3 also shows the means by age for the community college student experiences and vertical transfer student expectations which generated no significant relationships. As seen in Table 4, the null hypotheses were retained. No differences by age for either experiences or expectations were observed.

Table 3

Community College Experiences and Vertical Transfer Expectations by Age Group

Age in Years	<i>n</i>	%	Community College Experiences <i>M (SD)</i>	Vertical Transfer Expectations <i>M (SD)</i>
18-27	55	45.5	191.6 (24.7)	162.2 (17.6)
28-37	32	26.4	192.5 (27.2)	164.4 (15.4)
38-47	17	14.0	199.7 (27.6)	166.0 (32.6)
48-61	17	14.0	212.5 (20.5)	158.7 (19.6)
Total	121	100.0	195.6 (26.0)	162.4 (19.1)

Note. Mean age was 31.9 with a standard deviation of 11.2 years.

Table 4

ANOVA Table for Investigating the Relationships Between Age and Community College Experiences and Age and Vertical Transfer Expectations

Group of Items Tested		SS	df	MS	F	p
Community College Experiences	Between Groups	4,153.880	3	1384.627	2.139	.102
	Within Groups	52,424.073	81	647.211		
	Total	56,577.953	84			
Vertical Transfer Expectations	Between Groups	303.624	3	101.208	.267	.849
	Within Groups	20,054.095	53	378.379		
	Total	20,357.719	56			

Ethnicity

The sample was minority majority as seen in Table 5. The largest minority group was African American at 25.6%. Table 5 also provides the means of the total scores for each of the two scales by ethnicity. Table 6 confirms that the ANOVA did not generate any statistical significance. The null hypothesis was not rejected suggesting lack of relationships for ethnicity regarding both community college student experiences and vertical transfer student expectations.

Table 5

Ethnic Distribution (n = 129) of Scores for Community College Experiences and Vertical Transfer Expectations

Ethnicity	n	%	Community College Experiences M (SD)	Vertical Transfer Expectations M (SD)
White (non-Hispanic)	60	46.5	189.6 (26.6)	153.0 (21.4)
Latino/Hispanic	19	14.7	195.4 (23.2)	165.4 (21.5)
African American (Black)	33	25.6	199.5 (23.2)	162.4 (19.7)
Asian/Asian American/Pacific Islander	12	9.3	200.6 (21.2)	168.4 (22.3)
All Others	5	3.9	181.7 (16.2)	152.7 (13.4)

Table 6

ANOVA Table for Investigating the Relationships Between Ethnicity and Community College Experiences and Ethnicity and Vertical Transfer Expectations

Group of Items Tested		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Community College Experiences	Between Groups	2,433.897	4	608.474	.899	.468
	Within Groups	58,876.103	87	676.737		
	Total	61,310.000	91			
Vertical Transfer Expectations	Between Groups	2,307.015	4	576.754	1.334	.268
	Within Groups	25,509.844	59	432.370		
	Total	27,816.859	63			

Parental Levels of Education

Mother's education. Regarding the respondents' mother's educational attainment, 134 responded to this item as seen in Table 7. Only 18% of the respondents' mothers had earned a bachelor's degree or higher, but 16% had earned associate's degrees (Figure 3). Table 7 also shows the distributions of the means by mother's educational attainment for the two scales measuring experiences and expectations.

Table 7

Mothers' Educational Attainment (n = 134) and Scores for Community College Experiences and Vertical Transfer Expectations

Educational Attainment	<i>n</i>	%	Community College Experiences <i>M (SD)</i>	Vertical Transfer Expectations <i>M (SD)</i>
Elementary school or less	9	6.7	184.3 (21.8)	147.3 (26.3)
Some high school	15	11.2	198.3 (18.0)	159.9 (14.4)
High school graduate	32	23.9	193.1 (22.3)	158.9 (21.0)
Some college	33	24.6	204.0 (26.6)	165.1 (18.8)
Associate's degree from a two-year college	21	15.7	186.4 (30.6)	153.4 (25.7)
Bachelor's degree	9	6.7	187.0 (22.9)	159.7 (18.2)
Graduate school degree	9	6.7	184.9 (27.4)	159.0 (14.8)
Don't know	6	4.5	199.5 (36.4)	181.0 (31.1)

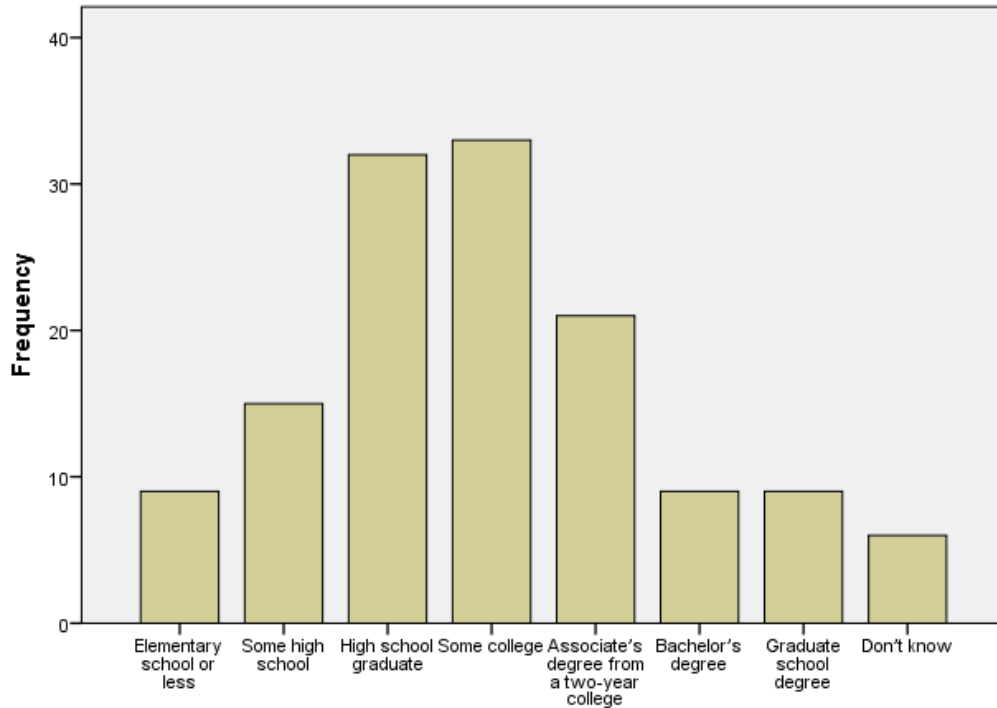


Figure 3. Bar chart depicting mothers' highest level of education.

The ANOVA test did not generate any statistical significance. Table 8 confirms that the null hypothesis was not rejected and the lack of relationships between both mothers' education and community college student experiences and mothers' education and vertical transfer student expectations.

Table 8

ANOVA Table for Investigating the Relationships Between Mothers' Education and Community College Experiences and Mothers' Education and Vertical Transfer Expectations

Groups of Items Tested		SS	df	MS	F	p
Community College Experiences	Between Groups	5,024.552	7	717.793	1.065	.393
	Within Groups	57,298.437	85	674.099		
	Total	62,322.989	92			
Vertical Transfer Expectations	Between Groups	2,358.937	7	336.991	.750	.631
	Within Groups	25,598.601	57	449.098		
	Total	27,957.538	64			

Father's education. Regarding the respondents' father's educational attainment, 134 responded to this item as seen in Table 9. One-quarter of the respondents' fathers had earned a bachelor's degree or higher, but just 7.5% had earned associate's degrees (Figure 4). Table 9 also shows the distributions of the means by father's educational attainment for the two scales measuring experiences and expectations.

Table 9

Fathers' Educational Attainment (n = 134) and Scores for Community College Experiences and Vertical Transfer Expectations

Educational Level	<i>n</i>	%	Community College Experiences <i>M (SD)</i>	Vertical Transfer Expectations <i>M (SD)</i>
Elementary school or less	8	6.0	189.3 (18.7)	142.0 (22.6)
Some high school	18	13.4	195.6 (21.8)	148.5 (9.5)
High school graduate	35	26.1	189.5 (28.5)	158.6 (24.9)
Some college	30	22.4	200.8 (21.2)	164.2 (16.3)
Associate's degree from a two-year college	10	7.5	212.33 (28.0)	163.5 (29.2)
Bachelor's degree	11	8.2	187.2 (24.3)	154.0 (26.2)
Graduate school degree	7	5.2	181.3 (32.0)	156.5 (15.5)
Don't know	15	11.2	190.6 (31.1)	168.2 (21.0)

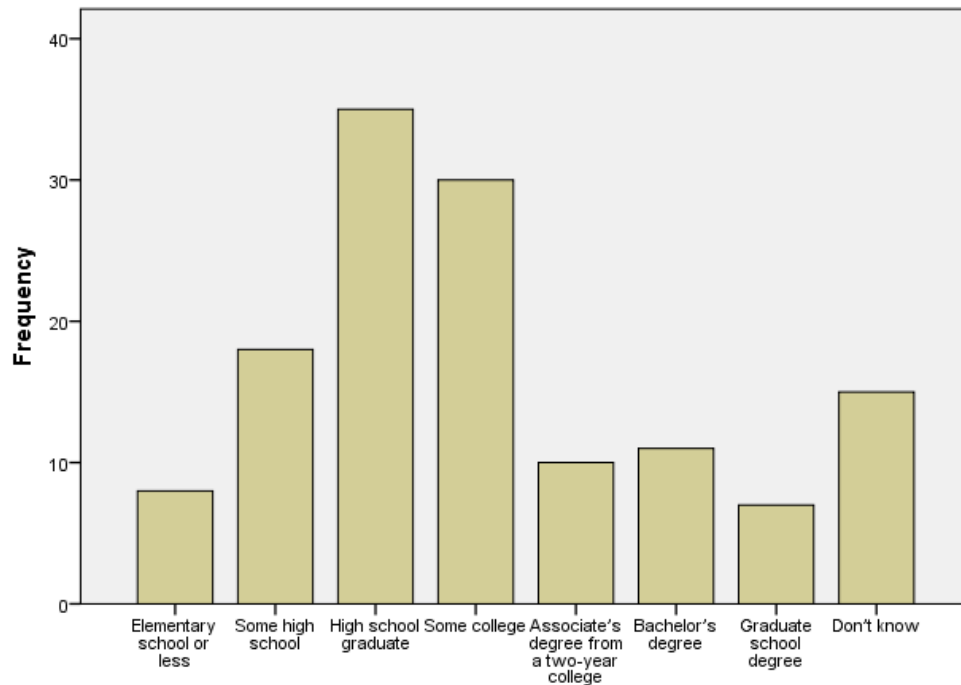


Figure 4. Bar chart depicting fathers' highest level of education.

The ANOVA test did not generate any statistical significance. Table 10 confirms that the null hypothesis was not rejected and the lack of relationships between both fathers' education and community college student experiences and fathers' education and vertical transfer student expectations.

Table 10

ANOVA Table for Investigating the Relationships Between Fathers' Education and Community College Experiences and Fathers' Education and Vertical Transfer Expectations

Groups of Items Tested		SS	df	MS	F	p
Community College Experiences	Between Groups	5,052.968	7	721.853	1.071	.389
	Within Groups	57,270.021	85	673.765		
	Total	62,322.989	92			
Vertical Transfer Expectations	Between Groups	2,729.294	7	389.899	.881	.527
	Within Groups	25,228.244	57	442.601		
	Total	27,957.538	64			

Socioeconomic Status (Income)

Students were asked the following via the survey instrument: What is your best estimate of your parent’s total household income last year? For this item 117 responded, and 66% indicated that their parents earned less than \$60,000 per year. Table 11 shows the distributions of the means by parental income for the two scales measuring experiences and expectations. Interestingly, for parental income and both the community college student experiences and vertical transfer student expectations scales, the ANOVA tests generated significance and both null hypotheses were rejected. Relationships between parental income as self-reported by participants and both the community college student experiences and vertical transfer student expectations scales were observed.

Table 11

Distribution of Parental Income as Reported by Participants (n = 117) and Scores for Community College Experiences and Vertical Transfer Expectations

Income	<i>n</i>	%	Community College Experiences <i>M (SD)</i>	Vertical Transfer Expectations <i>M (SD)</i>
Less than \$20,000	23	19.7	210.5 (20.2)	170.4 (19.7)
\$20,000 - \$39,999	26	22.2	197.0 (18.7)	163.8 (19.8)
\$40,000 - \$59,999	28	23.9	187.3 (29.2)	151.5 (20.3)
\$60,000 - \$79,999	19	16.2	186.3 (25.1)	144.7 (17.3)
\$80,000 or greater	21	17.9	187.4 (32.6)	167.4 (21.2)

Tables 12 and 13 depict the ANOVA ($F(4, 79) = 2.612, p = .042$) and the LSD post hoc comparisons for parental income and community college student experiences. Community college student experiences were rated higher by students reporting parent incomes less than \$20,000, according to the post hoc, than students whose parent incomes of \$40,000 - \$59,999, \$60,000 - \$79,999, and \$80,000 or greater. Students of poverty, whose parental incomes were

less than \$20,000 per year, reported more positive community college student experiences and more use of community college resources than students from the higher income brackets.

Table 12

ANOVA Table for Investigating the Relationships Between Reported Parental Income and Community College Student Experiences

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	6,810.915	4	1,702.729	2.612	.042*
Within Groups	51,495.085	79	651.837		
Total	58,306.000	83			

Note. * $p < .05$.

Table 13

Post Hoc LSD Comparisons for the Statistically Significant Relationships Between Parental Income and Community College Experiences

(I) Estimate of parents' total household income last year	(J) Estimate of parents' total household income last year	<i>M</i> Diff. (I-J)	<i>SE</i>	<i>p</i>	95% Confidence Interval	
					Lower Bound	Upper Bound
Less than \$20,000	\$20,000 - \$39,999	13.548	8.472	.114	-3.32	30.41
	\$40,000 - \$59,999	23.167*	8.772	.010	5.71	40.63
	\$60,000 - \$79,999	24.250*	9.750	.015	4.84	43.66
	\$80,000 or greater	23.147*	8.893	.011	5.45	40.85
\$20,000 - \$39,999	Less than \$20,000	-13.548	8.472	.114	-30.41	3.32
	\$40,000 - \$59,999	9.619	8.201	.244	-6.70	25.94
	\$60,000 - \$79,999	10.702	9.239	.250	-7.69	29.09
	\$80,000 or greater	9.599	8.330	.253	-6.98	26.18
\$40,000 - \$59,999	Less than \$20,000	-23.167*	8.772	.010	-40.63	-5.71
	\$20,000 - \$39,999	-9.619	8.201	.244	-25.94	6.70
	\$60,000 - \$79,999	1.083	9.515	.910	-17.86	20.02
	\$80,000 or greater	-.020	8.635	.998	-17.21	17.17
\$60,000 - \$79,999	Less than \$20,000	-24.250*	9.750	.015	-43.66	-4.84
	\$20,000 - \$39,999	-10.702	9.239	.250	-29.09	7.69
	\$40,000 - \$59,999	-1.083	9.515	.910	-20.02	17.86
	\$80,000 or greater	-1.103	9.626	.909	-20.26	18.06
\$80,000 or greater	Less than \$20,000	-23.147*	8.893	.011	-40.85	-5.45
	\$20,000 - \$39,999	-9.599	8.330	.253	-26.18	6.98
	\$40,000 - \$59,999	.020	8.635	.998	-17.17	17.21
	\$60,000 - \$79,999	1.103	9.626	.909	-18.06	20.26

Note. *The mean difference is significant at the 0.05 level.

Tables 14 and 15 depict the ANOVA ($F(4, 52) = 3.318, p = .017$) and the LSD post hoc comparisons for parental income and vertical transfer student expectations. Vertical transfer student expectations received higher ratings by students reporting parental incomes of less than \$20,000, according to the post hoc, than students whose parental incomes were \$40,000 - \$59,999 and \$60,000 - \$79,999. Students from poverty reported more positive vertical transfer student expectations than students from the higher income brackets. Students reporting parental incomes of \$20,000 - \$39,999 demonstrated more favorable vertical transfer student expectations than students from homes with parents making \$60,000 - \$79,999. Finally, students reporting parental incomes of \$60,000 - \$79,999 had lower scores for vertical transfer student expectations than students reporting parental incomes of \$80,000 or greater.

Table 14

ANOVA Table for Investigating the Relationships Between Parental Income and Vertical Transfer Student Expectations

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	5,167.934	4	1,291.983	3.318	.017*
Within Groups	20,246.628	52	389.358		
Total	25,414.561	56			

Note. * $p < .05$.

Table 15

Post Hoc LSD Comparisons for the Statistically Significant Relationships Between Parental Income and Vertical Transfer Student Expectations

(I) Estimate of parents' total household income last year	(J) Estimate of parents' total household income last year	<i>M</i> Diff. (I-J)	<i>SE</i>	<i>p</i>	95% Confidence Interval	
					Lower Bound	Upper Bound
Less than \$20,000	\$20,000 - \$39,999	6.588	7.600	.390	-8.66	21.84
	\$40,000 - \$59,999	18.819*	7.600	.017	3.57	34.07
	\$60,000 - \$79,999	25.690*	8.430	.004	8.77	42.61
	\$80,000 or greater	2.982	8.745	.734	-14.57	20.53
\$20,000 - \$39,999	Less than \$20,000	-6.588	7.600	.390	-21.84	8.66
	\$40,000 - \$59,999	12.231	7.740	.120	-3.30	27.76
	\$60,000 - \$79,999	19.103*	8.556	.030	1.93	36.27
	\$80,000 or greater	-3.606	8.867	.686	-21.40	14.19
\$40,000 - \$59,999	Less than \$20,000	-18.819*	7.600	.017	-34.07	-3.57
	\$20,000 - \$39,999	-12.231	7.740	.120	-27.76	3.30
	\$60,000 - \$79,999	6.872	8.556	.426	-10.30	24.04
	\$80,000 or greater	-15.837	8.867	.080	-33.63	1.96
\$60,000 - \$79,999	Less than \$20,000	-25.690*	8.430	.004	-42.61	-8.77
	\$20,000 - \$39,999	-19.103*	8.556	.030	-36.27	-1.93
	\$40,000 - \$59,999	-6.872	8.556	.426	-24.04	10.30
	\$80,000 or greater	-22.708*	9.588	.022	-41.95	-3.47
\$80,000 or greater	Less than \$20,000	-2.982	8.745	.734	-20.53	14.57
	\$20,000 - \$39,999	3.606	8.867	.686	-14.19	21.40
	\$40,000 - \$59,999	15.837	8.867	.080	-1.96	33.63
	\$60,000 - \$79,999	22.708*	9.588	.022	3.47	41.95

Note. *The mean difference is significant at the 0.05 level.

Because of the significance of parents' incomes to students' scores, consideration of whether or not students received financial support from their parents was appropriate. Of the 130 who responded to the item, 19% ($n = 24$) reported receiving financial support from their parents. Looking at responses by age group revealed 87% of 18 to 27 year olds receive financial support from parents, and for all other age groups just 13% receive financial support. No respondents aged 48 to 61 reported receiving any financial support from their parents. For the group of respondents receiving some financial support from their parents, the group mean for their total scores regarding community college experiences was 186.9 with a standard deviation of 29.3. For the group of respondents receiving no financial support from their parents,

the group mean for their total scores regarding community college experiences was 195.2 with a standard deviation of 25.5. For the group of respondents receiving some financial support from their parents, the group mean for their total scores regarding their vertical transfer expectations was 158.3 with a standard deviation of 12.9. For the group of respondents receiving no financial support from their parents, the group mean for their total scores regarding their vertical transfer expectations was 159.4 with a standard deviation of 22.5. Two *t* tests were conducted to determine if parents' financial support led to differences in scores for community college student experiences and vertical transfer student expectations. However, no significant differences were observed between the two financial support statuses and each of the scales as seen in Table 16.

Table 16

Results for t test for Equality of Means Between Students who Reported Receiving Financial Support from Parents and Students who Reported not Receiving Financial Support from Parents

	Levene's test <i>F</i>	<i>p</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>M</i> Diff.	<i>SE</i> Diff.	95% CI of the Difference	
								Lower	Upper
Community College Experiences	.676	.413	-1.175	88	.243	-8.309	7.070	-22.36	5.74
Vertical Transfer Expectations	2.364	.129	-.165	62	.869	-1.161	7.034	-15.22	12.90

For the independent personal income item, 105 respondents responded to the item, and 67% (*n* = 70) reported earning less than \$40,000 last year. Table 17 shows the distributions of the means by students' independent incomes for the two scales measuring experiences and expectations. However, no significant differences occurred when the ANOVA for the scores regarding community college student experiences and vertical transfer student expectations were compared to respondents' personal income self-reports. Table 18 depicts this lack of significance.

Table 17

Respondents' Best Estimates of Their Total Incomes Last Year, Independent from Their Parents (n = 105) and Scores for Community College Experiences and Vertical Transfer Expectations

Income	<i>n</i>	%	Community College Experiences <i>M (SD)</i>	Vertical Transfer Expectations <i>M (SD)</i>
Less than \$20,000	41	39.0	200.5 (22.9)	168.2 (19.5)
\$20,000 - \$39,999	29	27.6	191.3 (24.4)	150.7 (23.5)
\$40,000 - \$59,999	22	21.0	195.9 (24.6)	161.1 (23.0)
\$60,000 - \$79,999	7	6.7	181.7 (26.2)	145.8 (23.0)
\$80,000 or greater	6	5.7	213.0 (34.0)	152.7 (18.5)

Table 18

ANOVA Table for Investigating the Relationships Between Respondents' Independent Income and Community College Student Experiences and Respondents' Independent Income and Vertical Transfer Student Expectations

Groups of Items Tested		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Community College Experiences	Between Groups	3,133.887	4	783.472	1.325	.270
	Within Groups	40,206.058	68	591.266		
	Total	43,339.945	72			
Vertical Transfer Expectations	Between Groups	3,923.578	4	980.895	2.118	.093
	Within Groups	22,227.139	48	463.065		
	Total	26,150.717	52			

Research Question 2 Results

This research question was: Are there linear relationships with selected student aspirational variables and community college student expectations as part of the vertical transfer

student process? For Research Question 2, two general hypotheses were tested, one for each scale from the survey. Null Hypothesis 1A was: No linear relationships with selected student aspirational variables and community college student experiences will occur. Null Hypothesis 1B was: No linear relationships with student aspirational variables and vertical transfer student expectations will occur. The aspirational variables were the following: (a) highest academic degree intending to obtain at any college or university and (b) highest academic degree intending to obtain at TAMUCT. The frequencies for each of the aspirational variables are depicted in Tables 19 and 20; for both items, 134 responses were collected. Tables 19 and 20 also show the distributions of the means by aspirational variable for the two scales measuring experiences and expectations.

Table 19

Highest Academic Degree Students Intend to Obtain at any College or University (n = 134) and Their Scores for Community College Experiences and Vertical Transfer Expectations

Type of Degree	<i>n</i>	%	Community College Experiences <i>M (SD)</i>	Vertical Transfer Expectations <i>M (SD)</i>
Bachelor (BA or BS)	56	41.8	194.7 (25.8)	158.1 (26.3)
Master (MA, MBA, or MS)	45	33.6	189.1 (22.0)	157.3 (15.5)
Doctorate (PhD or EdD)	24	17.9	194.0 (30.3)	163.7 (21.5)
Law (JD or LLB)	2	1.5	181.0 (55.1)	
Not sure	6	4.5	218.5 (17.9)	162.3 (1.5)
Associate (AA or AS or AAS)	1	.7	198.0 (na)	151.0 (na)

Table 20

Highest Academic Degree Students Intend to Obtain at TAMUCT (n = 134) and Their Scores for Community College Experiences and Vertical Transfer Expectations

Type of Degree	<i>n</i>	%	Community College Experiences <i>M (SD)</i>	Vertical Transfer Expectations <i>M (SD)</i>
Bachelor (BA or BS)	79	59.0	191.2 (27.4)	159.4 (23.2)
Master (MA, MBA, or MS)	40	29.9	198.7 (24.3)	161.1 (19.2)
Doctorate (PhD or EdD)	15	11.2	192.9 (20.9)	154.3 (16.2)

The results of the ANOVAs to determine if students' educational aspirations related to their scores for community college student experiences and vertical transfer student expectations are provided in Tables 21 and 22. Neither ANOVA test generated statistical significance between students' educational aspirations and their scores for community college student experiences and vertical transfer student expectations. The null hypotheses were retained for both sets of scores by educational aspiration at any college or university and by highest degree intended to obtain at TAMUCT.

Table 20

ANOVA Table for Investigating the Relationships Between Respondents' Degree Intentions and Community College Student Experiences and Respondents' Degree Intentions and Vertical Transfer Student Expectations

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Community College Experiences	Between Groups	3,435.875	5	687.175	1.015	.414
	Within Groups	58,887.114	87	676.863		
	Total	62,322.989	92			
Vertical Transfer Expectations	Between Groups	510.541	4	127.635	.279	.890
	Within Groups	27,446.998	60	457.450		
	Total	27,957.538	64			

Table 22

ANOVA Table for Investigating the Relationships Between Respondents' TAMUCT Degree Intentions and Community College Student Experiences and Respondents' TAMUCT Degree Intentions and Vertical Transfer Student Expectations

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Community College Experiences	Between Groups	1,085.048	2	542.524	.797	.454
	Within Groups	61,237.941	90	680.422		
	Total	62,322.989	92			
Vertical Transfer Expectations	Between Groups	286.186	2	143.093	.321	.727
	Within Groups	27,671.352	62	446.312		
	Total	27,957.538	64			

Research Question 3 Results

This question was: Are there linear relationships with selected student responses between the TAMUCT feeder community college attended and community college student experiences and transfer student expectations as part of the vertical transfer process? The *t*-test was used to compare students' responses to the scales based on the feeder community college attended. For this question, six surveys were removed from the sample because the respondents indicated that they attended neither Central Texas College nor Temple College at this time. The final sample for the two feeder community colleges was 120 (17% response rate) for this *t* test. Because the sample from Temple College contained only 10 completed surveys, an additional nonparametric test the Mann-Whitney U for independent samples was performed to confirm the results generated with the planned *t* test. The *t* test results seen in Table 23 suggested statistical significance for students' scores on community college student experiences, however, the Mann-Whitney U test for independent samples was not significant. Figure 5 shows the results for the

Mann-Whitney U test. Due to the size of the sample from Temple College, the null hypothesis was not rejected.

Table 23

Results for t Test Between TAMUCT Feeder Community College Attended and Scores for Community College Student Experiences and Vertical Transfer Student Expectations

		<i>n</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>t</i>	<i>df</i>	<i>p</i>
Community College Experiences	Central Texas	78	191.18	26.20	2.967	-2.630	17.09*	.018**
	Temple	9	204.89	12.86	4.286			
Vertical Transfer Expectations	Central Texas	56	158.63	21.30	2.847	-.268	58	.790
	Temple	4	161.50	3.11	1.555			

Note. *Levene's test for equality of variances was significant $F = 5.098, p = .027$. ** $p < .05$.

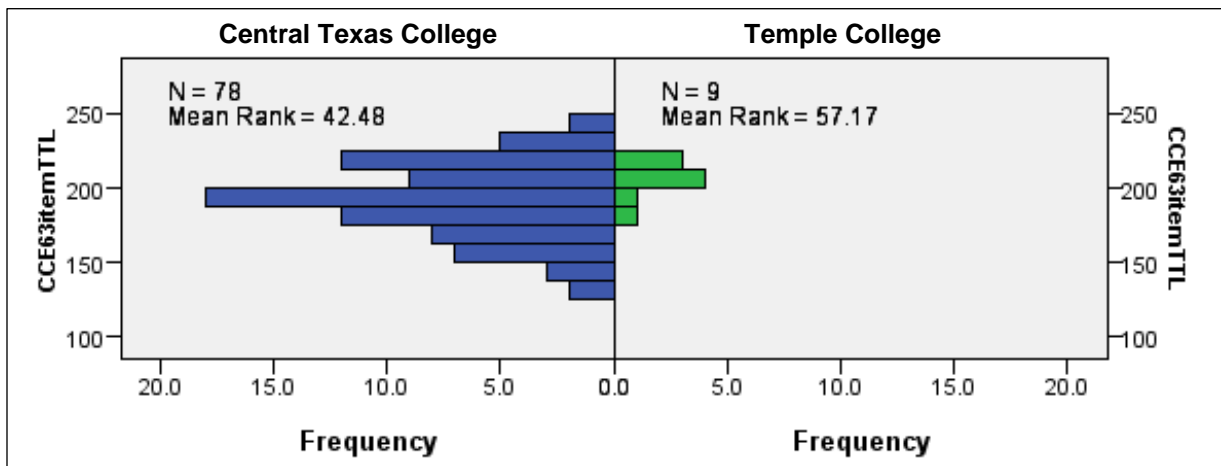


Figure 5. Independent samples Mann-Whitney U test's mean ranks ($U = 469.5, p = .099, SE = 71.7, n = 78$) for the two community colleges samples to determine appropriateness of rejecting the null hypothesis regarding differences between two colleges' students' reported community college experiences (CCE63itemTTL) due to the significant t test results for Temple College ($n = 9$).

Summary

This chapter has presented the quantitative results associated with the survey findings for each of the three research questions for the current study as well presented characteristics of the survey respondents. Only the variable of parental income demonstrated any type of significant relationship with the students' community college experiences and vertical transfer expectations. The experiences and expectations results for the participants are discussed in the following and final chapter. Based upon analysis of data, Chapter 5 addresses the findings in context with the literature as well as implications for practice and recommendations for future research pertaining to the vertical transfer process.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The intent of the current quantitative, descriptive study was to understand the experiences of community college students attending Temple College and Central Texas College regarding what they may expect as part of the vertical transfer process in order to improve the likelihood of their persistence to graduation at Texas A&M University-Central Texas (TAMUCT). Feeder community college students' perceptions regarding their current community college experiences at Central Texas College and Temple College as well as their future university expectations at TAMUCT were collected through an online survey. The survey utilized for the current study was adapted from Dr. Beth Sacksteder LaClair's (2010) instrument known as the Mann Adopted Survey. Sacksteder LaClair adapted her survey instrument from Dr. Frankie Santos Laanan's (2004) Transfer Student Questionnaire (L-TSQ®). The participants for the current study were students from two feeder community colleges (Central Texas College and Temple College) who had signed a Warrior Corp contract before spring of 2013 indicating their intention to vertically transfer to Texas A&M University-Central Texas. This chapter serves three main objectives. The first objective is to discuss the results in context with the literature and current practice. Secondly, this chapter serves to provide implications based on the findings. Finally, recommendations for future research will be discussed.

Findings and Discussion

The results from this study present a unique glimpse into the experiences and expectations of feeder community college students in Central Texas who have self-identified, by the signing of a Texas A&M University-Central Texas (TAMUCT) Warrior Corp contract, that they intend to vertically transfer to TAMUCT, an upper-level university. Descriptive statistics

portrayed the current sample of likely vertical transfer students. The useable sample was comprised of 136 surveys with a 19% survey response rate out of the population of 700 potential Warrior Corps transfer students. The findings for each of the three research questions of the study are discussed next.

Research Question 1

This question asked: Are there linear relationships with selected student background variables and community college student experiences as part of the vertical transfer student process? The indicated relationships were tested using the *t* test for gender and the analysis of variance (ANOVA) for all other background variables. Relationships were tested in terms of whether the factors represented by the independent variables showed different interactions with the tested dependent variable. No linear relationships between the student background variables of gender, age, ethnicity, and parental levels of education, and their community college experiences and transfer expectations were observed. For example, both genders expressed similar community college experiences so the relationships between each gender and the dependent variable were the same (i.e., equal).

One background variable showed statistical significance. This variable was parent's total household income. The nature of this relationship involved its income categories interacting with the two scales of community college student experiences and vertical transfer student expectations. Community college students from lower socioeconomic backgrounds reported higher satisfaction with and use of community college experiences than students from higher socioeconomic categories.

The observation that feeder community college students from lower socioeconomic backgrounds (i.e., parental incomes of \$20,000 or less) self-reported their community college

experiences higher than feeder community college students from all other higher socioeconomic brackets is a unique finding. The literature does not provide similar findings. The results associated with SES and community college student experiences and vertical transfer student expectations could be explained as a result of the likelihood that the variables of social class and attending a two-year institution may be confounding. The literature offers much documentation about an overrepresentation of low SES students attending two-year colleges (Austin, 1993; Brint & Karabel, 1989; Karen, 1991; McDonough, 1997; Warpole, 2003). Community colleges offer open access admission policies and low tuition costs. It is likely that students from lower economic backgrounds increase their social mobility toward obtaining a higher SES status by using the services provided by their community college, more so than students from higher socioeconomic statuses. In other words, low SES students view vertical transfer as a pathway for moving to a higher social status from their current socioeconomic class (Warpole, 2003).

Another finding is that students reporting parental incomes of \$60,000 to \$79,999 displayed lower scores for vertical transfer student expectations than students reporting parental incomes of \$80,000 or greater. This interaction for these two groups of middle class community college students might have occurred due to disappointment with lack of college choice due to potential desires to attend a more prestigious institution of higher learning having higher tuition rates. For high SES parents, the definition of success for their children is tightly tied to four years of college attendance, particularly attendance at what they believe to be a good or prestigious college (Hearn, 1990; McDonough, 1997, McDonough et al., 1997; Warpole, 2003). If this expectation is the case, the higher parental incomes greater than \$80,000 would offer opportunities for attending less affordable universities and colleges for this population of students. However, given the characteristics of the region in which this study was conducted, it

was likely that the participants were place bound due to affiliations with the local military installations, which could have impacted their college mobility, community college experiences, and vertical transfer expectations.

Research Question 2

This research question was: Are there linear relationships with selected student aspirational variables and community college student expectations as part of the vertical transfer student process? The results revealed no linear relationships between community college students' educational aspirations (highest academic degree intending to obtain at any college or university and highest academic degree intending to obtain at TAMUCT) and their scores for community college student experiences and vertical transfer student expectations. These findings support believing in feeder community college students having the motivation to succeed in persisting at TAMUCT. However, retention services and programs designed to impact student engagement (per Tinto, 1993) for those intending to vertically transfer could improve both transfer and four-year degree completion rates.

From an enrollment management perspective, if the results had indicated statistical significance, more than just completed credit hours and transfer grade point average could be considered for admitting vertical transfer students in an attempt to improve the community college students' likelihoods of experiencing good fits at upper-level institutions. Based on Townsend and Wilson's (2006) findings, admitting transfer students to upper level institutions based on credit hours and transfer grade point average does not provide enough information to facilitate persistence at the upper- level institution. Enrollment managers are limited in their ability to make holistic admissions decisions for transfer students as they are able to do with new freshmen students. Most transfer student admission criteria are not as rigorous as the admission

criteria applied to first time in college freshmen students who are typically admitted based on high school grade point average and scores on college success exams (e.g., SAT and ACT). Numerous researchers have validated the SAT® as a predictor of first-year grade point average, and the evidence has overwhelmingly substantiated its use for college admission (Bridgeman, McCamley-Jenkins, & Ervin, 2000; Burton & Ramist, 2001; Hezlett et al., 2001; Kobrin, Patterson, Shaw, Mattern, & Barbuti, 2008; Mattern & Patterson, 2009). Furthermore, because upper-level university admission criteria for community college transfer students are typically based almost solely on community college academic performance, it is important for admissions personnel to consider the GPA recovery phenomenon in the decision process, not just the transfer-shock phenomenon, which is an appreciable drop in grades in the first semester after transfer as reported in the literature (Diaz, 1992; Laanan, 2007).

Efforts to generate better matches between students and universities could ultimately improve the persistence and graduation rates of vertical transfer students. Assessing transfer students' prior college experiences and expectations for the upper-level university when they arrive at the upper-level institution for matriculation and applying those results directly for meeting the needs of those students (per Laanan, 2007) could form a best practices approach to increasing transfer student persistence and degree attainment. Additionally, student success practitioners should take deliberate action to make new transfer students aware of the opportunities for help and the ways in which these services can improve their academic success at the upper-level university.

Research Question 3

This research question was: Are there linear relationships with selected student responses between the TAMUCT feeder community college attended and community college student

experiences and transfer student expectations as part of the vertical transfer process? The results of the statistical tests were mixed because of the limited sample size from Temple College ($n = 10$). The t test results suggested statistical significance for students' scores on community college experiences, but this result was questionable since the one group's size was less than 15 (Salkind, 2011). The non-parametric Mann-Whitney U test for independent samples produced no statistical significance between the two colleges. The conservative decision process required retaining the null hypothesis between the relationships of the two colleges and the students' community college experiences and vertical transfer expectations. Ostensibly, students from both feeder colleges share similar community college experiences and vertical transfer expectations. The lack of difference between the two feeder colleges' students suggests that retention programs at the upper level institution may be more important to four-year degree attainment than concerns about establishing good fit relationships for students based on the feeder community college attended. Assessing transfer students prior college experiences and expectations as discussed above via a longitudinal approach employing predictive statistics may enable upper-level institutions to form best practices for increasing transfer student persistence and degree attainment.

It is also important to note that the findings have indeed interfaced with the theoretical frameworks used to guide the current research inquiry. In regard to Pace's concept of quality of effort (1980, 1984), the community college students illustrated their effort by completing the survey instrument and providing their thoughts and feelings about the vertical transfer process. Astin's (1984, 1993, 1999) theory of student involvement was exemplified by the increased satisfaction of students from lower socioeconomic backgrounds with their community college experiences and their anticipated transfer to the upper-level institution. The findings did not

confirm Oberg's 1960 conceptual framework related to the culture shock phenomenon since students involved with this study were still enrolled at their respective community college and had not transferred into the new environment of the upper-level institution.

Implications for Practice

Based on the results of this quantitative inquiry, students from lower SES backgrounds indicate intentions to use the vertical transfer process to reach their baccalaureate degree completion goals. Students from TAMUCT's feeder community colleges appear satisfied with the experiences at their respective community colleges, do have vertical transfer expectations, and want to obtain an affordable higher education. With these findings in mind, the following implications for practice emerged.

1. Community college students from middle SES backgrounds reported their community college experiences less positively and their anticipated vertical transfer to TAMUCT less positively. With this finding in mind, recruitment efforts need to focus on a positive and realistic understanding of the upper-level college experience.
2. Advisors at upper-level universities should partner with community college academic advisors to provide more accurate, streamlined, and complete information regarding cost savings associated with a well-planned vertical transfer from a community college to an upper-level institution. For example, community colleges and upper-level institutions could develop a recruitment strategy for highlighting the total costs of attending a community college to earn an associate's degree before vertically transferring to an upper-level institution to complete an affordable baccalaureate degree.

3. Community colleges and upper-level institutions could form partnerships for the development of a first-year seminar course or vertical transfer program that would emphasize requirements of degree programs, student involvement, and financial assistance as part of teaching students college success strategies. Alternatively, a major exploration and goal clarification course or program could be provided to new community college students during the first semester of study in order to lead them to vertical transfer into the upper-level institution as part of a partnership between institutions' student development services. The curriculum could be woven into a college success course as a module or could be offered as a series of cocurricular workshops. As Handel and Herrera (2006) pointed out, such a partnership could be used to bridge the programming gap thought to exist between two- and four-year institutions and assist both institutions efforts toward providing seamless transitions for successfully vertical transfer. These partnerships could increase communication between institutions and could lead to more successful and satisfied 2+2 vertical transfer students.
4. Aspirational variables were not significantly associated with students' community college experiences and vertical transfer expectations. It is possible that community college students do not have clear career goals, which could have confounded the findings of this study and may impede their completion of two- and four-year degrees. College and university career counselors should take note of this observation to improve their ability to influence community college students' aspirational goals by providing the same emphasis of major exploration and degree

completion with vertical transfer students as they provide to traditional first time in college freshmen students.

5. Based on the data from the feeder community college students who intend to transfer vertically, the admissions representatives from partnering community colleges, TAMUCT, and even other upper-level institutions need to gather together for a vertical transfer summit. The summit could involve admission and recruitment representatives, financial aid representatives, student life professionals, and interested faculty from all two-year, four-year and upper-level institutions. Both students who have vertically transferred and students who merely express an interest in vertical transfer could also be invited to participate in this summit to ensure that the voices of those served by the institutions are heard as part of improving this unique 2+2 model of vertical transfer leading to baccalaureate degree completion. These stakeholders could begin an intentional dialogue regarding how to serve students transferring between the various institutions more effectively and successfully. The dialogue of such a summit could lead to new programs and services and better practices for members of each partner institution.

Recommendations for Future Study

As a result of the findings from the current study, fourteen recommendations for further research are presented.

1. A replication of this study with larger sample size and more feeder colleges is needed in order to broaden the generalizability of the findings to vertical transfer students. The current study limited the study population to community college

students self-identifying as intending to transfer to a particular upper-level institution, TAMUCT.

2. A replication of this study could be performed with a larger population of community college students intending to transfer to other upper-level institutions, such as Texas A&M University at San Antonio. By expanding the sample population to include other feeder community colleges, it is possible that additional data could be revealed about community college students' experiences and vertical transfer expectations.
3. A replication of this study could be performed with a larger population of community college students intending to transfer to other upper-level institutions, in order to enable statistical controls for potentially confounding variables to be utilized, since only parental income demonstrated statistical significance with the community college experiences and vertical transfer expectations variables.
4. I did not offer an incentive for participation. Incentivizing survey participants could possibly increase participation in future research inquiries. The survey was administered via an online survey.
5. To provide increased participation for a larger sample size, a future researcher could conduct in class administrations using a pencil and paper version or portable touch screen computers. This effort would lead to collaboration between the future researcher and faculty who allow the survey to be administered in their community college classrooms.

6. A follow-up study could be conducted to discover if students' vertical transfer expectations actually match with their upper-level institutional experiences. This study could be accomplished by employing pre-post research methodology.
7. The survey response rate might have been hindered by students being intimidated by the length of the online survey instrument. By shortening the instrument and eliminating questions that appear to be similar in content, a future researcher may increase survey participation.
8. Even though I recommend reducing the size of the survey, I do recommend adding one question to capture the community college students' reports of their academic success by requesting them to provide their current cumulative grade point averages. The current survey only asked about participants' academic success behavior but did not take their current grade point average into consideration for quantitative analysis. Even though students would be likely to report higher than actual grade point averages (Kuncel, Credé & Thomas, 2005), the specific information could be beneficial for further analyses.
9. For future study, the aspirational variables may have needed to be studied qualitatively to determine the nature of the phenomenon experienced by students who truly aspire to earning a baccalaureate or higher degree.
10. The case study might be a more effective qualitative method and may provide an in-depth and rich understanding of the vertical transfer process from a specific community college into its feeder upper-level institution.

11. Future researchers should employ cross-sectional and focus group methodology simultaneously at both community colleges and upper-level universities to assess students' needs, experiences, and expectations for vertical transfer.
12. Because of the interesting relationships regarding community college student experiences, vertical transfer expectations, and students' socioeconomic backgrounds, future researchers could investigate whether middle class students report lower levels of satisfaction as a result of financial constraints regarding academic opportunities.
13. The incorporation of Boudieu's (1990, 1994) framework of sociocultural factors and individual agency could be used to explain the reproduction of existing social structures among vertical transfer students (Warpole, 2003).
14. Further, researchers could compare whether the four different transfer student categories (Jacobs, 2004) are more likely to obtain baccalaureate or graduate degrees.

Conclusion to the Study

In the current study, I sought to offer better understanding of community college student experiences and vertical transfer student expectations of feeder community college students of an upper-level institution. Although a larger sample size would have been ideal, the quantitative results expanded the current literature regarding vertical transfer students. The current findings improved understanding of transfer mobility. In particular, the research inquiry addressed a sub-population of transfer students that few researchers have studied in the past: community college students who have previously formally indicated their intention to transfer vertically to an upper-level institution. As both higher education enrollment and tuition increase, students will increase

their use of different and unique transfer pathways for baccalaureate degree attainment. Thus, it is imperative for national and state policy makers and higher education practitioners and scholars to attempt to provide a seamless and affordable the community college to senior-level institution pathway for vertical transfer students desiring social mobility.

APPENDIX A
PERMISSION TO USE SURVEY

> From: "Beth Sacksteder LaClair" <[REDACTED]>
> To: "Brandon B Miller" <[REDACTED]>
> Sent: Monday, December 3, 2012 7:58:48 PM
> Subject: Re: Permission to Use Your Modified L-TSQ Survey
>
>
>
> Brandon,
>
>
> Yes, you have the permission to use the altered L-TSQ. Please let me know of any significant
> findings!
>
>
> I've attached a few documents as well.
>
>
> Regards,
>
> Beth
>
> Beth Sacksteder LaClair, Ph.D.

APPENDIX B

INSTITUTIONAL RESEARCH BOARD APPROVAL LETTER



A green light to greatness.™

Office of the Vice President of Research and Economic Development

OFFICE OF RESEARCH SERVICES

February 25, 2013

Supervising Investigator: Dr. Kathleen Whitson
Student Investigator: Brandon Miller
Department of Counseling and Higher Education
University of North Texas

RE: Human Subjects Application No. 13-103

Dear Dr. Whitson:

In accordance with 45 CFR Part 46 Section 46.101, your study titled "Student Expectations and Perceptions as Related to the Vertical Transfer Process: A Case Study of Two Central Texas Community Colleges" has been determined to qualify for an exemption from further review by the UNT Institutional Review Board (IRB).

Enclosed is the consent document with stamped IRB approval. Please copy and **use this form only** for your study subjects.

No changes may be made to your study's procedures or forms without prior written approval from the UNT IRB. Please contact Shelia Bourns, Research Compliance Analyst, ext. 4643, if you wish to make any such changes. Any changes to your procedures or forms after three years will require completion of a new IRB application.

We wish you success with your study.

Sincerely,

Patricia L. Kaminski, Ph.D.
Associate Professor
Chair, Institutional Review Board

PK:sb

UNIVERSITY OF NORTH TEXAS™

1155 Union Circle #305250 Denton, Texas 76203-5017
940.565.3940 940.565.4277 fax <http://research.unt.edu>

APPENDIX C

EMAIL INVITATION TO COMMUNITY COLLEGE STUDENTS

Dear TAMUCT Warrior Corp Student:

You are among approximately 700 Central Texas area community college students interested in transferring to Texas A & M University – Central Texas. Because you have signed a TAMUCT Warrior Corp contract, you have been selected to participate in an important research study conducted by Brandon Miller, a doctoral student in the Higher Education program at the University of North Texas. Brandon’s dissertation research is supervised by Dr. Kathleen Whitson at UNT.

Please click on this link to enter the survey: <https://www.surveymonkey.com/s/TAMUCT>

Thank you in advance for taking time to complete this short survey. This confidential and anonymous online survey includes questions about your current experiences as a community college student and related to your preparation to transfer to Texas A & M University – Central Texas. Please be as honest as you can with your responses since your responses will be used to improve transfer student services. Your participation is completely voluntary. You may choose not to participate or not to answer a specific survey question(s). You may skip any question that you are not comfortable answering. If you choose to participate, please click on the link provided in this email to begin the survey. The survey should take no more than 15 – 20 minutes to complete. I cannot appropriately share how sincerely I appreciate your willingness to participate as well as your open and honest responses.

If you have any questions about your rights as a participant or about this survey, please contact me, Brandon Miller, at b.miller@ct.tamus.edu.

Again, thanks in advance for sharing your answers and your time,
Brandon B. A. Miller, Ed. D. Candidate

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