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Experiences of Vertical Transfer Students in the Department of Biological Sciences with the Transfer Credit Process: A Phenomenological Study

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EXPERIENCES OF VERTICAL TRANSFER STUDENTS IN THE DEPARTMENT OF BIOLOGICAL SCIENCES WITH THE TRANSFER CREDIT PROCESS: A PHENOMENOLOGICAL STUDY

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ABSTRACT

The purpose of this interpretive phenomenological study was to highlight the experiences of undergraduate STEM vertical transfer students. Through the lens of Schlossberg's Transition Theory, this study sought to better understand how students make sense of the transfer credit process and which support structures facilitated their understanding. Semi-structured interviews were conducted using qualitative methods with eight biological sciences and vertical transfer students currently enrolled at a large public four-year land-grant research institution in the Southeast United States. All participants had successfully transferred from one of 16 technical colleges within the state. Using interpretative phenomenological analysis, three themes were identified. This study showed that, as a result of the transfer credit process, vertical transfer students experienced negative implications on their academic degree progress and emotional effects. Vertical transfer students also showed distrust in institutional support and resources. Instead, vertical transfer students acknowledged the importance of themselves and relationships in making decisions while utilizing rationalization as a coping mechanism to move forward in their transition. This study contributes qualitative literature to a quantitative-heavy field of literature surrounding transfer credit policies and their impacts on vertical transfer students. Implications and recommendations for policy and practice include ensuring intentionality from design through implementation in articulation agreements with proper training and compensation for higher education faculty and staff. Future research should continue to focus on qualitative measures to further highlight potential institutional barriers to effective transfer credit policies.

DEDICATION

I dedicate this dissertation to my participants and to all past, present, and future transfer students of all kinds. Your decision to pursue higher education via a path that others might consider non-traditional should not inhibit your access to a baccalaureate degree. You do matter and deserve an equitable education.

ACKNOWLEDGMENTS

I started this Ph.D. journey unsure of where it would take me personally and professionally. I faced doubts and questions from people around me, which caused me to doubt myself. Despite this, there are people who made this journey possible and whom I would like to thank. First and foremost, I thank my parents, Mike and Connie Love. You have supported my never-ending quest for continued education, and I love you more than air. To my sister, Lucy Britton, you are my best friend, and even miles apart, I can feel your support and count on you to make me smile when I've had a bad day. To my brother-in-law, Eric Britton, your continued quest for education and dedication has been inspiring. I owe you credit, as your experiences navigating the vertical transfer process inspired this study's research question. Lastly, but most certainly not least, I want to thank my soon-to-be husband, Bryan Morse. We did not know each other when I began this journey, but when I met you, you showed me so much love and support without question, as if you had known me long before. I cannot wait to marry you and spend the rest of our lives together. Thank you to all my remaining Love, Collier, Morse, and Robinson family members who have poured your love and support into me.

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CHAPTER ONE

INTRODUCTION

Background

Within the path to obtaining a baccalaureate degree, the ability to transfer institutions serves as one of the primary routes for undergraduate students (Gardner et al., 2021). As funding for four-year institutions is cut and tuition costs rise, more students consider community college as a starting place in their undergraduate career as it is a more financially feasible opportunity (Dougherty & Townsend, 2006). Originally intended to serve as a lower division, allowing students to complete coursework before transferring to a university and earning a four-year degree (Handel, 2021), community colleges have largely evolved to serve many educational, vocational, and technical needs. However, despite the community college evolution, detailed in Chapter Two, its educational purpose of supporting the transfer student still largely exists. As more students enter community college, there is expected to be a greater focus on the transfer student pathway (Dougherty & Townsend, 2006; Gardner et al., 2021) and ways institutions can support transfer student success. The latest research indicated that of those students who enter community college, 80% had a goal to transfer and earn a baccalaureate degree (Community College Research Center [CCRC], 2021). In addition to this large student population, goals, including the Lumina Foundation's Goal 2025, aim to increase the percentage of Americans with degrees. With a large population of students intending to transfer and nationwide goals to increase degree attainment, the

focus should be on facilitating the transfer of students and ensuring the success of these students in obtaining baccalaureate degrees.

Problem

While many students begin at a community college and aim to transfer to a four-year college to earn a bachelor's degree, only a few succeed. Approximately 16% of these students earn a four-year degree (Shapiro et al., 2022). Barriers that students face include, but are not limited to, difficulty integrating into the new institution, non-transfer affirming institutional cultures, and a lack of credit transferability, which often leads to credit loss and increased time to degree completion, resulting in added financial stress (Gardner et al., 2021). While students are sometimes blamed for failure in successfully transferring, many of these barriers are considered institutional and can be remedied by institutional policies and administrators. The lack of credit transferability is one barrier many states and institutions have sought to prevent by implementing policies to facilitate the transfer of academic credit (Anderson et al., 2006). Despite these policies, research indicates that students and those who support students, such as advisors, often have difficulty navigating the complex credit transfer policies and finding ways in which academic credits can be seamlessly transferred from one institution to another without causing a loss of degree progress and other complications. In addition, as described in Chapter Two, many studies have sought to highlight this impact with quantitative methods. However, few have gone directly to students to highlight student experiences. As a result, the problem of practice for this study is centered on investigating students'

experiences with the academic credit transfer process during their vertical transfer from one community college to a four-year institution.

Purpose and Research Question

This research study aimed to highlight the experiences of students in the Department of Biological Sciences who successfully transferred from a two-year to a four-year college, specifically as it relates to their experiences with transferring academic credit. This dissertation study aimed to address the following research question and sub questions:

What are vertical transfer students' experiences with the academic credit transfer process?

a. How do vertical transfer students make sense of the academic credit transfer process when transferring course credits to a four-year institution?
b. What, if any, support structures facilitated students' understanding or awareness of transfer credit policies?

Significance

To meet national goals of increasing degree attainment, the focus should be improving conditions for the transfer student population. As evident by the literature review in Chapter Two of this study, much of the literature surrounding vertical transfer students and academic credit transfer policies is quantitative in methodology. Few studies have employed qualitative methods to provide insight into the student experience. Using qualitative methods, this study added to the limited existing literature.

This study also added to the literature in that student voices and experiences, specifically vertical transfer students in STEM, were highlighted. As seen throughout the literature, students in STEM face transfer barriers disproportionately compared to non-STEM students. Specifically, STEM students faced lower rates of successful transfer (Carlan & Byxbe, 2000) and greater difficulty when applying transfer credits to their intended degree program (Bailey et al., 2015; Bailey et al., 2017; Hodara et al., 2017). Because of these increased barriers, this study focused on STEM students, specifically students majoring in biological sciences and microbiology.

Theoretical Framework Overview

Given that the vertical transfer process is a transition that students experience, Schlossberg's Transition Theory (Anderson et al., 2012) provided the framework for this study. Consisting of three major parts, this theory can provide a model for institutions to better understand the transition process of its vertical transfer students. The three components, approaching transitions, the 4 s system, and taking charge, provided a detailed framework when viewing the students' vertical transfer process. A detailed overview of Schlossberg's Transition Theory is provided in Chapter Two. This theoretical framework guided the creation of the research question, the interview guide, and the interpretation of the results in investigating students' experiences transferring their academic credits from one institution to another.

Methodology Overview

This study is an interpretive phenomenological qualitative study. This method was selected to provide a deeper, more holistic view of vertical transfer students and their

shared, lived experiences while accounting for researcher bias and the context of participants' lives (Creswell & Creswell, 2018; Lopez & Willis, 2004). To provide insight into their experiences with transferring from local community colleges, undergraduate students in the Department of Biological Sciences at a public, four-year, land-grant research institution in the Southeast were purposefully selected. Data was collected through semi-structured interviews with students who had vertically transferred and were majoring in biological sciences or microbiology, the only undergraduate degrees in the Department of Biological Sciences. These majors were selected for this study because of their categorization as STEM majors. The researcher also has prior professional experience with these majors.

In the semi-structured interviews, the questions asked of these students specifically focused on their experiences with transferring their academic credit and how they navigated that process using various resources. Notes and observations made during the interviews were also collected, along with interview responses. Participants were provided with pseudonyms to ensure confidentiality, and the collected data was stored in the researcher's institutional storage cloud software for additional security. Using an interpretative phenomenological analysis (Smith & Osborn, 2007), interview transcripts were annotated, and emerging themes were identified and reorganized, ultimately identifying three overarching themes. These identified themes and their relevant sub themes are discussed in Chapter Four of this study. Lastly, techniques including member checking, negative case analysis, peer debriefing, thick descriptions, audit trails, and reflexivity were completed to ensure trustworthiness.

Positionality

Before entering my professional career, I obtained my undergraduate degree through the transfer mechanism. As such, I am strongly interested in highlighting the transfer student experience. My transfer experience was a lateral transfer (Bahr, 2009) from one in-state, four-year institution to another out-of-state four-year institution. As Gardner et al. (2021) emphasized, the many versions of transferring all hold unique challenges that lead to individualized experiences for each student. While my experience may not be identical to those students in this study, there are similar challenges. Some of the greatest challenges included understanding the credit transfer process and adjusting to the culture of a new institution.

After transferring, I encountered many difficulties in understanding the ways in which my credits transferred. I learned I would graduate a semester later than I had anticipated despite having already completed two full years in a similar STEM major. I worked with advising offices around campus to challenge how my credits counted. I learned I would need to request syllabi and learning objectives from my prior classes and contact the professors of those classes. Most notable was a calculus course completed at my previous institution, which satisfied a requirement for my previous STEM major but did not count towards the calculus requirement of my new STEM major. Also, despite completing two English courses, I learned that one would not count towards one of my two new English requirements. As a result, I enrolled in more credits than the recommended amount for several semesters to ensure I would not graduate later than I

had anticipated. I ended my undergraduate career with 149 credits, earning a degree that required 121 credits.

I also struggled to adapt to the culture of my new four-year institution. I felt behind socially and academically. My peers in my classes were enrolled in research courses and internships while I was still attempting to complete missed general education coursework. My peers all knew each other and formed study groups easily, whereas I struggled to make those same connections. My struggles with the transfer credit process and adjusting socially and academically are just a few of the barriers for other transfer students. Challenges to the transfer process are explored in more detail in Chapter Two.

My professional career has largely consisted of time spent in higher education, primarily as an academic advisor for biological sciences and microbiology undergraduate students. Throughout this time, I witnessed vertical transfer students' difficulty, particularly with transferring academic credits. In my position, one responsibility was to advise incoming transfer students, often vertical transfer students, on their transferred credits, new curriculum, remaining credits, and time to degree completion. Many of these students had already invested one to two years at community colleges and expected to complete the remaining two to three years at their chosen four-year institution. This was often not the case as their transferred credits were misaligned with degree requirements, resulting in missing prerequisite coursework, excess elective credits, and, ultimately, an increased time to degree completion. The frustration from students that arose from these conversations was evident, though as private advising conversations, these frustrations could not be shared in detail with higher administrators in the institution. While processes

existed to have transfer coursework re-evaluated and students were encouraged to take advantage of these processes, students rarely followed through with these processes as many times they were unable to locate course syllabi required for a re-evaluation and those that did were frequently unsuccessful and told their coursework was not equivalent to the coursework that they believed it to be.

While assisting students in my role as an academic advisor, my brother-in-law was simultaneously engaging in the transfer process himself. Having completed some coursework at a community college before entering the workforce, he found that to pursue his professional goals further, he needed to earn a baccalaureate degree. He decided to pursue this degree by starting at his local community college, allowing him to maintain his full-time career. He intended to ultimately transfer to a four-year institution, though at the time he began, he was unsure of exactly where or what degree to pursue. Over a few semesters, and after much research, he located a Midwest institution that would accept his currently completed credits and continue offering coursework to allow him to maintain a full-time career. However, in this transfer process, he needed to also transfer credits he earned before beginning his career. Upon sending these credits, he learned that many of them did not apply to his intended degree, and as a result, he engaged in a re-evaluation process. As I had professional experience working with transfer students, I worked with him as much as possible to help with this process. Even as a professional academic advisor familiar with credit policies, I found this process frustrating and unclear. As I worked with many students in similar situations, I

encouraged him to work with his academic advisor on creating a graduation plan to ensure he adjusted his expectations for a timeline to complete his degree.

My experiences, including my personal experiences as a lateral transfer student, conversations with vertical transfer advisees, and work with my family, have incited my desire to bring attention to students' voices. While writing this research study, I have since transitioned to academic medicine, working primarily with clinical faculty and healthcare professionals, allowing me to separate my professional work from my current research.

Definition of Key Terms

This last section identifies and describes the common terms used throughout this research study. As multiple meanings can often be associated with a key term, the one chosen for the context of this study is specified.

Vertical Transfer

First, while many transfer patterns across institutions exist (Townsend, 2001), this study focuses on the vertical transfer of students in higher education. Vertical transfer is the transfer from a two-year to a four-year institution (e.g., Baldwin, 2017; Gardner et al., 2021; Mullin, 2012; Townsend, 2001).

Two-Year

Next, it is important to recognize the evolution of the two-year college definition. As discussed in Handel (2021), the two-year college, also commonly referred to as a community college, was initially defined as a junior college where students could complete lower-division coursework before transferring to a university where they could

then earn a baccalaureate degree (Harper, 1901). Those who did not move on to transfer could enter the workforce with a two-year associate degree. Eventually, this term evolved into what is now called a community college (Witt et al., 1994). For this study, these terms may be used interchangeably as they are used interchangeably in the literature.

Four-Year

Third, the four-year institution is the receiving institution in the vertical transfer process (e.g., Baldwin, 2017; Gardner et al., 2021; Mullin, 2012; Townsend, 2001). As two-year institutions were designed to provide two extended years of education in which students can opt to earn a two-year associate degree and enter the workforce, four-year institutions were designed to offer a complete undergraduate education and a bachelor's degree.

Articulation Agreement

Fourth, the term articulation agreement is sometimes used interchangeably with credit transfer policies. For this study, "articulation agreement" is used as the overarching terminology for referring to different credit transfer policies and mechanisms (Taylor & Jain, 2017).

Transfer

Lastly, transfer is sometimes used as an all-encompassing term in literature. As Gardner et al. (2021) argued, the transfer process is an experience involving multiple facets and systems. Aligning with this view, this paper specifies the transfer of academic credits as "credit transfer" or "transfer credit" when referring to the movement of

academic credits across institutions to recognize that the transfer of academic credits is only a fragment of the overall transfer student experience.

Conclusion

This study added to the existing literature by focusing on vertical transfer students in STEM and highlighting their specific experiences with transferring academic credit. While many studies have studied the quantitative impact of transfer credit policies, few have studied the impact by asking those impacted. By listening to the experiences of students themselves, institutions and their administrators can better support the goal of transfer and ensure vertical transfer students' success in earning baccalaureate degrees.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The following chapter reviews existing literature on the importance of the community college and its function in the vertical transfer process. As this study seeks to highlight students' experiences and the academic credit transfer process, this chapter also reviews the literature surrounding the relevant barriers vertical transfer students face and how institutional practices impact these barriers.

Literature searches were conducted using Google Scholar and Clemson Libraries, which accessed databases including Eric, Project Muse, EBSCOhost, JSTOR, Taylor & Francis Online, Proquest, and SAGE Complete. In addition to searching for literature, cited publications in relevant work were included to ensure this review's saturation. Search terms included, but were not limited to, transfer, transfer student, vertical transfer, barriers to academic transfer, academic credit, transfer policies, articulation, credit pathways, transfer credit, community college, and two-year college.

Several factors were considered to determine if a piece of literature was relevant to the purpose of this review. First, only literature since 2000 was used in this chapter. As the latest updated report on transfer credit policies was published in 2022, it was determined that research in the approximate last two decades would be sufficient as policies continuously evolve in higher education, and many pieces of literature began their reviews with work published by Anderson (2006). However, literature incorporated

in the discussion of community college history included literature before 2000, as these pieces provide context and historical perspectives relevant to this study. Similarly, one of the earliest barriers to successful transfer recognized in the literature, transfer shock (Hills, 1965), was included in this review to provide a historical perspective. However, the remaining literature identifying transfer barriers was consistent with post-2000 publishing dates.

Next, this chapter's primary forms of literature included scholarly, peer-reviewed journal articles and reports published by national organizations. While some citations in the literature appeared to be relevant, they were found to be working papers or dissertations. These were omitted from this literature review as they are not peer-reviewed, and in many cases, working papers have been replaced by newer, published papers. To avoid duplicate pieces of literature, prior pieces of work that authors had updated were also omitted. For example, the Education Commission of the States (ECS) has several published reports. However, for this review, only the latest 2022 report was used.

The literature review begins with a brief history of the evolution of the community college, the current characteristics of community college transfer students, and their aspirations. This literature review details the barriers that transfer students experience, including the barrier central to this study: lack of credit transferability. Next, this review synthesizes literature that focuses on current policies that facilitate academic credit transfer and discusses their impacts, if any, on student outcomes. This section also discusses the framework used for this study, Schlossberg’s Transition Theory, and its

relevance to this study. Lastly, this chapter concludes with a discussion of any perceived gaps in the literature and how this study contributes to the existing literature.

The Community College

This section provides context to better understand the vertical transfer process by first providing a history of the community college. Next, the evolution of the community college mission and the influence of political and societal factors are reviewed. Lastly, this section describes community colleges today and their importance, along with the characteristics of community college students, followed by details of the transfer aspirations many community college students hold.

Founding Years

The community college, its purpose, and its function in the transfer pathway have largely evolved over the last century. As put forth by Handel (2021), “Before there could be transfer, there had to be a place for students to transfer from” (p. 17). The Morrill Act of 1862, responsible for the establishment of public institutions as a result of sold federal land now known as land-grant institutions, and the “second Morrill Act” of 1890 that later specified the inclusion of African Americans in the land-grand higher education system, paved the way for the development of community colleges as community colleges fought similar battles in their developing years (Vaughan, 1982). Land-grant institutions' battles included determining the type of educational offerings and who should have access to higher education. As described in the following sections, community colleges also experienced battles in making similar decisions.

First established as a “lower division,” Harper (1901) proposed that high school graduates would be admitted to what would be called a junior college, where students would complete a set curriculum prior to being admitted to a university to earn the baccalaureate degree. Those that did not qualify or were uninterested would earn a 2-year associate degree and pursue employment. William Rainey Harper considered the “father of the junior college in America” (Vaughan, 1982, p. 12) and former president of the University of Chicago, based his proposal on the rationale that currently existing smaller colleges lacked the resources and finances to train students. Thus, establishing junior colleges required restructuring higher education and privileging emerging research universities while consolidating smaller, financially struggling colleges into junior colleges that could support the transfer pathway known today (Handel, 2021). Harper is also known for impacting the development of Joliet Junior College, considered the country's oldest public junior college, by adding two years to its local high school program in Joliet, Illinois (Vaughan, 1982).

The idea of a junior college continued in 1907 when California first enacted a law establishing public junior colleges, permitting high schools to offer post-high school courses. In the years following, the former president of Stanford University, David Starr Jordan, popularized the “junior college” concept. They advocated for eliminating Stanford’s lower division coursework and implementing a requirement for those who entered the university to have completed two years prior at the junior college. However, no action was taken until later, in 1910, when the Fresno Board of Education established a two-year postgraduate program consisting of general courses (Winter, 1964). In 1917

and 1921, California legislation was established that provided additional support and funding for independent junior colleges. These state legislations served as models for legislation in other states (Vaughan, 1982). In addition to California's junior college advocates, David Starr Jordan and Alexis Lange, dean at the University of California at Berkeley, other educational leaders continued to influence the development of junior colleges, including most notably Henry P. Tappan, president of the University of Michigan, William Watts Folwell, president of the University of Minnesota, and as previously discussed, William Rainey Harper, president of the University of Chicago (Vaughan, 1982).

In 1920, the American Association of Junior Colleges (AAJC) was founded through a meeting initially coordinated by the U.S. Commissioner of Education and George F. Zook of the U.S. Bureau of Education, who later played a crucial role in developing community colleges. In 1972, the AAJC became known as the American Association of Community and Junior Colleges (Vaughan, 1982), and today, it is known as the American Association of Community Colleges. The association served and continues to serve today as a spokesman, advocating for junior college rights in front of the government and public leaders (Grubbs, 2020).

The establishment of junior colleges would benefit both university leaders and political leaders. For universities, the responsibility of teaching lower-division courses would fall on the junior college, and the four-year university could continue to hold greater authority over who could be admitted to the four-year institution. For political

leaders, those students who could not, or did not wish to, advance to the four-year institution would instead contribute to the local workforce and economy.

Mission Evolution

As with most institutions, the community college mission has evolved over the years to adjust to and meet the needs of its stakeholders. Factors influencing the community college mission include external societal changes and demands and interests of government and community college officials (Dougherty & Townsend, 2006). This section details some of the most notable factors that shaped the community college mission throughout its development.

Before the 1930s, in their early development, the primary mission of junior colleges was to provide introductory coursework that could be supplemented as the first two years of the baccalaureate degree (Vaughan, 1982). However, as the years continued, additional societal factors contributed to the evolution of the community college mission. Specifically, the GI Bill of Rights passed in 1944, which provided scholarship funds for veterans of World War II and eventually veterans of additional military conflicts, increased access to educational opportunities by eliminating financial barriers. The GI Bill was also seen as a commitment of the federal government to provide access to higher education opportunities (Vaughan, 1982). The breaking of financial barriers to higher education began the emphasis on open access within two-year college missions. Access barriers were broken again in 1947 when the President's Commission on Higher Education for American Democracy was developed under President Harry Truman and led by George F. Zook, who was previously involved in the development of the AAJC. In

the spirit of removing barriers to higher education, the Commission proposed establishing a network of community colleges that would offer both general and now technical education, merging both with state systems of higher education and the efforts of high schools (Vaughan, 1982). The Commission's use of the community college terminology popularized the term and supported the ongoing transition of junior colleges into community colleges as their missions developed to include a more comprehensive education and focus on community contributions.

The focus on community change and engagement continued with the leadership of Edmund J. Gleazer, Jr., who began as Executive Secretary with the AAJC in 1956. Gleazer's title transitioned from Executive Secretary to Executive Director and eventually President in 1972, and he held the President title until 1981 (Vaughan, 1982). Under his leadership, community college enrollments increased from 585,240 in 1958 to 4,826,000 in the fall of 1980 (Vaughan, 1982). His leadership promoted the community college mission of community-based education and lifelong learning. By the 1970s, concepts of lifelong adult learning had fully entered community college curricula (Dougherty & Townsend, 2006; Vaughan, 1982). This began a period of vocationalism within the community college mission, utilizing corporate support and developing job-specific training programs (Grubbs, 2020). During this time, one of the original purposes of the development of the junior college, the transfer function, could barely be seen. The emphasis on the community college's community service function and the growing inclusion of technical and occupational education left little space for the transfer function.

In the final decades of the twentieth century, community colleges demonstrated a greater emphasis on the training and economic needs of businesses and industry than education and individual development (Levin, 2000). Specifically, the community college mission shifted from serving local communities to serving the economy by promoting a curricular emphasis on skills needed for the economy and employment (Levin, 2000). Manufacturing jobs transitioned to service and technology jobs, which led to the curricular shift among community colleges as a response to the changes in the US economy (Grubbs, 2020). More recently, the community college baccalaureate was introduced (Dougherty & Townsend, 2006). State and college officials named increased degree opportunities at lower costs and increased prestige in community colleges as benefits of offering community college baccalaureate degrees (Dougherty & Townsend, 2006). As of 2019, 23 states allow community colleges to offer baccalaureate degrees, including the state in which this research study took place (Education Commission of the States [ECS], 2021).

Conflicting Missions. In response to changing society, government, and institutional interests, the community college mission has evolved to accommodate the needs of each period, resulting in complex and often conflicting missions (Dougherty & Townsend, 2006). Doughtery & Townsend (2006) cite three primary sources of mission conflict: occupational education, the community college baccalaureate, and community college honors programs. The emphasis on occupational education and the community college baccalaureate can be seen as detracting from the transfer function of the community college mission. The recent increase of community college honors programs

conflicts with the original mission to increase equitable access to higher education by instead privileging more advantaged students. Conflicting missions often arise from the need to serve many different social interests to obtain public and government support.

While the community college mission has evolved over the years, its original intent to provide introductory coursework and support the transfer function is broadly utilized among today's community college students. The following section details the characteristics of community college students, including the primary aspirations of these students, as reported in the literature.

Current Characteristics of the Community College Student

In the Fall 2020 semester, community college students comprised 38% of all U.S. undergraduate students (American Association of Community Colleges [AACC], 2023). Following a national trend of declining undergraduate enrollment, 2-year colleges saw a 12% decline between Fall 2019 and Fall 2020, likely due to the COVID-19 pandemic, but enrollment at 2-year institutions is expected to increase by 19% by 2030, including a projected 17% rebound between 2020 and 2021 (National Center for Education Statistics [NCES], 2022).

While not the sole focus of this study, it is essential to acknowledge the diversity among the community college student population. In terms of demographics, community college students are a diverse population. According to AACC (2023), of those students enrolled in community college during Fall 2021, 45% were White, 27% were Hispanic, 12% were Black, 6% were Asian/Pacific Islander, 4% were two or more races, 4% were other/unknown, 1% were Native American, and 1% were Nonresident Alien. The age of

community college students averages 27, with 43% being older than 22. In addition, women represented most community college students (59%), while men represented 41%. Lastly, 30% of community college students were the first generation to attend college, and 66% were enrolled part-time. Contributing factors to part-time enrollment could include additional familial responsibilities, as 16% of community college students are single parents. The population of students who constitute the two-year student body is diverse in that students of color and students from low-income families are overrepresented (Rosenberg & Koch, 2021). As Gardner et al. (2021) argued, the transfer student experiences studied in the literature suggest patterns of institutional and systemic inequities for transfer students. With inequitable attention and policies to support transfer students, these already historically marginalized groups of students are at risk of facing further inequities.

Transfer Aspirations. Of those students who enter a community college, 80% intend to transfer and earn at least a bachelor's degree (CCRC, 2021). However, according to the latest update by Shapiro et al. (2022), about 32% of degree-seeking students successfully transferred, and of those, approximately 49% completed a bachelor's degree within six years (Shapiro et al., 2022). Given this data, approximately 16% of all students who first entered community college intending to earn a bachelor's degree successfully earned a four-year degree (Shapiro et al., 2022). This data illustrates the high demand for the baccalaureate degree but the low attainment rate. The following section details students' potential barriers to transferring from their community college.

Barriers to Successful Vertical Transfer

Research has been done on the barriers in the transfer pathway to better understand the gap between students who intend to transfer and earn a baccalaureate degree and those who complete that goal. One of the earliest identified barriers to transfer success was transfer shock, a drop in grade-point average (GPA) at the new 4-year institution after transfer (Hills, 1965). Early studies focused on this notion of transfer shock, finding differences in GPA between transfer students and non-transfer students. However, while acknowledging that the academic performance of transfer students is essential, transfer shock describes a phenomenon as a result of transferring as opposed to the challenges that explain and cause transfer shock. Instead, more recent literature further examines how institutional barriers prevent a seamless transfer experience to provide a more comprehensive understanding of transfer. These barriers can be summarized into the following themes: (a) academic and social adjustment to the university, (b) non-transfer affirming cultures, and (c) lack of credit transferability. The following section summarizes the literature that examines those barriers.

Adjustment to the University

Recognizing that an academic GPA difference existed between transfer and non-transfer students established a clear need for further research into the differences between their experiences and factors that impacted their successes. Literature added to the concept of transfer shock by investigating influential factors on transfer students' abilities to succeed, particularly related to their academic and social adjustment at their receiving institution.

Academic Adjustment. Studies examining barriers that impacted academic adjustment reviewed barriers impacting transfer rate, persistence, and baccalaureate degree attainment. One barrier impacting the likelihood of transfer is the total number of credit hours completed at the time of transfer. Doyle (2009) found that increased credit hours increased the probability of a successful transfer. Aligning with these findings, sophomore and junior transfer students who had greater numbers of completed credits were also more likely to persist than those who transferred sooner with fewer completed credits (Ishitani, 2008). If a student can successfully transfer, additional factors continue to impact academic adjustment. In more detailed explorations of transfer student GPA and its impact on overall academic adjustment, literature emphasized the positive effects of higher pre-transfer GPA and greater academic preparation (Carlan & Byxbe, 2000; D'Amico et al., 2014; Ishitani, 2008; Pennington, 2006; Wang, 2009; Zhai & Newcomb, 2000). As it relates to STEM learning, exposure to specific STEM classes and institutions impacts transfer opportunities (Wang, 2009; Wang, 2013), with those not majoring in technical fields, including science, seeing less success (Carlan & Byxbe, 2000). These studies suggest that the more invested two-year institutions are into students' academic studies and coursework prior to transfer, the greater likelihood transfer students have of successfully obtaining baccalaureate degrees.

In addition to academic course preparation, academic counseling experiences also impacted academic adjustment for transfer students. Preparation, expanded to include gathering information on the transfer process, also significantly impacts academic performance (Berger & Malaney, 2003). Students who obtain information and learn

about the varying transfer processes through different resources, including institutional faculty and staff members, can better academically adjust once transferred (Berger & Malaney, 2003). However, Laanan et al. (2010) found a negative relationship between counseling experiences and academic adjustment, claiming that one reason for this could be that students may have received inaccurate or inadequate information surrounding the transfer process. Pennington (2006) found no relationship between advising and academic performance, suggesting neither a positive nor negative impact. Along with these quantitative studies, qualitative studies that claimed neither a positive nor negative relationship continued to highlight academic advising as an important impact on transfer student adjustment (Hood et al., 2009; Lukszo & Hayes, 2020; Miller, 2013). These studies provided insight from the student perspective on how academic advising was both helpful and harmful to student adjustment after successfully transferring (Hood et al., 2009; Lukszo & Hayes, 2020) and from the institutional perspective on their structure of academic advising and implemented programs in attempts to assist transfer students better (Miller, 2013). Furthermore, through academic counseling and gaining information, students were able to build self-efficacy, believing they can transfer, potentially leading to increased academic success (Lukszo & Hayes, 2020). Given this information surrounding academic advising and students' academic adjustment, it is essential to ensure that faculty and academic advisors know the information needed to guide transfer students successfully and that the information they receive and distribute is updated and accurate.

In contrast to the external factors that influence a transfer student's ability to adjust academically, students' intrinsic motivations and transfer aspirations have also been shown to impact adjustment. Community college students that indicated baccalaureate aspirations earlier in their academic careers were more likely to obtain a baccalaureate degree (Wang, 2009). In addition, students with baccalaureate or graduate degree aspirations earned higher GPAs, ultimately positively impacting academic adjustment (Zhai & Newcomb, 2000). Students with low intellectual self-confidence or apprehension surrounding the university environment also demonstrated difficulty adjusting academically (Laanan, 2007). These studies reveal the value of intrinsic motivation in increasing degree completion among transfer students and the importance of implementing programs and practices that can motivate students and alleviate student anxiety.

Social Adjustment. In addition to the literature examining impacts on transfer students' academic adjustment, social adjustment for students has also been considered when viewing transfer and degree attainment. In examining factors that impact both academic and social adjustment, Laanan (2007) controlled for community college experiences and found it is what students did at the receiving four-year institution that impacted social adjustment. Specifically, those students who become involved in extracurricular activities experienced less difficulty with social adjustment. Berger & Malaney (2003) also identified that students' social engagement at the community college did not impact student adjustment at the four-year university. Students' social adjustment developed independently of prior academic course experience. However,

interactions with faculty members did impact social adjustment (Laanan et al., 2010). This suggests that students may seek interactions from faculty instead of relying on their prior academic experience to adjust socially at their receiving institution.

Similarly, with academic adjustment, students' intrinsic self-confidence contributed to positive experiences adjusting socially, suggesting a greater likelihood of becoming involved with extracurricular organizational activities, ultimately positively impacting social adjustment (Laanan, 2007). Students' satisfaction with the university environment also positively contributed to the social adjustment of transfer students (Laanan et al., 2010). Satisfaction with the university environment leads to less anxiety and increased comfort, leading to better social adjustment.

Transfer Student Capital. Over time, these factors influencing transfer students' adjustment became known as Transfer Student Capital (TSC). First defined by Laanan et al. (2010), transfer student capital is the knowledge and experiences transfer students accumulate throughout the transfer process. As evidenced by the previous sections, the literature continues to focus on the types of TSC and the impacts TSC has on students' academic and social adjustment. Recently, Lukszo and Hayes (2020) investigated TSC more deeply to highlight where and how transfer students acquire TSC. The most common sources of TSC include peers, family members, and high school staff, followed by community college staff and faculty (Lukszo & Hayes, 2020). Students' ability to adjust academically or socially can hinder their success in transferring and attaining their baccalaureate degree.

Non-Transfer Affirming Culture

As previously discussed, many studies have sought to examine factors that influence a transfer student's ability to adjust successfully at their receiving institution. However, literature has since continued to evolve in examining how institutions create barriers through non-transfer-affirming cultures. This can be seen at the two-year and four-year institutions involved in the transfer pathway.

Culture at Two-Year Institutions. While not the institution ultimately receiving transfer students and awarding baccalaureate degrees, the two-year institution does hold joint responsibility for providing the 80% of students who entered intending to transfer the support resources necessary to follow through with that goal (CCRC, 2021). In a study highlighting the ideologies that underlie the culture of two-year institutions with high transfer rates, Shaw and London (2001) found themes of student-centered culture that emphasized an academic curriculum despite pressure to become more vocational. Themes of strong leadership focused on maintaining the transfer mission were also seen. Similarly, in a study that focused on the successes of two-year institutions that had particularly great success with transfer rates of low-socioeconomic-status students, best practices were summarized into three themes of (a) structured academic pathways, (b) student-centered cultures, and (c) culturally sensitive leaderships (Miller, 2013). Structured academic pathways centered around the academic mission of the community college and consisted of institutional articulation agreements, dual enrollment offerings, developmental or remedial coursework initiatives, and active learning teaching strategies (Miller, 2013). These opportunities encourage high academic rigor and preparation for

transfer students. Student-centered cultures emphasize personal attention for students through a customer service focus, specialized advising, flexible course scheduling, and learning communities. A student-centered culture can meet students' differentiated needs and improve transfer students' success. In support of this, literature has also shown the impact that academic advising has on supporting the transfer process. However, often inaccurate advising has been reported and negatively influenced the transfer process (Allen et al., 2014; Bahr, 2008; Dowd et al., 2013; Hood et al., 2009; Laanan et al., 2010; Lukszo & Hayes, 2020; Miller, 2013; Orozco et al., 2010). Lastly, culturally sensitive leadership was seen through staff and faculty role modeling, strategic planning, and outreach. A culturally sensitive leadership understands the needs of the diverse community college student population and fosters student ownership and academic excellence.

In contrast, two-year institutions that struggled with transfer student success were also examined in the literature. In a study that examined a Hispanic-serving institution, a consensus was identified among students, counselors, and faculty that there was a lack of commitment to the transfer function and, instead, greater focus placed on marketing vocational and technical programs (Ornelas & Solorzano, 2004). Instead of prioritizing one function of the community college mission, institutions should prioritize all functions equally.

Culture at Four-Year Institutions. As the institution that receives transfer students through a vertical transfer pathway, the four-year institution should additionally have a transfer-receptive culture. A transfer-receptive culture is an “institutional

commitment by a four-year college or university to provide the support needed for students to transfer successfully" (Jain et al., 2011, p. 253). Comprised of five elements, there are pre-transfer and post-transfer elements that institutions can focus on, including a diverse, intentional admissions process, transfer-specific outreach and resources, financial aid directed towards the transfer student population, recognizing the familial and community capital that transfer students bring, and lastly a reflective and analytical process in reviewing transfer pathways (Jain et al., 2011). While requiring buy-in from many campus stakeholders, implemented effectively, these five elements create a transfer-receptive culture at four-year institutions. Without transfer receptive culture, the resulting impacts include ineffective outreach, access, and retention of vertical transfer students (Jain et al., 2016).

Collaboration Between Two-Year and Four-Year Institutions. As vertical transfer is a pathway from the two-year institution to the four-year institution, both institutions must collaborate. For institutions to collaborate effectively through transfer partnerships, additional factors are reviewed in the literature. In highly effective partnerships, strong leadership that prioritizes transfer, clear academic pathways, and specific transfer advising serve as common practices (Fink & Jenkins, 2017). Establishing transfer as a critical component of the institutional mission and utilizing data and resources to support the transfer process holds institutions and their stakeholders accountable in their partnership. Pathways between two-year and four-year institutions should be made clear and created through collaboration with both institutions to best prepare students for upper-level coursework. Strong partnerships provide robust transfer

advising through two-year and four-year advising services. In addition to these common practices, strong institutional partnerships share accountability for transfer outcomes instead of placing blame (Fink & Jenkins, 2017; Miller, 2013). Kisker (2007) highlighted that a challenge often facing institutional partnerships is the lack of clarity in roles and responsibilities. However, this challenge can be addressed with clear leadership and strong communication (Fink & Jenkins, 2017). Strong collaborations between two-year and four-year institutions can be formed, ensuring transfer student success by combining transfer-sending and transfer-receptive cultures following the practices discussed in the literature.

Lack of Credit Transferability

One less commonly studied barrier to transfer student success is the lack of credit transferability. While studies examining student experiences with the transfer process have highlighted themes of difficulties with credit transferability (Hood et al., 2009; Lukszo & Hayes, 2020; Miller, 2013), few studies have solely focused on experiences with the transfer credit pathway. Research has shown that transfer students frequently face the loss of academic credit.

> "At the high end, research by the U.S. Government Accountability Office suggests that students lose an estimated 43% of their credits upon transfer to a new institution. Another study found that about 58% of students were able to bring at least 90% of their community college credits with them to a four-year institution, with another 28% finding themselves unable to transfer between 10 and 89% of their credits" (Beyond Transfer Policy Advisory Board, 2023, p. 4).

Transfer credits lost or inapplicable to a student's intended degree could cause vertical transfer students to have an increased time to degree completion and increased financial burden due to completing additional or missing coursework. Possible reasons for this lack of credit transferability highlighted in the literature are discussed below, followed by those studies that look specifically at experiences with the transfer credit pathway.

Unclear Transfer Pathways. As Fink and Jenkins (2021) emphasized, the pathway to transfer, including selecting a four-year institution and appropriate degree program and knowing which courses to enroll in before transferring, can be confusing and complex. In a study that examined the ease of access to transfer information, Schudde et al. (2020) found that in a review of community college websites, the ease of access to transfer information varied widely across institutions. However, most of the websites included in the study fell below the highest standard for either ease of access or high usefulness. Interviews with institutional staff and administrators also illuminated the difficulty of accessing such information, emphasizing that the difficulty for college students may be even greater. Further emphasizing the complex transfer system, Bustillos (2017) highlighted California's transfer system between community colleges and four-year institutions, focusing on the story of one student who had accumulated 95 credits across five different community college campuses, though only 70 were required. This report claims that the factors one must consider when transferring are "bureaucratic, inconsistent, and confusing" (Bustillos, 2017, p. 2).

Furthermore, an assumption exists that one can earn a bachelor's degree in two years following two initial years at a community college. Unfortunately, this assumption

is found to be true for very few students. Using National Student Clearinghouse data of students who started at a community college in 2007, Fink (2017) found that only 8% of bachelor's degree graduates followed the two-year at a community college plus two years at a four-year institution pattern.

Inadequate Advising and Progress Monitoring. With complex transfer processes, advisors and student services can be put in place to support students in selecting appropriate coursework and degree programs. However, these services can often be inadequate for transfer students as advisors also express difficulties and uncertainties with navigating multiple transfer processes across institutions (Bailey et al., 2017; Hodara et al., 2017). Furthermore, if students cannot name an intended degree program or institution that they intend to transfer to, advisors are limited in their capabilities to recommend suggested courses and plans of study. Thus, the early selection of degree programs and intended institutions is paramount to ensure that advisors support students best (Hodara et al., 2017; Wyner et al., 2016).

In addition to guiding students in coursework selection, advisors can assist with academic plan creation to ensure students are not only completing accurate coursework but completing this coursework in a timely manner to ensure degree completion. Often, community colleges do not assist with creating an academic plan (Jaggars & Karp, 2016). Failure to do so can result in excess or unnecessary credit completion. Compared to 4-year students, 2-year students were found to be completing more remedial courses that lack application towards an intended degree, resulting in an increased time to degree completion (Xu et al., 2018).

Lastly, community college students who are unable to identify a major of interest or institution of interest earlier on may be recommended by their community college to complete general education coursework as opposed to major-specific coursework under the assumption that general education credits can apply to any academic major selected post-transfer (Bailey et al., 2015). Unfortunately, this is not always the case. Certain degree programs within four-year institutions may have specific general education requirements and prerequisites that cannot be satisfied by general education completed at community colleges.

Experiences with the Transfer Credit Process. After utilizing quantitative measures to analyze transfer policies and their impacts in a single-state study, (Bailey et al., 2017) were able to conduct interviews with individuals who work directly with transfer students. These interviews led to helpful conclusions that identified the complexities of the transfer pathways. Specifically, students do not have clear transfer pathways, and even if such pathways did exist, students do not receive much help in choosing, entering, and staying on those pathways (Bailey et al., 2017). Similarly, Chase (2016) interviewed practitioners and sought to highlight their sensemaking of academic credit transfer policies, while Grote et al. (2020) also interviewed practitioners to understand further the impacts of colliding policies. While Bailey et al. (2017), Chase (2016), and Grote et al. (2020) contributed valuable qualitative data to the field, the students' voices are missing as only college employees and administrators, including academic advisors, were interviewed as opposed to students.

In addition to a policy review, Hodara et al. (2017) recognized the importance of students' voices, conducting focus groups with practitioners and students discussing student experiences with the transfer. Students expressed the importance of knowing a major or program earlier to eliminate credit non-applicability and non-equivalency (Hodara et al., 2017). While Wickersham (2020) initially sought to understand decision-making in transfer students, they, too, uncovered the importance of the transfer credit process. In their decision-making process, students based their decisions on those pathways that would best facilitate the transfer of their academic credit (Wickersham, 2020).

Lastly, in a study seeking to examine student sensemaking surrounding transfer policies, Schudde et al. (2021) identified themes among students when deliberating between multiple policy signals, information received about transfer policies, and their sources, including guides, websites, personnel, and noninstitutional sources. These themes, categorized as procedural and strategic, highlight students' process when making sense of transfer between community college and their intended four-year institution. Schudde et al. (2021) helped inform this study as it also aimed to uncover themes in students' experiences navigating transfer policies.

STEM Student Experiences. This study focuses specifically on students with a STEM major. As such, this section details existing literature surrounding the experiences of vertical transfer STEM students. First, it is essential to acknowledge the quantitative studies that have highlighted potential barriers for STEM students regarding the transfer credit process. In a study examining curricular pedagogy, Heileman et al. (2018)

identified that STEM curricula contain courses that must be completed sequentially. Thus, if unable to complete the sequential coursework appropriately, there is potential for graduation delays. Utilizing Heileman et al. (2018) approach to compare curricular complexity for engineering transfer students and engineering first-time-in-college (FTIC) students, Grote et al. (2021) found that, contrary to their hypothesis, transfer students experienced less curricular complexity. However, transfer students still fell behind FTIC students when comparing time to degree. Grote et al. (2021) summarized that the curricular complexity tool used did not capture other factors that can impact transfer student time-to-degree, including:

> 1) timing of courses being offered (e.g., fall vs. spring semesters); 2) strings of pre-requisite courses not offered at the community college that may add additional semesters to a degree plan; 3) credit loss (i.e., community college course credits that do not transfer or that do not apply toward a bachelor's degree); 4) students' retaking courses previously taken at the community college – in some cases by recommendation of advisors; 5) students not following optimal degree plans because of uncertainty of major early on at the community college; and 6) students attending school part-time both at the community college and at the university. (p. 791)

Nonetheless, Grote et al. (2021) emphasized the importance of articulation agreements in alleviating curricular complexity, especially those that can address not only the preservation of credits but the preservation of the correct sequence of courses, particularly impacting students in STEM.

In reviewing the experiences of STEM community college students aspiring to transfer, Holland Zahner (2022) highlighted the difficulties and complexities of navigating the transfer admissions process and earning course credit applicable to the student's intended institution and program of study. Holland Zahner (2022) provided critical qualitative data surrounding community college students' experiences prior to achieving successful transfer. In interviews with engineering vertical transfer students in a designated pre-transfer program, Grote et al. (2022) highlighted the benefits of intrusive advising on students' knowledge of articulation agreements. In this study, intrusive advising, involving intentional and proactive advising, was implemented so that students received individual plans of study and regular meetings. Students credited their advising experiences when making sense of transfer policies, and students not involved in the program experienced a more difficult time explaining their transfer credits. However, regardless of involvement in the program, engineering students were unsure of the purpose behind the institution's articulation agreement.

While not strictly consisting of STEM majors, Packard et al. (2012) recruited participants interested in a STEM career field and found three central themes: informational setbacks, imperfect program alignment with four-year institutions, and community college resource limitations. In their study, students specifically highlighted moments of poor or passive advising, which constituted informational setbacks, lack of course transferability and changing prerequisites, which constituted imperfect program alignment, and scheduling issues and poor experiences with financial aid, which constituted community college resource limitations (Packard et al., 2012).

The previous sections detail the literature describing barriers students face when transferring from one institution to another. Barriers include academic and social adjustment to the receiving institution, non-transfer affirming cultures, and lack of credit transferability. In response to the lack of credit transferability, policies have been established at the institution and state-wide levels to improve the facilitation of the transfer of academic credit for transfer students. This next section of the literature review summarizes the existing literature on transfer credit policies.

Transfer Credit Policies

Many states and institutions have sought to implement policies that can facilitate the transfer of academic credit (Anderson et al., 2006). The next section of this literature review details four emerging themes from the literature surrounding transfer credit policies. Themes include (a) policies that emphasize a common transferrable core or general education curricula, (b) policies on a guaranteed transfer of an associate degree, (c) reverse credit transfer policies, and (d) policies that allow for academic major articulation. These themes align with several dimensions of transfer credit policies set forth by Taylor and Jain (2017) and Education Commission of the States (ECS, 2022). Within each theme, literature could be differentiated into two sub themes: (1) detailing the overarching policy existence and its rationale, and (2) detailing the policy impact on student outcomes.

Common Core Curricula

One of the mechanisms by which states can facilitate transfer credit is through a general common core curriculum. Common core agreements allow institutions to

establish core coursework across varying institutions that can seamlessly transfer into general education coursework should a student choose to transfer from a two-year institution to a four-year institution (ECS, 2022; Ignash & Townsend, 2000; Taylor & Jain, 2017). Thirty-eight states have developed specific agreements for a common general education core (ECS, 2022). States that utilize this type of policy can serve in the best interest of not only the student in terms of easing the transition and ensuring the facilitation of the transfer of academic credit but also in the best interest of the institution by reducing the need to have courses repeated which often requires additional expenditures by the institution (Roksa & Keith, 2008).

Student Impact. Existing literature surrounding the common core curricula also details specific impacts on student educational outcomes. Studies using state-specific data observed how completing an entire core curriculum impacts baccalaureate attainment (Boatman & Soliz, 2018; Hodara & Rodriguez, 2013). In one state-specific study, Boatman and Soliz (2018) found that completing the Ohio Transfer Module (TM), a set of courses that satisfy general education requirements at all Ohio institutions, was associated with higher rates of transfer, contrary to those studies which used national data (Anderson et al., 2006; Stern, 2016). However, completing the Ohio TM may require additional time to complete a baccalaureate degree. While those who completed the TM were 4.7 percentage points more likely to earn their baccalaureate degree, there was no statistically significant effect on baccalaureate degree attainment (Boatman & Soliz, 2018). Hodara and Rodriguez (2013) observed a positive relationship between completion of the core curriculum and baccalaureate attainment. However, they were

criticized for not accounting for student differences in the analyses (Schudde et al., 2022). In the latest research on the impact of common core curricula, Schudde et al. (2022) focused on how each transfer core credit, as opposed to core completion, contributes to baccalaureate attainment. Noting that both prior studies used core completion as their independent variable, Schudde et al. (2022), again using state-specific data, observed a positive increase in the likelihood of baccalaureate attainment with each transfer core credit completed until core completion. After core completion, Schudde et al. (2022) noted that students experience a negative relationship with baccalaureate degree attainment instead.

Aside from baccalaureate degree attainment, students who complete a common core are more likely to attain an associate degree (Boatman & Soliz, 2018). While this may not contribute to the population of those who have earned a bachelor's degree, it still increases the population of associate degree earners, contributing to the overall mission of the Lumina Foundation's Goal 2025 to increase the population of those with a higher education degree.

Through establishing a common core curriculum, efficiency in the vertical transfer process can also be created, ultimately improving equity in the transfer experience (Chase et al., 2014). Specifically, policy interpretation can often be a barrier for community college transfer students looking to transfer to four-year institutions. Improving policies and establishing a common core reduce inequities in policy interpretation (Chase, 2016).

Guaranteed Transfer of an Associate Degree

Along with a transferrable common core, an additional mechanism by which two-year and four-year institutions can facilitate the transfer of academic credit is through the guaranteed transfer of an associate degree, ensuring students can transfer all credits and enter at the junior academic level (ECS, 2022; Hodara et al., 2017; Taylor & Jain, 2017). Currently, 35 states have such policies (ECS, 2022). Many states that do not have statewide policies instead encourage separate institutional agreements, many of which rely on a transferable common core (ECS, 2022). In addition, New Hampshire and North Dakota do not currently have statewide policies but are expected to have policies forthcoming (ECS, 2022). This type of pathway is referred to differently among states, including "guaranteed transfer of an associate degree" and "transfer associate degree" (Kisker et al., 2012). Some literature considers it two separate pathways (Taylor & Jain, 2017). However, as ECS (2022) sets forth a sole category referred to as the "guaranteed transfer of an associate degree," any literature reviewing the impact of earning an associate degree on student baccalaureate degree attainment was included in this section.

The intended impact of the implementation of transfer associate degrees includes alignment of degree requirements across two-year and four-year institutions, ultimately reducing course overlap and repetition (Bers, 2013; Kisker et al., 2012) and can further lead to cost savings for states and students (Kisker et al., 2012). Transfer associate degrees also aim to provide flexibility for the student when policies are implemented statewide, providing increased opportunities for student institutional choice (Kisker et al., 2012).

Student Impact. Several studies have investigated whether Associate Degrees of Transfer (ADTs) programs specifically impact vertical transfer students. As previous studies have been mixed on how transfer credit policies impact transfer student rates (Anderson et al., 2006; Boatman & Soliz, 2018; Stern, 2016), reviews on the impact of ADTs reported mixed results with no association on increased transfer rate (Baker, 2016; Spencer, 2019), but also acknowledged it may be too soon to observe statistically significant data. Studies have also found delayed results after policy implementation, suggesting the rollout of a policy and the spread of information affected these results (Baker, 2016; Worsham et al., 2021). Spencer (2019) observed variations in impacts from ADTs across states, emphasizing the complexity of transfer credit policies and the need for individual state research.

Considering the argument that transfer policies may better serve students in preserving academic credit instead of increasing transfer rates (Roksa & Keith, 2008), the following studies also reviewed the impact on student degree attainment. Focusing on credit-earning behaviors due to earning a transfer associate degree, a reduction in credits at graduation resulted in fewer excess credits (Baker, 2016; Worsham et al., 2021). Earning a transfer associate degree (AA or AS) was also positively associated with baccalaureate degree attainment (Kopko & Crosta, 2016). Aside from baccalaureate degree attainment, these policies increased associate degree attainment for students who might not have earned associate degrees. This can provide returns for the student and economic workforce (Baker, 2016; Spencer, 2019). Lastly, connected with the completion of the common core, those students who completed the common core

requirements and are guaranteed junior standing with their associate degree were more likely to continue and earn a baccalaureate degree than those who completed the common core and were not additionally guaranteed the transfer of an associate degree emphasizing the importance of going beyond common core curricula to incentivize with ADTs (Hodara & Rodriguez, 2013).

Reverse Credit Transfer

In some cases, vertical transfer students transfer from their two-year institution prior to earning an associate degree. In the case of reverse credit transfer, students can be retroactively awarded an associate degree (Bers, 2013; ECS, 2022). Reverse credit transfer is not to be confused with reverse transfer, the process by which students transfer from a four-year institution to a two-year institution (Taylor, 2016). Aligning with Bragg and McCambly (2021), this section refers to retroactively granting associate degrees as reverse credit transfer. Currently, 25 states have implemented statewide reverse credit transfer policies. However, 18 states provide reverse credit transfer opportunities through institutional agreements (ECS, 2022).

Without a policy to retroactively award students an academic degree, community college students who transfer to a four-year institution without an associate degree and cannot obtain a baccalaureate degree accrue excess credits and increase the "some credit and no degree" population (Taylor, 2016). Additional rationales for implementing a reverse credit policy, as discussed by Taylor (2016), included (a) the improvement of equity among vertical transfer students, (b) the reward of an associate degree can serve as a milestone along the pathway to a baccalaureate degree, (c) overall improvement to two-

year and four-year degree completion rates, (d) enhanced two-year and four-year institutional partnerships, and (e) increases to the state overall college completion numbers, ultimately benefiting local economies and workforce. Best practices for implementing reverse credit transfer policies are reviewed in the literature (Friedel & Wilson, 2015; Taylor, 2016) and can be helpful to those institutions that intend to follow these policies.

Student Impact. The Credit When Its Due (CWID) initiative, initially launched in 2012 by the Lumina, Kresge, and Bill & Melinda Gates Foundations, encouraged states to implement practices to grant associate degrees to vertical transfer students who transferred prior to earning sufficient credits upon earning enough credit(s) at their receiving institution (Bragg & McCambly, 2021). Project Win-Win, a similar reverse credit transfer policy (Adelman, 2013; Wheatle et al., 2017), also helped to inform the CWID reform (Bragg & McCambly, 2021). Since then, several pieces of literature have studied the impact and implications of CWID. Taylor et al. (2017) conducted an implementation and outcomes study surrounding CWID practices in multiple states. However, they did not report cross-case results, proving difficulty in summarizing conclusions. In a study that observed the number of associate degrees awarded across three academic years due to CWID, the reverse transfer credit policy increased state degree attainment (Taylor & Cortes-Lopez, 2017). Further, awarding an associate degree through reverse credit transfer in CWID states significantly predicted baccalaureate degree attainment (Giani et al., 2021; Taylor & Giani, 2019). However, mixed results were found on retention and ultimately cited as preliminary (Taylor & Giani, 2019).

Qualitative results found that while reverse transfer credit policies were beneficial in theory, they can be challenging to implement and do not ultimately resolve the concerns of the lack of aligning transferrable credit across two-year and four-year institutions (Bailey et al., 2017). Giani et al. (2021) also highlighted that the gap in bachelor's degree attainment for low-income transfer students was closed slightly for those awarded an associate degree through reverse credit transfer, improving equity for transfer students.

Program Major Articulation

For those vertical transfer students who do earn credits through common core curricula or ADT programs, the credits may not ultimately count towards the student's intended program of study, especially in STEM majors (Bailey et al., 2015; Bailey et al., 2017; Hodara et al., 2017). In addition, despite a guaranteed junior status through ADT programs, junior status in some degree programs may not always indicate two remaining academic years until baccalaureate degree attainment due to missing required prerequisite courses that were not included in the earned associate degree (Hodara et al., 2017). Program major articulation agreements, specified as policies that allow for credit transfer within a specific program of study (Bautsch, 2013), have not been frequently studied as it can be challenging to measure the extent to which earned credits apply to a student's selected major (Worsham et al., 2021). ECS (2022) also did not provide a comprehensive overview of how many states contain such a policy. Ignash and Townsend (2000) described that only 7 of the 34 involved states in the study had program major articulation agreements, attributing the difficulties of developing such agreements to the lack of consensus among faculty regarding course articulation.

Student Impact. Studies have found excess credit accrual among transfer students compared to non-transfer students (Bailey et al., 2017; Schudde et al., 2022; West, 2015). Excess credit accrual could be one effect of the lack of major-specific pathways (Hodara et al., 2017). Further, Schudde et al. (2022) found that excess credit accrual was also associated with a decline in baccalaureate degree attainment. However, in a qualitative study that identified three system-level major-specific transfer pathway policies, 2 + 2 systems, credit equivalency systems, and institution-driven systems, Hodara et al. (2017) found themes of student uncertainty and limited advisor capacity suggesting that despite the existence of major-specific pathways, complexities in transferring academic credit remain. Ultimately, students require clarity on how credits earned before transferring can also apply to their intended degree program (Bailey et al., 2017).

Schlossberg's Transition Theory

Given that the vertical transfer process is a transition that students experience, Schlossberg's transition theory (Anderson et al., 2012) provides the framework for this study. Consisting of three major parts: (1) approaching transitions, (2) the 4 s system, and (3) taking charge, this theory can provide a model for institutions to understand the transition process of its vertical transfer students (Anderson et al., 2012). This section details each of Schlossberg's Transition Theory components and discusses their application and relevance to this study.

Approaching Transitions

This first component helps to identify where an individual is in their transition, "any event or nonevent that results in changed relationships, routines, assumptions, and roles" (Anderson et al., 2012, p. 39). For some, transitions might be considered crises, while for others, transitions might be less subtle. However, regardless of the type of event or nonevent, transitions result in change and require coping. Anderson et al. (2012) provided guidelines for identifying the types of transitions that individuals may encounter, which may be anticipated, unanticipated, or nonevent. An anticipated transition includes expected events, including but not limited to marriage, beginning a job, or retirement. Unanticipated transitions are the opposite in that they are unpredictable, including examples such as being fired or laid off, divorce, or premature death of a loved one. Lastly, nonevent transitions include transitions that individuals had expected but never occurred. Examples of nonevent transitions include a plan to have children but the inability to follow through.

In addition to the type of transition, perspective, context, and impact are also points for consideration when utilizing this framework. Individuals' perspectives of transitions may vary greatly where one individual may consider retirement as a negative ending, and another may see it as a positive opportunity. Individuals' perspectives on transitions influence how they cope with and navigate them. Context should also be considered when viewing transitions. Contextual factors, especially demographic factors, can influence individuals' lives, their transitions, and their reactions to those transitions. Lastly, the impact or the extent to which the transition impacts an individual's life must

also be considered. Impacts as a result of transition can be seen in "relationships, routines, assumptions and roles" (Anderson et al., 2012, p. 47).

The final premise of Schlossberg's Transition Theory's first component is that a transition is a continuous process of phases. Specifically, these phases include (a) moving in, (b) moving through, and (c) moving out (Anderson et al., 2012). The first phase can be either moving in or moving out. Individuals must assume new roles and learn new environments and expectations when moving into a transition. Once in a new situation, individuals begin the moving through period, confronting any necessary issues, looking for balance, or feeling neutral. In moving out of transitions, individuals end one transition and look at what is next.

The 4 S System

The second component of Schlossberg's Transition Theory is the 4 S System: (a) situation, (b) self, (c) support, and (d) strategies (Anderson et al., 2012). The 4 S System details the varying factors, which can be considered liabilities or assets, that influence one's ability to navigate a transition. The trigger, timing, level of control, role change, duration, prior experience, concurrent stress, and perspective can impact an individual's situation. Because of the factors that influence the situation, each transition event or nonevent presents as different. Next, what an individual brings to the transition can impact coping mechanisms. Self includes but is not limited to socioeconomic status, gender and sexual orientation, age and stage of life, state of health, ethnicity/culture, psychological resources, ego development, outlook including optimism and self-efficacy, commitment and values, and spirituality and resilience. Support can include many types

and positively and negatively influence individuals' ability to transition. The types of support can be categorized into four primary sources: intimate relationships, family units, networks of friends, and institutions or communities (Anderson et al., 2012). Lastly, in the 4 S System are strategies, or how individuals cope with transitions. Coping strategies largely depend on the transition and the individual's ability to balance assets or liabilities. In addition, not all strategies can be generalized and applied to the same transition for the same individual.

Taking Charge

The third and final component of Schlossberg's Transition Theory includes how individuals can control and manage their responses to transitions. Schlossberg's Transition Theory is comprehensive in providing further guidance to those seeking to assist individuals through transitions (Anderson et al., 2012). This component includes models, such as counseling theories, to enhance resources and help individuals identify and assess their situation, self, support, and strategies.

Application and Relevance

An anticipated transition occurs when two-year students apply to a four-year institution and successfully transfer from their sending institution to their receiving institution. These students take on new roles, encounter new environments, and face new relationships as part of this transition. In addition, each student experiences varying factors all related to their situation, self, support, and strategies that can be viewed through Schlossberg's Transition Theory. Though initially intended for counselors, psychologists, and social workers working with adults experiencing transition, higher

education administrators and policymakers can utilize this framework to understand vertical transfer students' experiences.

Conclusion

Research has shown that while the community college was designed to intentionally support the transfer function by establishing a junior college and many current community college students that begin at the community college intend to transfer, few complete a vertical transfer. Literature has explored the barriers preventing successful transfer, including academic and social adjustment at the receiving institution, non-transfer-affirming cultures, and lack of credit transferability. While the lack of credit transferability is not as commonly studied, literature does exist that reviews the policies implemented to facilitate credit transferability for transfer students. However, many of these literature pieces are quantitative and lack students' voices. Guided by the literature on the barriers of transfer, including the lack of credit transferability, transfer credit policies, and Schlossberg's Transition Theory, this study contributes qualitative insight into how students specifically make sense of the transfer credit process and what support structures, if any, facilitated their understanding.

CHAPTER THREE

METHODOLOGY

Introduction

This qualitative research study focused on understanding the phenomenon of the academic credit transfer process that two-year college transfer students experience when transferring to a four-year institution. This dissertation study aimed to address the following research question and sub questions:

What are vertical transfer students' experiences with the academic credit transfer process?

a. How do vertical transfer students make sense of the academic credit transfer process when transferring course credits to a four-year institution?
b. What, if any, support structures facilitated students' understanding or awareness of transfer credit policies?

This chapter details the selection of qualitative methodology and justifies its selection along with the selection of phenomenology methods. Next, this chapter describes the research setting, participants, data collection, and data analysis. Lastly, this chapter discusses steps taken to ensure trustworthiness.

Research Design Rationale

The research paradigm of constructivism guided this research study. Highlighting the subjective meanings of experiences that individuals form, constructivism provides a worldview in which the participants' views of their experiences can be studied (Creswell

& Creswell, 2018). With this worldview, the researcher examined how individual experiences have shaped vertical transfer students' understanding of the academic credit transfer process. The following sections detail the methodological design choice, its components, and its relevance in this study.

Qualitative Inquiry

As most existing research surrounding the academic credit transfer process has been quantitative, research involving data collection and equation models (Creswell & Creswell, 2018), utilizing qualitative research for this study highlighted the experiences of vertical transfer students and emphasized students' voices. Qualitative research provides a deeper and more holistic form of research (Creswell & Creswell, 2018; Padgett, 2012), which aligns with this study's purpose of contributing additional context to the academic credit transfer process literature. Qualitative research consists of several characteristics, including a natural setting, the researcher as a key instrument, multiple sources of data, inductive and deductive data analysis, participants' meaning, emergent design, reflexivity, and holistic account (Creswell & Creswell, 2018). Later sections describe these characteristics as they apply to the varying data collection and analysis methods. Beyond these characteristics, there are many qualitative methodological designs, including but not limited to phenomenology, narrative research, grounded theory, ethnography, and case study (Creswell & Creswell, 2018). The design choice strongly relies on the research question and the study's intended purpose. For this study, a phenomenological qualitative design was selected.

Phenomenology

Phenomenology is often used in qualitative research to describe a population's shared and lived experiences (Creswell & Poth, 2017). Researchers using phenomenology set aside biases to utilize objectivity, aiming to provide a deeper understanding of the meaning of certain experiences to highlight the essence of that experience (Beck, 2021). In this study, participants shared the experience of vertical transfer and engaging in the academic credit transfer process, justifying the selection of a phenomenology design.

Phenomenology can be further differentiated into descriptive and interpretive phenomenology (Cohen & Omery, 1994). Evolving from Husserl's philosophy (1970), commonly referred to as Husserlian phenomenology, descriptive phenomenology proposes that all researcher biases be accounted for and that the researcher actively assesses biases and preconceptions. Another assumption of descriptive phenomenology is that there are "features to any lived experience that are common to all persons who have the experience" (Lopez & Willis, 2004, p. 728). From the shared experiences, the researcher identifies commonalities to establish a generalized description of that experience (Lopez & Willis, 2004). In descriptive phenomenology, there is a belief that the essence of lived experiences can be highlighted without focusing on context, including the impact of culture, society, and politics, claiming reality is objective and independent of history and context (Lopez & Willis, 2004). Therefore, with a descriptive approach, one would focus more on the phenomenon's essence than its context.

In direct contrast to descriptive phenomenology is interpretive phenomenology, summarized from the ideas of the scholar, Heidegger (1962), which evolved to be known as hermeneutic phenomenology, derived from the Greek god Hermes (Lopez & Willis, 2004). Hermes was responsible for interpreting messages between gods (Lopez & Willis, 2004). Interpretive phenomenology argues that the "lifeworld" is important to individuals' everyday experiences. Lifeworld refers to the concept that individuals' realities are shaped by the world around them (Lopez & Willis, 2004). Emphasis on lifeworld encourages researchers to investigate what individuals' narratives explain about everyday experiences. Another important component of interpretive phenomenology is the idea of situated freedom. Situated freedom is the concept that individuals are constantly faced with choices and are free to make decisions, but the outcomes from those choices are not always clear (Lopez & Willis, 2004). Interpretive phenomenology focuses more on the contextual factors that influence experiences surrounding the phenomenon.

The researcher chose to utilize interpretive phenomenology when selecting descriptive or interpretive phenomenology. Crucial to this study was the context surrounding students' experiences navigating the academic credit transfer process and how their unique experiences and choices shaped their process, which an interpretive phenomenology emphasized. In this next section, the selection of interpretive phenomenology in application to this study is expanded to provide greater detail in the justification of this methodological approach.

Interpretive Phenomenology

This study was designed to explain how vertical transfer students make sense of the transfer credit process. A foundational component of interpretive phenomenology is the interpretation of participant narratives as a response to various contexts (Lopez & Willis, 2004). A significant purpose of this study was to identify the structures that successfully or unsuccessfully facilitated the transfer of academic credit; therefore, historical, social, and political contextual factors needed to be considered.

The difference in acknowledging researcher bias between descriptive and interpretive phenomenology was also considered for this study. As evident by the researcher's positionality, provided in Chapter One, the researcher holds both personal and professional experience as it relates to the core subject of this study. While descriptive phenomenology argues that the researcher's prior knowledge, experience, and bias be removed, interpretive phenomenology argues that, while still important to acknowledge, prior experience from the researcher cannot be rid of (Heidegger, 1962). The researcher's prior experience leads to identifying a topic worthy of research (Koch, 1995). Therefore, the researcher's knowledge base for this study serves as a valuable guide in investigating the experiences of vertical transfer students and the academic credit transfer process.

Lastly, when using descriptive phenomenology, literature reviews and theoretical or conceptual frameworks are often advocated against as they can influence the researcher's goal. However, with interpretive phenomenology, theoretical or conceptual frameworks are encouraged as they can guide the study's focus. This study conducted an

extensive literature review to contextualize the participants' lived experiences. Schlossberg's Transition Theory (Anderson et al., 2012) was chosen as this study's theoretical framework and influenced decisions surrounding the structure of the interview questions. It also served as a framework for interpreting the results throughout data analysis. Interpretive phenomenology was the best approach for this study investigating the lived experiences of vertical transfer students and their sensemaking of the academic credit transfer process.

Research Setting

Research Site State

As community college policies vary across states, this section provides context to the current landscape of community colleges within the research site state. Within this research site state, there is a state Technical College System that is comprised of 16 technical colleges spread across the state. One of these technical colleges offers an Applied Baccalaureate program, the state's first program established in 2018. Each technical college has varying transfer programs that partner with different state institutions, including the research site institution. The state has an online Transfer and Articulation Center that contains a wealth of information for students, faculty, advisors, and administrators intended to facilitate student transitions between the state's higher education institutions. This site includes information about transfer course equivalencies, transfer profiles for participating institutions, searchable databases, and additional planning for transfer guidance.

The following section details the availability or lack of statewide transfer agreements aligned with the primary policies for transferring academic credit discussed in the existing literature, as detailed in Chapter Two. This state has a statewide course equivalency database published on the state Transfer and Articulation Center's website. The state also has a transferable core of lower-division courses, specifically a statewide articulation agreement for 86 courses. These 86 courses are noted by the Transfer and Articulation Center's website as the "List of Universally Transferable Courses because it lists general education courses that are guaranteed to transfer to any two- or four-year public institution in the state" ([Redacted] Transfer and Articulation Center, n.d.). However, an additional note states that the courses may transfer as elective credits and not toward specific degree requirements, impacting program major articulation. The state does guarantee the transfer of an associate degree through transfer blocks. Four publicly available transfer blocks list specific course titles that students can complete and apply to their graduation requirements. Any student who completes an Associate of Arts or Associate of Science degree program that contains the total coursework in the respective transfer block is automatically entitled to junior-level status. However, an additional note states that the junior-level status does not apply in calculating academic degree credits. Lastly, there is no statewide reverse transfer agreement. However, individual institutions can implement reverse transfer agreements between partner institutions. The next section details the research site, FourYear University.

FourYear University

This study occurs at a large public four-year land-grant research institution in the Southeast United States. For this study and to ensure the confidentiality of its participants, the research site was given the pseudonym FourYear University. The undergraduate student population for Fall 2023 was 22,875 students. Of the 22,875 undergraduate students, 76% were identified using University metrics as White, 8.7% were Hispanic or Latino, 5.5% were Black or African American, 4.0% were Two or More Races, 2.8% were Asian, 2.0% were Unknown, 0.8% were U.S. Nonresident, 0.2% were American Indian or Alaskan Native, and 0.1% were Native Hawaiian or Pacific Islander ([Redacted] University, n.d.).

Of the undergraduate students, 96.8% were enrolled full-time in 12 more credit hours, and 3.2% were enrolled part-time in less than 12 credit hours. 53.0% were identified as female, and 47.0% were identified as male. Comparing residency at the time of entry based on location at the time of admission, 58% were considered legal state residents, and 42% were considered out-of-state residents. Lastly, as this study focuses on undergraduate transfer students, it is essential to note that for Fall 2023, of those undergraduate students enrolled, 6.6% were first-time transfer students, indicating Fall 2023 was the first term of enrollment post successful transfer to FourYear University ([Redacted] University, n.d.). The next sections of this chapter provide additional details of the research setting, including its admissions process for transfer students and bridge program that provides context relevant to the transfer student experience.

Transfer Admissions

FourYear University accepts transfer student applications on a rolling basis, closing when all classroom space has been filled. Students may enroll in January for Spring admission and throughout the summer for Fall admission. Transfer students also have the option to apply for Maymester and/or Summer Sessions. Final deadlines for transfer application materials are posted on FourYear University's website. Along with general admission requirements, transfer students must have completed a year of college study, specifically 30 semester or 45 quarter hours, not including Advanced Placement, International Baccalaureate, and dual-enrollment credit. Specific FourYear University majors have additional transfer credit and GPA requirements. Lastly, the FourYear University transfer admissions page specifies that "freshman-level courses in English, science, and mathematics for your intended major" must be completed and is followed by a link to the University's transfer course equivalency guide.

Bridge Program

In addition to a first year and transfer admissions process, FourYear University also has a process through which students who apply as first-year students and are not admitted to FourYear University can be admitted into a Bridge program. FourYear University selects these students based on set criteria that are not publicly available. This Bridge program provides certain FourYear University benefits such as on-campus housing and access to campus facilities. However, the students register and complete coursework at a local two-year technical college. Upon completing 30 transferable credit hours and a 2.5 GPA, a Bridge student will be admitted into FourYear University as a

Bridge transfer student the subsequent Fall semester. Students previously enrolled in the Bridge program were not included in this study as they receive additional structured resources that may not be available to other vertical transfer students.

Department of Biological Sciences

FourYear University's Department of Biological Sciences consists of two degree-granting baccalaureate programs, biological sciences and microbiology. Together, these degree programs contained 1,731 enrolled undergraduate students, 7.6% of the undergraduate student population for Fall 2023. For Fall 2023, 103 of those students were considered first-time transfer students ([Redacted] University, n.d.). This includes those students who participated in FourYear University's Bridge program. As discussed in Chapter Two, students who major in STEM programs face additional challenges when transferring academic credits. For this reason, this study focused on students within the Department of Biological Sciences to add to the literature on STEM transfer students. The chosen criteria for selecting study participants are discussed in the following sections.

Study Participants

Purposeful sampling was chosen to select participants for this qualitative study, specifying standard criteria that participants needed to meet. Purposeful sampling involves intentionally selecting participants best qualified to answer the research study question (Creswell & Creswell, 2018). The participants met several criteria of being transfer students and, more specifically, transfer students whose sending institution was a two-year institution, which qualified them as vertical transfer students. While students

who participated in the Bridge program with FourYear University fit this criterion, they were excluded as the program is designed for students who initially applied to FourYear University. The Bridge program is only available to those who initially applied to FourYear University and were not accepted. Bridge students also receive specific, additional levels of support that other two-year transfer students may not receive.

Furthermore, as the literature review emphasizes, each state has varying academic credit transfer policies. As such, the participants for this study were required to have attended an in-state, two-year institution before acceptance at the study site. This criterion is purposeful in keeping the transfer method consistent across participants. There were no demographic criteria as this study included all vertical transfer students regardless of demographic characteristics. The students included were those majoring in biological sciences or microbiology. These majors are not listed as degrees with additional admission requirements beyond the general FourYear University transfer admission requirements. By selecting these majors that belong to the same department, discrepancies in transfer credit admission requirements were removed. In addition, biological sciences and microbiology are considered STEM majors. Students in STEM majors often find difficulty in applying transfer academic credits to their program of study requirements, as reviewed in Chapter Two. With an emphasis on STEM vertical transfer students, insight can be added to the gaps in the literature on STEM student experiences. Lastly, to avoid limiting the participant population, no restriction on the year of study was applied.

Participant Recruitment

Upon receiving approval from FourYear University's Institutional Review Board (IRB) (see Appendix A), the researcher worked with representatives from both the Office of Institutional Effectiveness and the Office of Institutional Research within FourYear University to follow FourYear University's guidelines in soliciting study participants. After the deadline for enrollment and the deadline to change undergraduate majors had passed, the Office of Institutional Research provided the researcher with a list of 98 student university email addresses. Allowing these deadlines to pass ensured that the 98 students met the participant selection criteria and that no students were unintentionally omitted.

After receiving the list of student email addresses, the researcher sent an email that had been previously approved by IRB to all 98 students (see Appendix B). The students were blind carbon copied on the emails to ensure maximum confidentiality. This email introduced the researcher, the study, and its purpose of highlighting the vertical transfer student experience. In the email, students were provided details on the interview process, including the approximate duration, interview platform, and next steps if interested. If interested, students were asked to complete a survey to indicate their interest. This survey, designed using Qualtrics software, collected basic background information, including gender and race/ethnicity using university metrics, along with their preferred days and times to be interviewed upon agreement (see Appendix C). In addition, the emails contained a statement informing participants that if they participated, they would be provided with a $20 Amazon gift card. These self-funded gift cards were

intended to incentivize participation and thank the participants for their willingness and time. The gift cards were distributed after each participant completed their interview.

Per FourYear University's Office of Institutional Effectiveness guidelines, only four participant recruitment emails could be sent. This included the original email, followed by three reminder emails. These four emails were distributed biweekly across six weeks. After these four emails, nine students expressed interest in interviewing by completing the Qualtrics survey. After receiving a Qualtrics submission, the researcher sent a personalized email to the participant to schedule the Zoom interview based on the researcher's availability and preferred days and times submitted by the participant. Once the Zoom interview was scheduled, a calendar invitation was sent to the participant's FourYear University email address unless otherwise requested. All nine participants had interviews scheduled. However, two participants were unable to attend and emailed the researcher to let them know. The researcher attempted, with follow-up emails, to reschedule the two interviews, but never received responses from either participant.

After reaching the limit of emails allowed to be sent, the researcher contacted FourYear University's Office of Institutional Effectiveness again to seek recommendations for additional ways to recruit participants. The Office of Institutional Effectiveness recommended to contact the Department of Biological Sciences at FourYear University to request an email be sent out on behalf of the researcher. Through a professional connection with a prior coworker, the researcher made this request, and the department's Director of Advising sent the participant recruitment email approximately 1.5 weeks after the researcher sent the final email. From this email, two additional

participants complete the Qualtrics survey. The researcher successfully made contact and scheduled an interview, which was completed, with one participant; however, never received responses from the second interested participant. In total, this study was completed with eight participants. Collected, self-reported demographics for each participant were organized and are displayed in Table 1 to provide context for this study. It is important to note that all eight students were enrolled in the biological sciences major at the time of the interview. However, one student, Amelia, intended to change their major to microbiology and another, Noah, intended to change their major to environmental engineering for the upcoming semester.

Table 1

Participant Data

Name	Gender	Race/ethnicity	Age	First semester enrolled at FourYear University
Sophia Clark	Female	Black	25	Fall 2022
Olivia	Female	Black	20	Spring 2023
Liam	Male	White	19	Fall 2023
Noah	Male	White	20	Fall 2023
Oliver	Male	White	26	Fall 2021
Joyce	Male	White	20	Spring 2022
Emma	Female	White	25	Fall 2023
Amelia	Female	White	20	Fall 2022

Participant Context

The first component of Schlossberg's Transition Theory, the theoretical framework used as a guide for this study, is defining the type of transition an individual experiences (Anderson et al., 2012). While each participant experienced the same type of anticipated transition, transferring from a two-year institution to FourYear University, the context and impact of the transition varied across participants. This section provides additional context to each participant's transition to align this study further with Schlossberg's Transition Theory.

Sophia Clark was a 25-year-old student at FourYear University who began in the Fall 2022 semester. Sophia Clark was homeschooled and earned their GED before starting at a local two-year institution that their parents had both attended; however, Sophia Clark knew they would eventually transfer to earn a baccalaureate degree. After touring a few four-year institutions, Sophia Clark applied and was admitted as a transfer student to FourYear University. Despite having a later graduation date than initially anticipated, Sophia Clark planned to return in Spring 2024 with the goal of earning their four-year degree and pursuing medical school.

Olivia was a 20-year-old student at FourYear University who began in the Spring 2023 semester. Prior to FourYear University, Olivia attended a two-year institution despite having been initially accepted into FourYear University after high school. Under the guidance of their older sister, Olivia was encouraged to attend a two-year institution to save money, as Olivia does not receive familial financial assistance and get a feel for college before attending FourYear University. Olivia knew they wanted to attend

FourYear University, but when deciding to transfer, applied to several four-year institutions and reviewed several degree programs to ensure their completed credits would transfer appropriately. Their decision on when to transfer to FourYear University was based on information given to them stating that they would be able to enter FourYear University in January 2023 as a biological sciences transfer student and change their major to nursing, which aligned with their intended career goal. Following this advice, Olivia enrolled in the Spring 2023 semester. However, after entering, Olivia was told that they could not change their major to nursing until they had completed a semester at FourYear University. As a result, Olivia remained a biological sciences major to avoid delaying their graduation further and planned to return in Spring 2024.

Liam was a 19-year-old student at FourYear University who started in the Fall 2023 semester. Before beginning at FourYear University, Liam had enrolled in a two-year institution after an unexpected timely graduation from high school since he felt the admissions process for two-year institutions was more fluid. Liam always knew they would eventually transfer since he had a goal to pursue medical school and recognized the need for a four-year degree. Liam chose FourYear University as family members attended previously and felt it was much nicer than other four-year institutions he had been considering. Liam planned to return in the Spring 2024 semester to continue his degree program.

Noah was a 20-year-old student at FourYear University who started at FourYear University in the Fall of 2023. Noah started at a two-year institution because they were uncertain of their academic goals and could not decide which four-year institution they

wanted to attend, so the two-year institution they chose to attend first provided courses at a lower cost that they could take while they made their decision. After applying as a transfer student to two institutions, they chose FourYear University as past relatives had attended FourYear University, and it provided familiarity. Noah planned to return to FourYear University in Spring 2024. However, Noah shared that they requested to change their major to environmental engineering, which was approved. As they will be changing their major, Noah shared that they were unsure when their anticipated graduation would be.

Oliver was a 26-year-old student at FourYear University who started in the Fall 2021 semester. Oliver had attended two separate two-year institutions before beginning at FourYear University. Oliver shared that they chose to attend a two-year institution first due to lower costs and uncertainty of their goals at the time. However, Oliver did know that they would eventually like to transfer to earn a four-year degree to obtain an advanced degree in the pursuit of a career in healthcare. After several years and earning both an Associate of Arts and an Associate of Sciences, Oliver successfully transferred to FourYear University for its strong educational reputation and proximity to family so that they could commute and continue their familial caretaking responsibilities. Oliver shared that they planned to graduate in December 2023.

Joyce was a 20-year-old student at FourYear University who started at FourYear University in the Fall 2022 semester and planned to graduate in May 2025. Joyce had attended one two-year institution before transferring because it provided a lower cost. They were unsure that they wanted to attend a four-year institution to earn a degree as

they did not have a determined plan. Eventually, Joyce decided they wanted to pursue athletics at a different four-year institution than Four-Year University; however, upon researching costs, they decided that for the same cost, they could attend Four-Year University, which they cited as having a better reputation. Joyce planned to return to Four-Year University in the Spring 2024 semester.

Emma was a 25-year-old student at FourYear University who started at FourYear University in the Fall 2023 semester. After exiting the military and coming to live with their significant other, who was enrolled at FourYear University, Emma applied to FourYear University. Emma was not accepted and did not receive an offer to participate in the Bridge program. Despite not being offered a spot in the Bridge program, Emma decided to enroll in the same two-year institution that participates in the Bridge program and complete courses separate from the Bridge program. At the time of enrollment, Emma knew they would apply again to FourYear University as a transfer student after completing two semesters at their two-year institution. Emma's significant other had plans to pursue dental school after graduating in May 2024, which led to Emma making the decision to transfer again in the Fall 2024 semester to a different four-year institution close to their significant other's dental school so that they can continue to live together. At the time of their interview, Emma was determining which of their credits would and would not transfer to their next institution. Their decision to transfer again relied heavily on what they learned as their current G.I. Bill benefits restricted their time in school. Emma would not transfer again and follow their significant other if it meant they would lose the applicability of their credits and would need to delay their graduation.

Amelia was a 20-year-old student at FourYear University who started at FourYear University in the Fall 2022 semester and planned to graduate in December 2026. Amelia had attended two separate two-year institutions before attending FourYear University. Upon graduating from high school, Amelia initially applied to FourYear University as a first-year student but instead was accepted into FourYear University's Bridge program. However, Amelia chose not to participate in the Bridge program and instead enrolled in a different two-year institution, separate from the one that partnered with FourYear University in the Bridge program. After moving in with another family member in a different city, Amelia attended a different two-year institution before ultimately applying as a transfer student to FourYear University. Amelia planned to return to FourYear University in Spring 2024 with a new major in microbiology.

The remaining sections of this chapter detail how participant data was collected using semi-structured interviews. Next, the data analysis steps are detailed, including how themes were developed. Lastly, this chapter concludes with the steps taken to ensure trustworthiness.

Data Collection

Upon completion of the Qualtrics survey and review by the researcher, the student was contacted to select a day and time to complete an interview. This study used semi-structured interviews to learn about participants' experiences navigating the transfer process, specifically related to transferring their academic credit from one institution to another. Semi-structured interviews are designed to have selected questions ready but also allow for natural conversation (Creswell & Creswell, 2018; Creswell & Poth, 2017).

These interviews allowed the researcher to act as the key instrument in data collection (Creswell & Creswell, 2018). During the interview, participants were asked about their experiences with transferring their credits from their prior two-year institution to FourYear University and the perceived impacts, if any, on their program of study progress. Questions were also asked about what resources, including offices, individuals, or documents, they found to be of help during the experience at their prior two-year institution and FourYear University (see Appendix D).

The researcher developed the semi-structured interview guide in alignment with the theoretical framework used for this study, Schlossberg's Transition Theory. Keeping in mind the importance of the context behind the transfer transition that participants have experienced as a foundational concept of Interpretive Phenomenology, the first set of questions was developed to gather contextual information from the participants about the development of their decision to transfer. Questions were structured in a format that aligned with the timeline of transfer, beginning with questions related to their prior two-year technical college experiences, followed by questions related to their experiences with FourYear University. The interview ended with a series of reflective questions asking participants to share what they would recommend for future students who follow a similar vertical transfer process. After developing the semi-structured interview guide, a relevant component from Schlossberg's 4-S System was identified as it applied to each question to ensure the interview guide aligned with Schlossberg's Transition Theory and was best designed to highlight each student's experience.

In addition to the interviews, data was collected through observation notes. As the researcher identified any body language or felt the need to write comments throughout the interviews, notes were kept as a second data source, contributing to the multiple data sources that characterize qualitative research (Creswell & Creswell, 2018).

Lastly, these interviews were conducted using the virtual Zoom platform for maximum convenience. Before beginning the interview using Zoom, students were also sent an informed consent document (see Appendix E), approved by IRB, and asked to confirm they received the consent form and whether they had any questions. After confirmation, the interview began and was recorded using Zoom. At the conclusion of the interview, each participant was sent a $20 Amazon gift card from the researcher's personal account as a thank-you for their time.

Data Analysis

The virtual Zoom platform provided technical ease in the recording process. The software recorded the interview, uploaded it to a cloud storage system, and provided an automatically generated recorded session transcript. After each interview, the researcher reviewed the transcript to ensure accuracy and edited it as needed to correct any automatic transcription errors. Next, each participant was emailed a copy of their transcript and asked to review it to confirm the transcription and make any necessary clarifications. When sent their transcript, each participant was asked to provide a pseudonym to protect their anonymity. A note in each email stated that the participant had two weeks to review the transcript and provide a pseudonym. The participants were informed that if no feedback was received, the transcript would be included in the study,

and a pseudonym would be assigned to them. If the researcher needed to assign a pseudonym, the researcher located the top name for the year the participant began at their two-year technical college provided by the Social Security Administration website.

Interpretative Phenomenological Analysis

As an interpretive phenomenological study, it was important that the analysis of this data followed best practices to make sense of the meaning of participant's experiences. Smith and Osborn (2007) described an interpretative phenomenological analysis (IPA) approach with the foundation of a phenomenological approach, examining the participant's lifeworld while emphasizing an interpretative approach involving a two-stage interpretation. Within the study, participants try to make sense of their own experiences, and the researcher tries to make sense of the participants' sense-making process, thus resulting in a double hermeneutic connected to the underlying hermeneutic philosophy of interpretive phenomenology (Smith & Osborn, 2007).

Critical to IPA is that the researcher engages in an interpretative relationship with the transcripts, reviewing transcripts multiple times to seek out themes. Therefore, the first step in this data analysis process was to review a single transcript while adding annotations about significant or interesting responses. In this first stage, the transcript is read multiple times to become as familiar as possible, with each reread potentially illuminating new insights. For this study, the annotations were made on hard copies of the transcript. The annotations consisted of notes on significant comments made by the participants and notes on the language used by the participants. As a transcript was

reread, annotations connected related and relevant responses made by the participant throughout the interview.

The second step in IPA is to transform the initial annotations into "concise phrases which aim to capture the essential quality of what was found in the text" (Smith & Osborn, 2007, p. 68). Like initial coding, often referred to as open coding, the qualitative data was broken down into discrete parts (Saldaña, 2016), establishing a slightly higher-level phrase to allow for theoretical connections but grounded enough to be connected back to what the participant actually said (Smith & Osborn, 2007). Continuing with the first transcript, the annotations made during step one were condensed into emerging themes, identified by Smith and Osborn (2007), and recorded on the hard copy of the transcript.

The next step in the process required a more analytical reordering, taking the emerging themes from the first transcript and clustering themes if connections were made to remove redundancies. The clustered emerging themes often resulted in a need to develop a superordinate concept. However, as clustering occurred, the transcript was continuously referenced to ensure the participant's words warranted the connection, emphasizing the iterative process of interpretative phenomenology derived from the hermeneutic cycle (Smith & Osborn, 2007). From here, the themes were ordered coherently within an electronic document, with names assigned to the clusters.
This process of annotating and theme naming continued with the remaining seven transcripts. The emerging themes identified from the first transcript were used to orient, repeating subsequent themes in the following transcripts; however, new themes were also

identified. Each time, in the case of new themes, the prior transcripts were reread to identify any potential participant responses that could support the new theme. As with initial coding, all proposed codes are "tentative and provisional" (Saldaña, 2016), and some codes may be revised as the analysis continues. This was the case as the emerging themes were reflected upon within the context of the research questions and Schlossberg's Transition Theory.

Lastly, after each transcript had been analyzed using annotations and emerging themes were named and clustered, when necessary, a final table was constructed of the superordinate themes, their relevant sub themes, and examples from within the transcripts of the participant interviews. Using Schlossberg's Transition Theory to contextualize the data, three overarching themes arose that addressed the research questions. These themes, their sub themes, and their accompanying narratives are provided in Chapter Four.

Data Storage

Transcripts, Zoom recordings, researcher notes, and observations made during interviews were stored using the researcher's institutional cloud storage software. This provided an additional layer of confidentiality in that only the researcher could access raw data. Hard copies of the transcript used during data analysis were stored at the researcher's home, away from family member access.

Trustworthiness

With the qualitative methods used in this study, steps were taken to ensure rigor and allow for trustworthiness, following the guides Lincoln and Guba (1985) set forth. This section details those steps. Lincoln and Guba (1985) describe that to ensure

trustworthiness, credibility, transferability, dependability, and confirmability must be established. Techniques can be implemented to establish each component of trustworthiness.

Several steps were taken to ensure credibility, or the truth of findings (Lincoln & Guba, 1985), in this qualitative study. Member-checking, which allows participants to verify the validity of their engagement, was implemented in this study by allowing participants to review their transcripts and ensure their accuracy. Participants were also asked for feedback and clarification when interview data was unclear.

Through the process of IPA, as emerging themes were identified, data was consistently reviewed to check for outliers or participant experiences that did not align with the emerging themes. This method of negative case analysis ensures credibility by highlighting data that contradicts emerging themes (Lincoln & Guba, 1985). Participant experiences that contradict the majority of participants' experiences are discussed and elaborated upon throughout Chapter Four and Chapter Five.

The researcher also engaged in peer debriefing with institutional faculty and staff members to ensure that data analysis accounted for implicit bias. Peer debriefing allows the researcher to engage with others to explore other potential lines of inquiry that have not yet been discovered (Lincoln & Guba, 1985). Emerging themes were discussed with peers early in the data analysis stage to provide an opportunity to test and defend themes. Through this process, institutional faculty and staff members determined the practical implications discussed in Chapter Five plausible.

To ensure transferability, thick descriptions are used throughout this study. Thick descriptions provide detailed accounts of the research site, setting, participants, and participant situations. Through using thick descriptions, external researchers can determine when drawn conclusions can be transferable (Lincoln & Guba, 1985).

Confirmability, or ensuring the study is removed from researcher bias and could be replicated (Lincoln & Guba, 1985), was followed through implementing an audit trail and reflexivity. Detailed steps in selecting participants, recruiting participants, interviewing participants, and analyzing the data were kept, ensuring an audit trail can be accessed for future research.

The researcher also engaged in reflexivity throughout the study and when analyzing collected data to acknowledge any potential bias due to the researcher's background, identity, and culture. The researcher developed a reflexive journal (Lincoln & Guba, 1985) that was a private reflection of participant responses and methodological decisions. This reflexive journal allowed the researcher to document reflections in the context of one's values and interests.

Conclusion

Using qualitative interpretive phenomenology, the researcher investigated vertical transfer students' experiences with the academic credit transfer process. Participants included students majoring in biological sciences who had previously transferred from in-state two-year community colleges. Semi-structured interviews were conducted with participants and focused on the lived experiences as students navigated the academic credit transfer process and what support structures facilitated this process. The transcripts

were then analyzed using an interpretative phenomenological analysis, resulting in three overarching themes. Lastly, the researcher engaged in member checking, negative case analysis, peer debriefing, thick descriptions, audit trails, and reflexivity to ensure trustworthiness.

CHAPTER FOUR

FINDINGS

Introduction

This chapter presents three overarching themes across participants' experiences with the transfer credit process that were discovered in this study. The following research question and sub questions guided this study:

1. What are vertical transfer students' experiences with the academic credit transfer process?
    a. How do vertical transfer students make sense of the academic credit transfer process when transferring course credits to a four-year institution?
    b. What, if any, support structures facilitated students' understanding or awareness of transfer credit policies?

After employing an interpretative phenomenological analysis, three overarching themes emerged about participants' emotions and academic degree progress due to the transfer credit process, responses to institutional support, and overall feelings of themselves throughout the process and how they chose to move forward. The three themes were given titles that best aligned with their respective component of the 4 S System of Schlossberg's Transition Theory, and best generalized the underlying participant experiences. These themes were titled, Negative Implications on Four-Year Degree Progress and Emotional Effects, Situation and Support: Distrust in Institutional Support

and Resources, and Support, Self, and Strategies: Importance of Self and Relationships in Decision-Making while Using Rationalization as a Coping Mechanism. Each theme also consisted of several sub themes that helped develop the overarching theme. The three themes, summaries, and corresponding sub themes are organized in Table 2 to provide an overview of this chapter.

Table 2

Overview of Themes

Theme	Summary	Sub themes
Situation: Negative Implications on Four-Year Degree Progress and Emotional Effects	The transfer credit process caused participants to experience negative consequences on their undergraduate experience.	Credit misalignment; Class status misalignment; STEM-Heavy course load; Wasted time; Time-to-degree changes; and Emotional frustration
Situation and Support: Distrust in Institutional Support and Resources	Participant experiences as a transfer student and with the transfer credit process led to distrust of the institution.	Unclear resources and processes; Sources of misinformation; Two-year student services; and Transfer student disadvantage
Support, Self, and Strategies: Importance of Self and Relationships in Decision-Making while Using Rationalization as a Coping Mechanism	Participants acknowledged the large role that their efforts and decision making had in the transfer credit process and attempted to justify their negative experiences.	Ownership and assertiveness including with the use of technology; Peers and family; and Rationalization

The first theme, Situation: Negative Implications on Four-Year Degree Progress and Emotional Effects, focused on the effects of the transfer credit process. These effects

included emotional, mental, and physical implications for participants' undergraduate degree progress. As indicated by the theme's title, this theme represents the situation or the characteristics of the participants' transition. Specifically, participants' assessments of their transition and experiences with the transfer credit process were apparent, leading to the development of this theme. The sub themes encompassing this theme included credit misalignment, class status misalignment, STEM-heavy course load, wasted time, time-to-degree changes, and emotional frustration.

The second theme, Situation and Support: Distrust in Institutional Support and Resources, represented participants' perspectives when viewing institutional support structures, particularly two-year advising resources. This theme added additional context to the participants' situation as they shared stories of their institutions. It also primarily surrounded participants' negative experiences with support intended to help facilitate their transition and transfer credit experience. This theme included sub themes of unclear resources and processes, sources of misinformation, two-year student services, and transfer student disadvantage.

The third theme, Support, Self, and Strategies: Importance of Self and Relationships in Decision-Making while Using Rationalization as a Coping Mechanism, mainly focused on how participants' strong sense of self guided their experiences and utilization of additional resources during their transition. In addition, when reflecting on these experiences overall, participants relied on rationalization to make further sense of their transition, aligning with both self and strategies that make up the 4 S System. The

sub themes that comprised this third theme included ownership and assertiveness including with the use of technology, peers and family, and rationalization.

In this chapter, a narrative of each theme is provided. Each narrative consists of participant quotes that align with corresponding sub themes. The participant narratives provide insight into how vertical transfer students experience the transfer credit process and how varying support structures can facilitate their understanding of the process.

Theme One: Situation: Negative Implications on Four-Year Degree Progress and Emotional Effects

The first theme highlighted the effects that participants experienced due to the credit transfer process. Each participant shared experiences navigating credit applicability, or lack thereof, time-to-degree changes and what they wished they would have done differently. As participants detailed these experiences, all but one displayed anger and frustration. Emma, who did not share in the anger and frustration, was consciously aware of potential negative implications, especially as they looked forward to transferring again in another semester. This section shares those participant narratives in detail.

Credit Misalignment

Participants frequently discussed misalignment after completing their transfer, whether it was a misalignment between credits earned at their two-year institution and credits required at FourYear University or between their class standing and enrolled classes. When reflecting on which of their credits transferred, Sophia Clark said:

> A bulk of them… I won't say all of them, but the bulk of them transferred as electives. And the math classes, the English classes, oh my god, the psychology, the sociology, everything, the world history, almost everything that I did in that two years or so came over to [FourYear University] as electives.

Having credits transfer into FourYear University as electives was frequently reflected upon. When asked what degree requirements they had completed after transferring, Joyce said, "It was essentially every extracurricular. Even if classes didn't necessarily fit into a specific extracurricular thing that [FourYear University] has it would go under the category of this optional class." Liam also discussed their elective credit requirements being "ate up" by classes they completed at their two-year institution, "… and at the bottom of that [advising tool] page was like a whole list of like my credits that didn't transfer to anything relevant to the degree that like ate up all my electives."

After completing the degree's elective credits, students noted that credits beyond this requirement were named excess credits. When Amelia completed all their elective credit requirements, they shared that they then filled a requirement titled excess electives: "So, all my 13 credits for required electives were all good, so I have no more electives that I need to do. But I have 34 credits for excess electives." Olivia also noted that they had excess electives after transferring: "I do have like a couple, like I probably have like four extra electives that I didn't need to take." Oliver, while unable to use FourYear University's excess electives terminology, was aware that they had completed more than enough credits required for the degree: "I think they just say, like elective, unnamed

elective, or something like that. I think I've got like a good 30 credits more than I need for my degree."

Participants made sense of elective credits by specifying that they didn't count towards their degree requirements. Sophia Clark continued the discussion of their elective credits by saying: "But, I wanna say, maybe two classes came over as what they were properly, if that, but on the record none of them came over. None of them came over properly." Sophia Clark utilized the term "proper" to reference classes that would have counted for their degree. Joyce also discussed credit inapplicability by saying: "I came in with 61 credits, but a lot of them didn't actually count for biology." Joyce made sense of credit inapplicability by saying that the credits that did not contribute to degree requirements didn't "count." Liam also recognized the difference between electives and counting for the degree when they said:

> The other ones were, were like more gen ed classes, a lot of which were like discounted as instead of going towards the degree they just counted as general transfer electives… they didn't count for like the degree, the major requirement.

Some classes that were being considered as excess electives for Amelia would have counted towards another major at FourYear University, but not the biological sciences major as they described: "But none of those classes even matter for [FourYear University] and for what I'm doing. Those are all like the nursing credits, which I'm not in nursing." Amelia highlighted the importance of completing courses towards the intended major, as Amelia's courses would have counted towards their degree had they selected another major.

Olivia's FourYear degree program selection was dependent upon credit applicability. Despite four excess elective courses, Olivia chose biological sciences when transferring to FourYear University. When reflecting on how they chose their major, Olivia shared:

> … cause I was looking into engineering. That was like one of my second choices other than biology. But there was just a lot of curriculum that I would need to add on. And I just didn't, I definitely didn't want to be behind, cause I worked so hard to stay on top of it and be ahead. So yeah… but that definitely pushed me away from that because I did not want to add an extra year or anything.

Olivia chose biological sciences over engineering degrees because the courses they completed would align better with the biological sciences degree program. Participants in this study proved the ability to differentiate between when their transfer credits counted as electives, excess electives, or major degree requirements.

Lastly, two participants commented about transferring their English courses from their two-year institution to FourYear University. Joyce shared: "I think it was maybe English, English literature. Some specific English literature class, I think, didn't transfer. But I thought, you know, it's specific enough that there might not be just an immediate comparison." Liam also reflected on their English class and its inapplicability and said:

> I took [TwoYear Technical College's] first semester of like college level English… and that just transferred as elective credits, which I thought was strange. And I took the second semester, which transferred as an English class, but didn't cover the literature required for [the biological sciences degree].

While both Liam and Joyce recognized that their course did not transfer to specific FourYear University English requirements, they weren't sure as to why they did not transfer.

It's important to note that Emma did not explicitly share the experience of having excess electives. However, Emma did share: "Everything lined up perfectly. My [trigonometry] and algebra from [TwoYear Technical College] didn't like carry the same weight, though, so I couldn't come straight into calculus here. I had to do other math." Emma recognized that these math classes did not count for the biological sciences math requirements, and they would need to do additional math. Emma was also in a unique situation as they completed their interview when preparing to register for classes for the upcoming term, which would be their final term at FourYear University, before transferring to another four-year institution. Emma knew that their completed classes might not transfer to their next intended institution. Emma said:

> I am still working through next semester's credits, just to make sure everything transfers before I submit my registration. So that is like a little nerve wracking, because I don't want to lose any credits, because I told my boyfriend, if one credit I've already taken doesn't transfer, like, I'm not transferring. I'm not losing those credits.

Similarly to Olivia, Emma's decision to select a major or transfer across institutions relied heavily on their degree progress and how many completed courses would transfer seamlessly.

Participants shared many experiences of credit misalignment after successfully transferring, whether the credits went towards elective credit requirements, excess electives, or other degree programs they were not enrolled in. Participants also discussed taking coursework that they felt should have been taken in prior academic years because of credit inapplicability.

Class Status Misalignment

With electives and excess electives completed, participants often needed courses they believed should have been taken in earlier years. For example, Joyce said: "I'm in sophomore classes because of sort of the strange way it worked, the credits that I transferred in with. But I'm under the category of a junior." Joyce had enough credits to classify as a junior at FourYear University. However, they were enrolled in courses that were considered sophomore-level. Amelia and Noah, also considered juniors, shared similar experiences. Amelia said: "I'm technically a junior by credits… but my credits didn't really transfer all that well… right now, I'm in freshman classes." Amelia continued explaining that they were in first-year classes despite having a junior class status due to their excess elective credits, as mentioned previously: "I have 34 excess electives. That's why I'm a junior, technically. But I'm in freshman classes." Noah was unclear on where they stood in terms of completing courses within their graduation timeline, but shared: "Technically? I should be a junior, credits-wise. I'm like a second semester sophomore. I don't know exactly." Despite their confusion, Noah understood that the credits they had earned put them in a class level higher than the one that fit their graduation timeline.

Participants frequently named degree-specific requirements, as opposed to general education requirements, as the courses they needed to revisit and complete. For example, Oliver discussed the impact of not completing chemistry coursework before their transfer: "Well, I guess chemistry, not having my chemistry courses, really threw a wrench in stuff for me because I was taking Chem one as a junior." As mentioned, Emma shared that they needed to take a math course since their completed math courses did not transfer into the specific requirement they needed to complete. Olivia named that math requirement, typically required during the first year, as being one that they were missing:

> [My credits] were all over the place, like I had still some classes that I need to take that usually people take their freshman year, but that's what I was trying to do. Fill in the gaps… for example there was a calculus class that I still had to take and you usually take that freshman year.

While participants did not share that this upset them, there were implications for their degree progress. Revisiting and completing core academic degree requirements that should have been taken sooner caused participants to have heavier current and future semester schedules.

STEM-Heavy Course Load

As a result of completing their electives, participants frequently discussed the impact on their current schedule and future semesters. Specifically, with no remaining elective credit requirements, only core degree requirements remain. Joyce said: "You've taken every extracurricular you would have to for the entire four years. So this would be a sprint of biology and chemistry." Liam also elaborated on not having electives left to

complete because of transferring. They said: “[transferring] changed some of the courses I could take or not. I just don’t have any electives is the big thing. Like, and the order is somewhat out of the norm… it’s just all degree requirements.” Amelia felt they were not too far behind in their graduation timeline after transferring but recognized they would only be taking core degree requirements during their remaining time. Amelia said:

> Since all of my other humanities and other things are pretty much taken care of. Like, I’m basically on the right track. But I’m gonna have to like, do a lot of science like for the next couple of years to catch up.

Lastly, Olivia also shared that although they only had a few remaining credits, they didn’t think they should condense them since they were science-heavy. Olivia said:

> Now, I literally basically only need like the science classes like hard science classes. So, they're kind of like compact in my schedule, even though I need 33 credits only it's like I also should space them out because it's just like all I need is like cell biology, microbiology. It's just literally major requirements. Science based classes.

As Olivia shared, these participants felt that because they had earned so many elective credits and completed most, if not all, of their non-science requirements, their remaining semesters would be science content heavy, resulting in more difficult semesters.

Wasted Time

Participants were asked to reflect on their transfer process thus far in their interviews and if they would have done anything differently. Many participants shared that, knowing what they know now, they would have chosen classes differently before

transferring to FourYear University. When discussing how their elective credits had been completed, Sophia Clark shared: “Looking in hindsight 20/20, I should have taken [biology and chemistry] back at [TwoYear Technical College].” Liam needed to complete courses at FourYear University that were prerequisites for courses they felt they should already be taking. As a result, Liam shared this about taking different classes before transferring: “Like I’m doing a lot of classes right now that are like prerequisites for my other classes that I felt weren’t explicitly spelled out enough that I probably could have done a couple more at [TwoYear Technical College].” Liam continued by sharing that they would have taken fewer of the courses that “ate up” their electives, as mentioned earlier, and would have preferred to complete degree requirements to avoid the heavy courseload of degree requirements that they are taking now. Specifically, Liam said: “… if I had known that they would have just been electives, I would have taken electives, you know, instead of trying to work on the degree and having to do it again.”

Olivia and Noah shared a similar sentiment when comparing their number of elective credits versus degree requirement credits. Olivia said: “I’d probably take more just like more of the serious major classes that I need like biology.” Noah said, “… I would have definitely done the major courses.” Joyce, who hadn’t initially planned to transfer to FourYear University, also shared that had they known they were going to transfer, they would have prepared their coursework better. Joyce said, “If I had known that I was going to transfer, I would have done it entirely different.” These participants commonly felt that they would have completed different coursework than they chose to complete before transferring to FourYear University.

As a result of wishing they had taken different classes, participants felt they had wasted time. While they knew they would transfer, Sophia Clark did not know how their credits would be accepted by FourYear University, specifically when deciding to transfer to FourYear University. In response to learning about their transferred credits, Sophia Clark shared:

> Oh my gosh! And it at the time it filled me with just turmoil, cause I was like I wasted my time. Truly. I feel that I wasted my time. If I had known that I was going to come to [FourYear University] in the beginning of my [TwoYear Technical College] journey I would have selected different classes, or just came straight to [FourYear University].

Amelia also specifically cited wasted time very plainly when they said: "I felt like I had wasted like two years of my life." Amelia went on to say they didn't feel that transferring gave them any advancement in their degree plan. Amelia said: "I really feel like it was kind of redundant for me to go to college for two years whenever it really didn't like really advance me." Oliver had a particular experience when they were initially under the impression that they would be completing classes at their two-year institution that could be transferred as courses that would satisfy a psychology minor at FourYear Institution. When Oliver was told those classes would not count towards a minor, Oliver shared the following about how they felt: "… a lot of time wasted that I felt, you know, not having the minor in Psychology." Feelings of wasted time were expressed as participants discussed what they would have done differently and how they felt in response to knowing the result of the transfer credit process.

Time-to-Degree Changes

A few participants also discussed that their expected graduation dates differed because of transferring, credit inapplicability, misalignment, and wasted time. Sophia Clark explicitly shared: "[My anticipated graduation date] is different." Joyce also shared that they were behind their anticipated graduation date by saying: "When I first transferred in, I suppose you could say I was a semester behind." Lastly, Amelia also shared that, with the help of their FourYear University advisor, they created a new graduation plan after transferring. Amelia said: "I believe whenever my academic advisor like, she planned it all out. But I'm only going to be graduating one semester late, I believe." On the other hand, Liam plans to graduate on time but must take additional coursework each semester. Liam said: "Even though my graduation date is on track, I think I have to take slightly more than average per semester to keep it like that, like only like one or two extra classes per semester, but still."

Despite having a delayed graduation date, a few students had come to terms with it. Noah acknowledged having additional financial support and said:

> I graduate when I graduate… I'm very lucky my dad is helping me with a lot. I have [state scholarship]. Money is a factor, but I did the three semesters at [TwoYear Technical College] and that saved a lot of money.

Sophia Clark also acknowledged that although their anticipated graduation date had changed, they had accepted it. Sophia Clark said: "Is it not what I planned? Sure. But this, this is right now, the path. It's not the plan. It's the path."

However, Olivia and Emma ensured that their anticipated graduation date would remain unchanged. While biological sciences was a degree program Olivia was interested in, they had compared different degree programs to consider all options. Olivia shared that they had considered engineering degree programs, but due to the lack of credit applicability, which would cause a delayed graduation, they ruled it out as an option. Olivia said:

> …a lot of the engineering degrees, cause I was looking into engineering. That was like one of my second choices other than biology. But there was just a lot of curriculum that I would need to add on. And I just didn't, I definitely didn't want to be behind, cause I worked so hard to stay on top of it and be ahead. So yeah… but that definitely pushed me away from that, because I did not want to add an extra year or anything.

As Emma was planning to transfer again to another four-year institution, they reflected on how they would feel if their anticipated graduation changed. Emma said: "[If my credits don't transfer] it probably would [impact my decision to transfer], because, being on GI benefits, I have to fit their timeframe and timeline in order to make sure I get all of my benefits." Specifically, Emma utilizes GI benefits to pay for coursework and ensuring they do not exceed the timeline for graduation as dictated by their GI benefits is extremely important to them.

Lastly, Oliver had the most significant impact on their anticipated graduation timeline and had a significant emotional response. Oliver shared: "Yeah, I would have already graduated by now if I had [known the extra credits taken at TwoYear Technical

College would not transfer].” Oliver continued to elaborate on why they believed they would have already graduated by sharing:

> I thought I was gonna graduate last December… I just thought that I had all of the classes to fulfill my degree. I thought that having a completed associate degree meant that it was two years past that but I didn't understand that, you know, just having an associate degree, didn't mean you transitioned into a bachelor's degree after that. I didn't understand that, and my advisors never cleared that up with me every single time I talked about it.

Oliver expressed that they believed a typical timeline to a baccalaureate degree was two years and assumed it would only take two years after completing an associate degree.

Inapplicability of their credits, misalignment in class status, science-heavy courseloads, wasted time, and resulting time-to-degree changes were responsible for the negative implications students experienced towards their degree progress due to the transfer credit process. Beyond physical effects on their degree completion and time spent, students experienced emotional and mental effects. The following sections detail how students expressed these feelings.

Emotional Frustration

As a result of the effects on their degree and undergoing the transition, participants expressed strong feelings of general frustration. While it is not a physical implication on their degree, participants were upset and angry. Sophia Clark first summarized their overall feelings by saying: “Very disappointed. Very upset. Very betrayed by the lack of transparency because [FourYear University] is already this larger-

than-life school, and when you think of [research site state], you think of [FourYear University].” Joyce summarized their feelings plainly by simply saying: “It was a bit of a stressful experience.” Liam also said that, while they expected difficulty when transferring their credits, they were also frustrated. Liam said:

> … it’s definitely frustrating… so it’s definitely very frustrating but I also did kind of expect it going in just because I knew that like transfers were just often muddy. So, I thought I probably wouldn’t be an exception. But definitely it was very frustrating.

Oliver shared in the frustration by saying: “Extraordinarily frustrated. Yeah, very frustrated” Oliver also elaborated by expressing feelings of burnout as they approached their graduation that was coming up. Oliver added to their previous comments by saying simply: “I guess I'm more burnt out about it.” Amelia shared that they cried when learning about how their transfer credits were inapplicable when their new, FourYear University advisor told them during orientation. Amelia said: “After [my four-year advisor] told me, and we got off the Zoom call I cried because it was just very frustrating… but I was very disappointed and like very frustrated whenever I initially learned that.” Lastly, due to misinformation about transferring to the nursing program, Olivia shared that they were also upset. When referencing the story of misinformation, Olivia said:

> Also nursing… I was supposed to start at nursing. I would have been in nursing right now, but since [receiving misinformation] I would have to wait till this January to do an application. Then I would start the next fall, and that is adding a

> year onto it, and that's why I was like, oh. so yeah, that's why I was upset about that. Because instead, starting this past fall, I would have to wait till January to do the change of major application. Then start fall 2024, which is no.

Olivia had original goals to pursue the nursing program at FourYear University, but since they received misinformation about the admissions process, it would not be possible if they wanted to keep their anticipated graduation date. If they had continued the process anyway, they would have had to graduate later than they wanted, leading to Olivia's upset feelings.

Theme One Summary

The participants in this study shared negative physical implications and emotional consequences due to their transfer credit experience, leading to the development of the first theme, Situation: Negative Implications on Four-Year Degree Progress and Emotional Effects. The implications and emotional effects that each participant experienced were all a part of their situation as they navigated their transfer from their two-year institution to FourYear University. These components of their situation influenced how each participant chose to respond and analyze their overall transition.

Theme Two: Situation and Support: Distrust in Institutional Support and Resources

Participants cited unclear resources and processes, sources of misinformation, poor advising, and having a general disadvantage due to being a transfer student as reasons for the negative impacts on their degree and emotional well-being, as discussed in the previous section. These reasons ultimately led to feelings of distrust in institutional

support and resources. This section details those reasons and summarizes the second theme.

Unclear Resources and Processes

As Joyce and Liam were confused as to why their English courses did not match English requirements for FourYear University, other participants frequently noted their confusion about what classes did or did not transfer and shared how institutional processes were unclear. Amelia also commented on their English credits as they attempted to understand what counted towards their degree and what didn't. As they tried to explain it to themselves, they called the process "weird." Amelia said:

> My English [composition] two from [TwoYear Technical College] did transfer. So, what I'm seeing is like, I guess the lower level classes, or like the introductory classes I had to take at [TwoYear Technical College], would never transfer over to [FourYear University], but like, I had to take those ones before I took the next step [at TwoYear Technical College]. So, I don't know it was it was very weird.

Even after transferring, Amelia was not fully aware of why or why not their credits applied the way they did.

While Sophia Clark acknowledged existing resources designed to facilitate understanding of the transfer credit process, they expressed that they still needed help understanding. Specifically, when referencing their excess elective credits, Sophia Clark said:

> Truly, I still don't understand why they transferred over as electives. I can, I could look over the catalog, I could look at [FourYear University degree tool], I could

> talk to my current academic advisor until my face is blue. I do not understand why my classes… all those came over as electives.

While participants recognized that resources and support existed, how to use them wasn't always straightforward. Amelia emphasized that learning how to use existing resources could have been clearer. In reflecting on how they figured out what classes to take that would transfer, Amelia said:

> I do remember them mentioning that you could go online and like, see how the credits could transfer. But I remember it was very overwhelming because I didn't really know what the classes meant. I didn't really know where the starting point was for [FourYear University], specifically.

Joyce echoed that processes were unclear or confusing by saying: "It was not always necessarily clear if you were in good standing, the things that you needed to do, and the registrations, and so on, that you needed to fill out." Joyce continued by highlighting that to find the existing resources, you had to seek them out yourself, and they could have been better explained. Joyce said:

> But it felt like there were certain things that weren't always obvious or were implied and you had to kind of ask someone about… some pieces that were implied or skipped over, or not necessarily explained all the way through which I feel could have been.

Olivia shared that they took much initiative themselves, like what Joyce shared. Olivia said:

> [Making sure my credits transferred] wasn't too much work, but it definitely wasn't the simplest, either, because you have to always just keep up with it. Make sure just like every single semester I would, you know, look at everything, take everything that would transfer. I spent a lot of time on this.

Olivia said they took the initiative to find the resources and do the research to ensure that the classes they took would transfer to their intended degree at FourYear University. Lastly, Oliver summarized their feelings about the available resources, specifically at their prior two-year institution, by saying: “I think that [TwoYear Technical College] likes to flaunt all these resources they have, but don't really give them to you, or let you know that you should be using them.”

While the support structures exist, participants felt they needed clarification and clarity. Beyond unclear processes, participants also shared that they experienced times when they received misinformation. The following section details experiences of misinformation as perceived by participants.

Sources of Misinformation

Several participants shared that they had experiences with individuals at their two-year institution and FourYear University that resulted in them receiving misinformation or instances where they received no information. When reflecting on their many electives, Sophia Clark felt that the advertised partnership between the institutions was false. Sophia Clark said:

> They told me that [FourYear University] and them had like a deal, or they had some type of program or some type of something, where all of my classes were

> meant to transfer over to the equivalent of the [FourYear University] classes. That was not the case.

Sophia Clark continued by saying:

> I remember [TwoYear Technical College] specifically saying that all the classes transfer, so I didn't feel the need to think about it anymore. I believed that no matter where I was transferring to, my credits were going to go over as classes.

Sophia Clark felt that they were under the impression that the classes they completed at their two-year institution would align entirely with their degree program.

When discussing a general education requirement that FourYear University had, Joyce and Liam identified it as something they were not informed about before transferring. Specifically, Joyce said: "But I think that's just something that [TwoYear Technical College] wasn't aware of. It was not offered, and at the very least it wasn't advertised as something you should be taking." Liam contributed as well by saying: "I forget what the exact name of the requirement is here… you have to take at [FourYear University], specifically, even if you did an additional class. And I didn't find that was advertised almost at all." Liam explained that this requirement had to be taken at FourYear University regardless of whether they did the equivalent class at their two-year institution.

As mentioned previously, Oliver had been under the assumption that they would only have two additional years to complete to earn their bachelor's degree after earning their associate degree. Also discussed previously, Oliver had been informed at their two-year institution that they could take courses towards a FourYear University psychology

minor. Oliver also reflected on these incidents and completed courses within a building explicitly labeled as a transfer building. Oliver said:

> But I took classes in that [university transfer] building that didn't transfer. So, you know there's that. So that, I actually had a lot of difficulties, especially with the fact that I should technically have a minor in psychology. But the classes that I was told that would transfer… by they have like a unit like a transfer building like office, and he told me, it would transfer over, and they didn't transfer at all. So, I actually had that big issue where I could have a minor. But I don't.

Oliver shared that those recommendations to complete psychology courses for the minor were provided by an office dedicated to supporting transfer students.

Lastly, as briefly mentioned previously, Olivia shared that they received misinformation about the admissions process for the nursing program at FourYear University. Specifically, Olivia shared that this information came from the on-campus admissions building at FourYear University. Olivia said:

> I was advised to [apply to FourYear Institution then transfer to the nursing program after being accepted in January] because it would be an easier process, and then cause I didn't want to wait another semester before going into [FourYear University], so I just wanted to start in last spring. That was one of the main things. But this is 100% what I was told, and I know, but when I ended up getting accepted into [FourYear University] then I was told the application for nursing opened in January, but I wasn't able to apply because I hadn't had a previous

> semester [FourYear University] GPA established. You're required to at least be there for a semester. So, then, I couldn't apply to the nursing program.

Olivia was told they could apply to FourYear University without applying directly to the nursing program. Once they did that, they were told they could immediately apply to the nursing program in January. However, after Olivia was accepted and arrived at FourYear University, they were told they needed to wait an additional semester to earn a FourYear University GPA before they could be admitted to the program. This led to Olivia's decision to forgo the nursing program application so they could maintain their anticipated graduation timeline within their biological sciences major.

Oliver and Olivia experienced specific incidents where they recalled misinformation from offices with functions intentionally designed to support transfer students. Additional participants also identified times when their advising experiences, specifically at their two-year institution, did not fully support them. This next section details the different recollections of participants.

Two-Year Student Services

Common across participants were the impacts that two-year advising experiences held. While participants critiqued their two-year advising experiences, they often justified them by acknowledging the workload of two-year advisors. When reflecting on their two-year advising experience, Olivia referred to their excess electives. Olivia said: "Their advising, see, they didn't help me I feel like that they way they should've cause like I said there were some classes that I took, and I didn't need to take." Olivia felt it was the advisor's fault that they had excess electives. Noah also shared that they had taken an

incorrect biology course that was not specific enough for the biological sciences major. Noah said:

> … technically my credits did transfer. I just got put into the wrong classes like I have credit for the non major bio. But my advisor didn't put me in the right one I needed to be in at [TwoYear Technical College].

While Noah shared that the advisor, who was also an English professor, did not put them in the right biology course, they also shared that they felt it was not the advisor's fault. Noah continued by saying:

> … this English professor, it's not her fault, she didn't know what she was doing so and that happens with a lot of the other ones, because I remember my sociology professor would complain about having to do advising meetings and be like, I don't have time. I have to grade all of your papers, and I also have 13 meetings in the next four days to advise students. And he's like, I don't know everyone's major. I don't know how I'm supposed to do this… like your advisor at [TwoYear Technical College], is also a professor that probably already also has a lot on their plate anyway, doing the professor stuff. I loved everybody at [TwoYear Technical College]. All the professors were great to me. They were also very overworked, so in their moments of shortcomings I was like is no big deal.

Noah acknowledged that despite being placed in an incorrect biology course, they did not blame their advisor. Noah justified it by sharing that they enjoyed their advisor regardless and thought their advisor was overworked.

Other participants also recognized that their advisors, while not helpful, were overworked in their jobs. Amelia had taken two courses that did not apply to the biological sciences major. When sharing about these classes, they referenced that their first two-year institution advisor had recommended they take the first semester of a two-part sequence, and their second two-year institution advisor recommended that Amelia complete that sequence. Amelia reflected on this by saying:

> … so, this is what you took at [TwoYear Technical College]. So, this is what you should take at [TwoYear Technical College #2] now to continue that so I did take like anatomy and physiology two to continue that, but none of those classes even matter for [FourYear University] and for what I'm doing. Those are all like the nursing credits, which I'm not in nursing. So, it wasn't again, it wasn't really focused on like the future."

However, despite taking courses they did not need at FourYear University, Amelia also justified it by recognizing that the advisors had large student caseloads. In discussing their two-year institution advisors, Amelia said:

> They were okay. I knew they had a lot of students to like get through… I think it would have helped if they did take a little bit more time to be like, okay, if you're actually wanting to do this, this is what you're going to actually take for it to transfer instead of just like focusing on what the two-year school needs.

Amelia continued with this discussion, saying that they didn't feel recognized as a transfer student, and when recommending courses, the advisors did not consider their plans to transfer. Amelia continued:

> I wish that my old advisors kind of took more care in like the transfer process, because I would tell them I'm a transfer. I'm a transfer, and they'd be like, oh cool! And then they would just do the bare minimum what they needed to do for me to get my associates at their institution and they didn't really look forward and what I would need [at FourYear University].

Emma also shared that they felt rushed in their advising meetings at their two-year institution while acknowledging the lack of employees that the institution had. Specifically, Emma said:

> My advisor was my biology professor. So, it did feel like she definitely tried to like rush your advising because she still had lecture, she still had lab, student hours, other people to advise. So, it just felt very rushed and like not really cared for… they're very short staffed over there, and most of the faculty are part time. They're not full time. So, they generally don't care to teach.

Lastly, Oliver also pointed out their overworked two-year institution advisor. When reflecting on how they selected their courses, Oliver said: "[I took] just the recommended classes. And what sounded best cause I had you know, I didn't have the best guidance counselor and I really didn't know what to pick." Oliver had continued to discuss how their advisor had other things to do and, in their advising meetings, would not provide support. Oliver said:

> … but they just have teachers that don't know jack about anything and I mean, she was an amazing person, but she didn't have a clue about anything, and every

> single time, I had to go for an advising appointment. She would go, I have no idea, but I can, you know, point you in the right direction.

Again, Oliver quickly said that they liked their advisor as a person but also recognized their faults as a support for transferring. Oliver thought that they were doing fine and making progress until after the fact upon successfully transferring. Oliver thought their advisor could have been better in providing more transparency. Specifically, Oliver said:

> I think that [TwoYear Technical College] specifically could have a lot better advising in general… It's like you know, I felt secure about what I was doing until I transferred and I think my advisor should have been a lot better in that respect.

Lastly, Oliver continued to discuss two-year institution advising overall and continued not to fault the advisors themselves. Oliver said:

> … trusting whatever someone that says… They don't know what they're talking about because there's too many students. It's a community college, I mean… I put too much trust in it myself, I mean, at the end of the day. I don't blame them that much because I know it's a community college, and they're definitely not getting paid what they deserve in the first place, and they're definitely stretched way too thin. Otherwise, they wouldn't have some random human sexuality teacher be my advisor, you know I felt bad for every time.

It's important to note that while Olivia, Amelia, Emma, Noah, and Oliver all described poor advising experiences, Sophia Clark, Liam, and Joyce did not share any notable experiences from their advisors. Joyce shared: "My advisor was fairly helpful. I don't

think he led me astray terribly." The participants either had strong emotions based on experiences with their two-year institution advisor or did not feel it significantly contributed one way or another.

Participants acknowledged a general disadvantage of being a transfer student, along with the confusing processes, incidents of misinformation, and poor advising experiences. The following section shares the participant's comments about what it was like to be a transfer student.

Transfer Student Disadvantage

Comments were made by participants throughout their interviews about the meaning of being a transfer student in general. While not explicitly about navigating the credit transfer process, the experiences resulting from the overall transition were significant and essential in developing this theme. Sophia Clark began by referencing the transfer credit process and communication between the two-year institution and FourYear University. Sophia Clark said:

> But the lack of communication between [TwoYear Technical College] and [FourYear University], or perhaps even [FourYear University] and me, that is across the board, zeroes. They don't, [TwoYear Technical College] doesn't know the truth. I don't believe they understand. And [FourYear University] doesn't really care, and I don't think feels the need to care.

Sophia Clark discussed how the credit transfer process, while the sole focus of this study, is simply a fraction of the entire transfer process. Sophia Clark continued:

> … I think the transfer credit process is just a small cog in the wheel, in the entire machine. It's poor. It's a very poor way that they do it. And then, in general, the way that transfer students get treated by faculty on campus, by just things that you wouldn't even think about, even with housing, the food, the meal plans all this. Transfer students, the transfer credit process reflects how they feel about transfer students. Just terrible. It reflects they don't care about transfer students. They don't care about our comfort coming in. We're not as valuable as the freshmen… we're not lucrative. We're tossed away. It doesn't matter if were here or not like even like for things like for Welcome Week. We didn't even have like the tour of the campus, or like the Welcome Week leaders, or any of that… they'll set up for, like the new students coming in, nope, not for us. And that from the transfer credit process all the way through, [FourYear University] does not care.

Sophia Clark emphasized that as a transfer student, they felt the university did not care for their success.

Amelia and Liam felt their success was not cared for from their two-year institution's perspective. Both participants felt the focus was on fulfilling associate degree requirements instead of ensuring a successful transfer. Amelia mentioned this before when discussing how they did not feel acknowledged in two-year advising meetings. Amelia added: "I think that [TwoYear Technical College] are more focused on me, just fulfilling my associates of science degree instead of like the idea of me transferring." Liam echoed this sentiment by saying: "The [TwoYear Technical College] programs did not seem to be set up for people trying to transfer and was instead solely

focused on completing internal requirements for [TwoYear Technical College].” Liam continued when elaborating on how they felt uncared for as a transfer student by saying:

> I think that the transfer aspect of community college is largely disregarded by the colleges themselves because it requires more communication and cooperation between separate institutions. The more universities can do to share resources and information between each other and the students, the better.

Liam highlighted that they felt a problem lies with both institutions and communication of resources, and with this, transfer students could be better supported.

Participants did not think their success was cared for and shared that they felt unprepared. Olivia said they thought they were missing a lot. Specifically, Olivia said: “I know a lot of people can be, you know, feel pushed back or whatever, because they did transfer like, I know, I definitely felt like I was missing a lot.” Olivia acknowledged the feelings of other transfer students in feeling behind and concurred that they felt the same way. Amelia also shared that they fell behind in terms of undergraduate experiences. Amelia said:

> I'm totally a junior, but like I feel very not as well like prepared or developed as other juniors cause, like, they're all doing their research already… and I'm like, damn like I want to be in internships. I wanna be in labs like, I wanna do that. But I don't really know what to do or like where to go or like, you know. So, like the social aspect of being a transfer student like it's very difficult. You're trying to assimilate yourself into a grade that has already been here for like three years. So

> that's it's difficult, and that you don't feel like you're on the same level as your peers… You have imposter syndrome, like times two.

Despite being a junior, Amelia felt behind and underprepared compared to other juniors. Noah also experienced a similar feeling. Noah said:

> It's just transferring is weird. That's really the biggest think is cause I never lived on campus and now I commute and I'm just like there. I don't know cause all the Bridge students all know each other. But I was also at [TwoYear Technical College], and I don't know any of them. It's just weird.

Noah compared themself to FourYear University's Bridge program students since Noah transferred from the same two-year institution that the Bridge program students attend during their first year. Despite being at the same institution, Noah felt they had no connections to the students.

These continued negative experiences felt by participants led to a general distrust in institutional support and resources. As previously discussed, students expressed that they were not cared for and were not prepared. When asked for recommendations they would give to future students, participants recommended that future students do not trust anyone but themselves. Olivia specifically said: "Do not rely on advisors completely, because you need to definitely have just a lot of information yourself." Amelia also recommended to not rely on anyone else saying: "Advocate for yourself… be your own self advocate and like, do your own stuff. Don't rely on them to do it all for you." Oliver used their own experience and differentiated between the help they received at FourYear University and their poor advising experience at their two-year institution. Oliver said:

"Definitely check with the [four-year institution] before, and not trust anything anyone says at your [two-year] school." Emma also recommended that future students develop their own plans before advising meetings to ensure productive and helpful conversations. Emma said: "If you want to go to grad school, look at their prerequisites as early as you can. So, when you go into your advising appointments, you kind of like already have a game plan." Participants heavily recommended relying on something other than institutional resources due to their own experiences with the credit and transfer processes.

Theme Two Summary

The participants of this study shared experiences with confusing processes, receiving misinformation, poor advising support, and feeling disadvantaged as transfer students. These experiences caused participants to distrust institutional resources designed to provide support. Instead, they recommended that future students refrain from trusting these resources. This led to the second theme, "Situation and Support: Situation and Support: Distrust in Institutional Support and Resources." Each unique experience continued to characterize the situation participants encountered as they transitioned from their two-year institution to FourYear University. Furthermore, they identified which support systems they found not helpful to their transition. The following section details the final theme that emerged in this study.

Theme Three: Support, Self, and Strategies: Importance of Self and Relationships in Decision-Making while Using Rationalization as a Coping Mechanism

As a result of the distrust in institutional support, participants identified their abilities and different resources in navigating the credit transfer process instead.

Specifically, participants showed ownership and assertiveness when making decisions related to the credit transfer process. They also cited relationships with peers and family as serving as additional resources. While participants showed distrust in institutional support, they remained reliant on technological resources, acknowledging the work they put in themselves while using technological resources. Finally, despite the distrust and negative experiences, participants showed rationalization as a coping mechanism and strategy in progressing with their undergraduate experiences.

Ownership and Assertiveness

Participants often cited that they felt they needed to do the work to ensure they succeeded in the credit transfer process instead of relying on institutional support. As previously discussed, often when students advocated for not relying on the institution, they offered instead that you should rely on yourself. This same attitude of ownership and assertiveness was seen in participants during other parts of the interview.

When Sophia Clark spoke about their continued lack of understanding of why their credits transferred the way they did, they said: “There is no resource that could give me that information. It feels at will very much.” Sophia Clark thought finding any information they needed was up to them. Oliver also expressed a similar sentiment about visiting multiple offices to obtain information. Oliver said: “… lot of times, me running down to the this department or this department and this department.” Oliver also noted that while their four-year advising experience was “kind of” helpful, they found it not as useful because they had been accustomed to finding information by themselves for a while. Oliver said:

> … my [FourYear University] advisor was kind of helpful. Not really. I mean, I just kinda already understood at that point. I guess cause I didn't really have a lot of interactions with my advisor, because I was already pretty familiar with doing everything on my own, because you kind of do at [TwoYear Technical College], you know.

When asked to provide recommendations to future students, Oliver also said: "Find out what those resources are for yourself." Oliver strongly emphasized doing things for themselves due to their overall experience.

Olivia was also adamant about recommending future students do the work themselves, and Olivia shared that they did everything by themselves as well. Apart from the few extra elective courses, Olivia felt good about how their credits transferred to FourYear University. Just as Olivia was comparing degree programs, as discussed previously, Olivia was continuously checking their credits against the biological sciences degree program. Olivia said: "… what I did was I made sure I was always looking at the biology degree requirements for [FourYear University] that way… I made sure everything would transfer that helped me a ton." When asked if any notable resources helped Olivia, they said: "I did do a lot of the work myself." Olivia did credit their sister, which is discussed in the next session, but Olivia was proud of the work that they did themselves as well. Olivia compared what they did to what they know of other transfer student experiences, saying:

> I definitely feel good that I did that work, because… I know some people that transfer too, and they're like, oh, these classes didn't transfer, you know. It sucks

> like my brother transferred to a northern college, though, and a lot of his classes did not transfer. And he, you know, was very upset about that. So, I'm very glad that I did try and keep up with everything.

As mentioned previously, Olivia cautioned against relying on advisors entirely. However, Olivia did make a point to encourage assertiveness when interacting with advisors by saying: “and also maybe get opinions from multiple advisors. If you do talk to them at [FourYear University]. Just make sure 100% double-check that, you know. So little stuff like what happened to me won't happen.” While participants distrusted institutional support, such as advisors, others, like Olivia, commented occasionally about their assertiveness when needing information. Joyce considered themselves “lucky” that they were willing to make this effort and said: “And luckily I was very willing to just go in there and bother people to find out the way to do it.” Amelia also needed to contact an institutional office to request a course count towards their degree requirement. Amelia shared:

> I think the American government [course] actually did [count] I forgot what it’s called. But it’s the new law that they have… you have to have a requirement filled for like an American government class, I did email them. Yeah, I emailed them and I was like hey, can this count? They’re like, yeah, sure. So, it did count for that.

Amelia found that they needed to reach out themselves to request a course to count towards their degree that otherwise would not have been counted.

Liam also emphasized talking to FourYear University advisors before transferring as it was something other than what they did. Liam said:

> … actually talk to the advisors [at FourYear University] before, which is not something that I did like I only reached out to advisors and like to actual people at [FourYear University] once I came there. I wasn't very proactive about that. So, I would recommend doing that for sure. I think that would help avoid most of the big mistakes.

In this remark, Liam encourages proactiveness in the credit transfer process, again emphasizing student ownership and assertiveness.

As mentioned, Emma also encouraged proactiveness when attending two-year advising appointments by coming prepared with a plan. Amelia echoed this by saying:

> [two-year advising] kind of like it did kind of rely on, like the student to be aware of what they kind of needed to transfer. But whenever you're 18, you don't really know where you want to go exactly yet.

While Amelia recognized that there's a level of ownership involved in the credit transfer process, it can be challenging to make such permanent decisions at a young age.

Participants emphasized ownership and assertiveness in ensuring that credits transfer appropriately during the transfer process. While institutional support seemed to fail participants, and instead, they claimed ownership over their decisions, they consistently referred to technology as a means of support.

Technology. What could be seen as institutional support, technology played an essential role in participants' understanding of the credit transfer process. However,

participants assumed ownership over utilizing the technology provided. Frequently, participants named a website that could convert courses from the institution they were completed at to courses at the intended transfer institution. For example, Liam, emphasizing his ownership of using the tool, said: **"**I went to the transfer website to look up the equivalent courses." Olivia also described how they used a similar website. Olivia said:

> There's the transfer website. That's very helpful. That was very helpful for me. I would just put in the course and then see what it would transfer as into [FourYear University] to make sure like the exact class listed on the degree, like the degree plan list.

The degree plan list that Olivia referred to also came from Olivia using technology. Olivia highlighted the efforts they made and said: "I would go just online and search up… [FourYear University] degree. And then it gives you all the classes that are required for that major." Amelia also referenced the same site that both Liam and Olivia used. Amelia said: "… like the whole thing where you can, like, put in one credit from one institution, and then you can see how it transfers to [FourYear University]. So that was really helpful." Joyce referenced a few technological resources. Joyce first referred to the general transfer portal checklist: "Yeah, the transfer portal with the checklist and all that was very helpful." Next, Joyce also named the site that Liam, Olivia, and Amelia used. Joyce said: "… it had this little spot where you could put in class codes from your schools… and it would find the correlating class to show you the transfer." Lastly, Oliver

also utilized the credit converter site. However, Oliver did not find it until they were accepted to FourYear University and began their transfer. Oliver shared:

> But I eventually found the tool that helped me, I understood how my classes were gonna look like before I got to [FourYear University] because I found the transfer tool that they have on the website after I left [TwoYear Technical College].

This website was the most referred-to technological tool that students used. Students took ownership of using it, citing that they would put their courses in themselves. Only Amelia had mentioned that an advisor provided the link to the website.

Another commonly referred to technological resource was a degree checklist tool. Both participants' sending institutions and FourYear University had their version of a degree checklist software. Joyce and Oliver expressly referred to their two-year institution's software as useful. Joyce said: "I had an advisor who kinda did things, but it was mostly through the [TwoYear Technical College online system]. But it would just sort of tell you what categories I filled up." Joyce kept up with their requirements using this system. Oliver also commented on their system, saying:

> … just specifically they had a like checklist for your associate degree, and then you could go like, like… it would say, you need these… The only difference is that it would show you all the classes that you could click, and that's how I planned my entire college career.

However, as the participants transitioned to FourYear University, they noted that the software helped them understand their transferred credits and degree requirements. Mid-interview Sophia Clark said: "I'm gonna actually bring up my [FourYear University

degree tool].” Sophia Clark said this while attempting to explain how their credits transferred and which courses specifically were counting as elective credits. Liam also referenced the same program: “… the program that [FourYear University] has, I thought was very useful.” Noah shared that the FourYear University degree tool was difficult to understand, but with the help of their FourYear University advisor they eventually made sense of it. Noah said: “[FourYear University degree tool] helped eventually. It took a few meetings for me to understand it. But eventually [my FourYear University advisor] explained everything to me, and I was like, Okay, I know what’s going on now.” Lastly, Amelia also shared their thought on the same tool:

> Once I got access to that like because they really don't like map it out for you before you're a student like they don't give you like before you are enrolled in [FourYear University]. They don't go, here's what every class you will need before you get in here. It's like, okay. Now that you're in here, and you know you've done whatever, here's every single class like listed out. But they don't do that beforehand, so it's very difficult to know what I'll actually need for my whole degree.

Whereas Olivia had searched for degree requirements using an internet search, Amelia relied on this tool to see degree requirements. Amelia shared that this tool would benefit those anticipating transferring to FourYear University instead of receiving access after transferring.

While participants lacked trust in what they had been told, they instead trusted technological resources they could use themselves. The final support mentioned by participants was the support received by peers and family.

Peers and Family

Mentioned briefly by some participants was the influential support of peers and family. Both peers and family served as a form of support during participants' transitions as they often guided students' decision-making. Sophia Clark pointed out that the selection of their degree program was influenced by it having been a popular choice for students with a similar goal of medical school. Sophia Clark said: "… even though it is a hard major, it is the most common one. The path has been trekked multiple times. If I want advice from anyone, I can get it more readily." Sophia recognized that by selecting this degree program, they would have more opportunities to seek advice from other students. Joyce also relied on additional students, especially in the selection of coursework. Joyce said:

> And my roommates. But that's because my roommate has been a friend of mine for along time, and he went to [FourYear University] immediately… I think he knew more about the classes, and he was just sort of like you don't need to have these ones, you don't need to take these ones, give or take, so on.

Emma utilized their boyfriend's past course schedules in planning their classes and attributes their success to ensuring successful credit transfer to the help received from their boyfriend. Emma said: "I had a general idea of what classes I needed because my boyfriend is getting the same degree as me. So I kind of just figured take his, tweak it for

[my graduate school goal] and go from there." Olivia also largely credits their sister for their success in having credits transferred successfully. Olivia said:

> My sister helped me because, like I said, she went to [FourYear University]. If it wasn't for her, I probably definitely would not have known about looking at the degree cause she showed me, you know, you can search up every degree and it'll show you exactly what you need before you can graduate, so it'll show you exactly what classes you need. Cause her main thing was, don't go take classes and waste your time, because then they won't transfer… if it wasn't for her help then I definitely would have struggled.

Olivia's sister also encouraged Olivia to do much of the work themselves. As mentioned previously, Olivia shared recommendations to not rely on advisors. Olivia also said:

> … and my sister just, you know, helped me, you know, see like this is what you should definitely be following, you know. Looking will help you a lot. She literally basically told me don't rely on the advisors. You have to make sure you're doing it yourself, cause they will, of course they're busy, but you know you have to make sure you put in that work as well, just to check off the boxes that you know your advisers can miss. Just keep up with it yourself. That definitely helped a lot.

Olivia's sister also cautioned Olivia not to trust the advising resources at their institutions. Participants recognized when peers and family could serve as a support resource in their transition. Participants relied on rationalization when other forms of

support, such as institutional resources, did not serve them the way they expected or when facing previously mentioned negative implications or emotional frustration.

Rationalization

Overall, when reflecting on their experiences with the credit transfer process and their transition to FourYear University, participants rationalized by allowing grace to the institutions they felt "messed up." Also, despite the emotional frustration, participants shared how they moved forward with their undergraduate careers using rationalization and justification.

When Sophia Clark learned that they would not graduate as anticipated, they shared: "Is it not what I planned? Sure. But this, this is right now, the path. It's not the plan. It's the path." While acknowledging that it was not their anticipated goal, Sophia Clark accepted their new "path," as they called it. Joyce used rationalization several times throughout their interview. First, Joyce said: "But, I don't know, what's done is done." In a version of acceptance, Joyce expressed that nothing further could be done about their credits that did not apply to their degree. In reference to the same topic, Joyce said: "… that's fair enough that it didn't transfer. That's all right." Joyce viewed their inapplicable credits as fair and justified it by reassuring themselves that it was all right. Joyce emphasized fairness and said: "… so, it's fair enough, but it just causes a pain." With this last statement, Joyce shared that although they perceived it as fair, it frustrated them. Liam shared something similar: "But I don't think that's really gonna be like a huge problem. I was like expecting that going in, so I'm not worried about that, but not having any free electives is definitely annoying." While expected for Liam, it was annoying.

Elaborating on why it was expected, Liam shares that misaligned credits should have been expected as a transfer student because the transfer process is "muddy." However, Liam hoped they would be an exception. Liam said: "… but I also did kind of expect it going in just because I knew that like transfers were just often muddy. So, I thought I probably wouldn't be an exception." When reflecting on their inability to transfer into the nursing program, Olivia shared: "But I think I made a good decision. It just maybe wasn't meant to be. Because I do like that I stuck to biology." With this statement, Olivia reassures themselves that they enjoy biology and that being unable to transfer into nursing was "maybe" meant to be. Amelia, who had cried after being told of their misaligned credits, also reassured themselves. Amelia said:

> But I mean, I've put it past me now. Like, I can only look forward and like work on what I have to, and I think that once my new advisor, like, mapped out everything, and I only saw that I would only be a semester late, I was like, okay, I was like, I'll be okay, like it'll be fine.

Amelia made sure to say that they would be moving on and looking forward. Noah similarly tried to be optimistic and justify retaking an introductory biology course. As previously discussed, Noah took a biology course at their two-year institution that did not count for the biological sciences major at FourYear University. In response to retaking the course, Noah said: "It's nice now, being in [introductory biology course] right now, because I know 75, 80% of the material already. But I'd also like to be building towards my degree, so." While Noah shares that it's helpful to have already known the material, Noah would have liked to have been working towards other degree requirements. Noah

also said: “It’s just [my credits] kinda just either they did or they didn’t [transfer]. I was just like dang that sucks. Guess I gotta make up that now.” Like Amelia, Noah chose to move forward despite having credits that did not transfer. Lastly, Oliver also justified the excess elective credits by saying: “Yeah, I mean, [the extra courses taken] is great information I got. I don’t know how long I’ll remember it for.” While they were unnecessary courses, Oliver found a silver lining in that they could provide additional knowledge, though they added they weren’t sure how long that would hold on to that knowledge.

The participants frequently added qualifiers to their statements about negative implications or negative emotions they were feeling. Participants spoke as if what they had experienced or felt should have been expected or was fair enough simply because they transferred.

Theme Three Summary

The participants in this study expressed the importance of taking ownership and being assertive with their decisions in the credit transfer process. They found technological resources useful as they trusted them and named family and peers as trusted support. As a strategy to cope with the transition, participants found rationalization, attempting to justify their experiences and emotions. This led to the creation of the third and final theme, Support, Self, and Strategies: Importance of Self and Relationships in Decision-Making with Rationalization as a Coping Mechanism. In this theme, participants recognized more useful mechanisms of support, highlighted their self-

importance, and identified a valuable strategy to their transition and experiences with the credit transfer process.

Conclusion

The participants in this study shared their experiences surrounding the credit transfer process and attempted to make sense of it. The three themes that emerged from their interviews were 1) negative implications on four-year degree progress and emotional effects, 2) distrust in institutional support and resources, and 3) the importance of self and relationships in decision-making while using rationalization as a coping mechanism. Each theme was connected to a 4 S component of Schlossberg's Transition Theory (Anderson et al., 2012) and described in detail in this chapter using participant narratives. In the next chapter, these themes are further discussed and connected to existing literature.

CHAPTER FIVE

DISCUSSION

Introduction

The overall research question that this study sought to address was: What are vertical transfer students' experiences with the academic credit transfer process? There were also two sub questions with the first sub question: How do vertical transfer students make sense of the academic credit transfer process when transferring course credits to a four-year institution? The second sub question was: What, if any, support structures facilitated students' understanding or awareness of transfer credit policies? This chapter further discusses the findings presented in Chapter Four and relates them to the existing literature surrounding vertical transfer students and the academic credit transfer process. This chapter also discusses the findings through the lens of the theoretical framework used in this study. This chapter concludes with a discussion of the study's delimitations, limitations, and implications for higher education administrators, practitioners, and future research.

Findings Related to Literature

This section utilizes the literature presented in Chapter Two to align the findings from this study with existing findings. Each theme is discussed as it relates to the literature on vertical transfer students and the transfer credit process.

Theme One

Theme one, Situation: Negative Implications on Four-Year Degree Progress and Emotional Effects, discussed in Chapter Four, was illuminated by the participants' overall negative experiences with the credit transfer process. Participants' experiences with credit inapplicability were most notable, resulting in excess electives. Participants shared that while their credits may have transferred, they did not always apply to their degree program requirements, as findings have shown previously (Bailey et al., 2015; Bailey et al., 2017; Hodara et al., 2017; Hood et al., 2009; Lukszo & Hayes, 2020; Miller, 2013; Xu et al., 2018). As a result of degree inapplicability, participants ended up with large amounts of excess credits aligning with prior findings comparing total accrued credits between transfer and non-transfer students (Bailey et al., 2017; Schudde et al., 2022; West, 2015). Most participants shared that knowing the effects of their transferred credits on their current degree program would have changed their course selection prior to transferring, emphasizing the recommendation made by Bailey et al. (2017) that students be provided clarity ahead of time on how their completed two-year institution credits can apply to their intended four-year degree program.

As Heileman et al. (2018) identified, STEM curricula contain sequential ordering of coursework. Participants in this study shared that they needed to take courses they believed should have been taken in prior academic years because of the effects of their transferred coursework. Specifically, participants needed introductory chemistry, biology, and often math courses because of missing prerequisites. Student experiences of missing prerequisites resulting in increased time to degree attainment (Hodara et al., 2017) were

highlighted in this study. Hodara et al. (2017) listed missing prerequisites as a reason why, despite a guaranteed junior status through ADT programs, two years might not be left to complete, as Oliver discovered with their experience. The need to revisit prerequisites and completion of most, if not all, general education and elective requirements led to participant's STEM-heavy schedules and the need to "catch up," as also found in Packard et al. (2012). Joyce and Liam identified a general education requirement at FourYear University that they could not complete at their two-year institution. The inapplicability of general education requirements, despite completing the state's general education core, was also highlighted in the literature (Bailey et al., 2017). While the research site state has a transferrable core of lower-division coursework, this specific FourYear University general education requirement could not be completed elsewhere, leaving Joyce and Liam confused. Lastly, because of credit inapplicability and misalignment, there were feelings of frustration among participants in this study. While not a significant theme highlighted by Packard et al. (2012), upset emotions were also identified when participants spoke of their credit inapplicability.

As discussed by the quantitative literature, a transferable core of lower-division courses and a statewide guaranteed transfer of an associate degree, both of which the research site state has implemented, have been seen to affect time-to-degree completion (Boatman & Soliz, 2018; Hodara & Rodriguez, 2013; Kopko & Crosta, 2016; Schudde et al., 2022). The specific cause is unclear, but it is important to note that six participants indicated they had an anticipated graduation date later than they intended. A few participants were actively working or had worked to make up coursework to remedy their

timeline. The other two participants shared that they spent time ensuring their completed credits would transfer appropriately to their intended degree program, so much so that this process influenced their decisions surrounding their intended major and institution, a finding also found in Wickersham (2020).

Theme Two

Theme two, Situation and Support: Situation and Support: Distrust in Institutional Support and Resources, emerged from participants' primarily negative experiences with resources designed to support the transfer process. Participants spoke of the transfer credit experience as generally confusing and unclear, which is emphasized in most qualitative literature surrounding transfer policies (Bailey et al., 2017; Bustillos, 2017; Grote et al., 2020; Hodara et al., 2017; Holland Zahner, 2022; Schudde et al., 2020; Schudde et al., 2021). Participants shared moments where they received misinformation or felt information was omitted, contributing to their confusion. Sources of misinformation stemmed from institutional employees such as faculty advisors and admissions staff. Inadequate advising and progress monitoring have been discussed in prior literature as factors in vertical transfer success. Just as policies are difficult for students to understand, they are also difficult for advisors (Bailey et al., 2017; Hodara et al., 2017), which participants in this study occasionally acknowledged. Much like what participants in this study experienced, misinformation from advising has also been seen to impact academic adjustment (Laanan et al., 2010).

While intrusive advising helped students in a transfer-specific program, as Grote et al. (2022) found, the lack of this resource for all other aspiring transfer students could

be seen in how they could not clearly explain the transfer credit process. The participants in this study similarly lacked intrusive advising, as they were not part of FourYear University's Bridge program, and struggled to understand the transfer credit process, suggesting a more detailed advising model could have benefited their experiences.

Participants also noted several times that they did not feel cared for as transfer students at their two-year institutions, indicating a lack of institutional commitment to the transfer function, the adverse effects of which have also been discussed in the literature (Ornelas & Solorzano, 2004).

Theme Three

The final theme, "Support, Self, and Strategies: Importance of Self and Relationships in Decision-Making while Using Rationalization as a Coping Mechanism," emerged as participants clearly described the impact of their own decisions and actions on their transfer credit experience. They identified how peers and family supported them and how their utilization of technology contributed to their success, both of which have been identified as helpful support structures (Hood et al., 2009; Lukszo & Hayes, 2020). When things did not go as planned, participants looked to rationalization to justify their negative experiences and move forward.

As participants navigated their experiences at their two-year institution and FourYear University, they developed transfer student capital (Laanan et al., 2010). Participants utilized the information they learned for themselves through experiences, both positive and negative, with institutional resources, their family, peers, and technology to navigate the credit transfer process. Frequently, participants found that it

was solely up to them to locate resources and information. Participants attributed this to the lack of guidance they felt they received from institutional support, as presented in the second theme. However, participants consistently justified why they might not have received strong institutional support, noting that it was visible that their two-year institutional advisors were overworked, busy, and not paid enough. Indeed, community college advisors are often overwhelmed and find it challenging to know all transfer policies to support transfer students successfully (Bailey et al., 2017; Grote et al., 2020), so much so that they often negatively perceive transfer (Chase, 2016).

In alignment with the ownership and responsibility participants took during the transfer credit process, a few participants noted that having their plans in place prior to advising meetings was helpful, just as research has found early identification of a major can better help eliminate inapplicable credits (Hodara et al., 2017). Transfer students with higher intrinsic motivation and the ability to identify career and degree aspirations earlier experienced positive academic (Laanan, 2007; Wang, 2009; Zhai & Newcomb, 2000) and social (Lannan, 2007) adjustment. Participants in this study showed high intrinsic motivation as seven participants identified early goals of a baccalaureate degree, and all students described ways in which they sought information to ensure their success.

The findings in this study were supported by existing literature as they relate to credit inapplicability, impacted degree timelines, unclear processes, receiving misinformation, transfer student barriers, student ownership, and transfer student capital. The following section discusses how the themes in this study could be viewed using Schlossberg's Transition Theory.

Findings Through Schlossberg's Transition Theory

Schlossberg's Transition Theory (Anderson et al., 2012) provided the theoretical framework for this study as it helped develop the research questions and the semi-structured interview guide and served as a framework throughout the data analysis process. The three themes developed from this study also aligned with a component of Schlossberg's 4 S System. As discussed previously in Chapter Two, the 4 S System details factors that influence an individual's ability to navigate a transition (Anderson et al., 2012).

The first theme of this study provided additional context to the situation that the participants experienced as part of their transition. As the first theme developed from the impacts on participants' degree progress and emotional well-being, these factors constituted the participants' situation, presenting unique challenges as they transitioned. While themes were common in the experiences participants had, each experience uniquely influenced the context of the transition participants navigated.

The second theme of this study contributed additional detail to participants' situation and their support. The unclear processes surrounding participants' experiences with the credit transfer process continued to develop their situation and influence how they responded. The support, or lack thereof, that they found in institutional resources also influenced the ways participants navigated their transition. It is essential to acknowledge that, while intentionally designed to be beneficial, support systems can negatively impact transitions (Anderson et al., 2012).

The third and final theme, emerging from participants' emphasis on their work, described additional components of participants' support, provided great insight into how they viewed themselves, and highlighted a strategy they used to navigate their transition. Participants provided details about their family and peers that contributed additional support layers. However, participants largely discussed the importance of their personal development, values, and work ethic put into their transition, which are components of oneself when analyzing factors that influence transitions. Lastly, participants' rationalization when reflecting on their experiences was a strategy to help cope with the transition.

Though initially intended for the psychology field in assisting adults with transitions, Schlossberg's Transition Theory (Anderson et al., 2012) provided significant value to this study. Using this theoretical framework, how exactly participants navigated the transfer credit process could be identified using Schlossberg's 4 S System. While participants each encountered unique experiences, their experiences could be viewed as one of the influencing factors of the 4 S System that impacted their abilities to navigate the transition of vertical transfer, specifically as they experienced the credit transfer process.

Delimitations

In this study, there were a few delimitations designed to structure this research study intentionally. First, inclusion criteria were set for this study to avoid significant differences across student experiences. By utilizing a single institution and specifying that participants had transferred from an in-state two-year institution, the potential for

varied experiences with transfer credit policies was omitted, as policies can vary significantly across states, as discussed in Chapter Two. A single department was also specified to avoid differences in student experiences with credit applicability to degree programs. Lastly, FourYear University's Bridge program students were omitted as they receive additional support structures unavailable to other vertical transfer students.

A second delimitation is that this study only provides students' perspectives and purposefully omits the experiences of university faculty and staff. Students and university employees may have varying perspectives of a single experience; however, it was important for this study to contribute the student voice to the existing body of literature. For this reason, university employee experiences were not included.

Lastly, the transfer credit process is a small fraction of the transfer experience. While there is a growing emphasis on understanding the entire transfer experience, this study focused specifically on experiences with the transfer credit process to provide depth, as the literature indicated it is a contributing barrier to vertical transfer student success.

Limitations

The first limitation of this study was the low participation rate and participant drop-out throughout the initial stages of recruitment. While three students had expressed interest in participating in an interview, two did not attend their scheduled interview or respond to attempts to reschedule. One student did not respond to emails to schedule the initial interview. As seen in the findings and discussed in this chapter, students experienced distrust in institutional resources. This could be a potential reason for the

lack of participation. Also, as participants shared how "what's done is done" after their successful transfer, students may not have seen the benefit of further discussing their experiences.

Representation for this study was also limited. This study sought to recruit students from two majors within a single department, but there was no representation from one of the majors, microbiology. Therefore, this study became limited because it only represents a single degree program at FourYear University. In addition, a monetary gift was provided to students to incentivize their participation. With an incentive, participation may be biased and lead to an inaccurate representation of the credit transfer experience.

Emerging Transfer Policies and Research

While conducting this study, new literature, initiatives, and legislation concerning transfer students have continued to be published. There is national attention from the U.S. Department of Education on how to support community college transfer students. In the fall of 2023, the department held a summit on initiatives and commitments to improving transfer as part of the "Raise the Bar: Attaining College Excellence and Equity Initiative." The research site's Bridge program for transfer students was included in a published spotlight by the department for its successful partnership.

Initiatives are also ongoing at the research site state level. In August of 2021, the state Commission on Higher Education (CHE) began an ad hoc state transfer task force that, as of the fall of 2023, has established a state Transfer and Articulation Action Plan and received institutional signatures across the state for a statement of commitment to

develop a statewide transfer agreement. The state Transfer and Articulation Action Plan consists of six recommendations to maximize student success transfer success. These recommendations include: 1) appoint institutional transfer liaisons at each institution and promote regular statewide meetings, 2) develop a statewide data system, 3) organize a stakeholder group that reviews articulation resources, 4) require public and participating independent institutions to adequately inform students of transfer options and resources, 5) establish a reverse transfer plan, and 6) request state funding to establish transfer scholarships and awareness ([Redacted] State Transfer Task Force, 2023). Commitment to these six recommendations was reinforced by the signing of the statement of commitment.

In January of 2024, the state public research universities also signed a statewide transfer agreement with the state technical college system to promote seamless transfer of academic credits. Most notably related to the findings of this study is the establishment of 30 or more credit hours that are guaranteed to be accepted and applicable to the transfer student's major. The agreement also established a reverse transfer credit option, data sharing across institutions, and commitment to ongoing collaboration.

At the research site, FourYear University, a policy existed where any course completed at a nonbaccalaureate-degree granting institution could be used as an equivalent or substitute for any 3000- or 4000-level FourYear University course. This policy specifically impacted vertical transfer students' progress in obtaining their baccalaureate degree. However, this policy was eliminated in the 2022-2023 academic

year and there are continued discussions with university faculty and staff on how the removal of this policy impacts advising practices.

Implications and Recommendations

This section discusses the implications for policy, practice, and research. The discussed implications for policy and practice inform higher education policymakers, administrators, faculty, and staff of potential consequences highlighted by the findings of this study. Recommendations follow the discussion of implications to provide practical solutions for higher education institutions looking to support vertical transfer students better. As this study highlighted areas where further research could contribute additional literature, implications for research are also discussed.

Implications and Recommendations for Policy and Practice

As evidenced by the first theme discussed, due to the transfer credit process, students experienced negative consequences, including credit inapplicability and misalignment. Several participants discussed that the alignment of their credits and the impact on their timeline to degree completion influenced the selection of their major and intended institution. As a result, undergraduate recruitment programs should consider the impact of credit applicability on students' decisions when recruiting vertical transfer students. Institutional employees should tailor recruitment efforts to the individual instead of mass recruitment efforts so that vertical transfer students receive individualized support and can ensure their credit applicability.

In the second theme, participants told stories of times they received misinformation, negatively impacting their experience. Participants also discussed

general confusion surrounding transfer policies. Misinformation and confusion can ultimately affect the retention rates of vertical transfer students. Participants were frustrated by their negative experiences and felt disregarded by FourYear University and their two-year institutions as transfer students. Moments of misinformation and confusing processes can deter students from completing their undergraduate careers, causing lower institutional retention rates and degree completion rates. As such, institutional administrators, specifically two-year institutional administrators, should devote more effort towards training faculty and staff who serve as informational resources for students.

Participants also notably recognized that their two-year institution advisors were overworked and underpaid. When students can make these observations, two-year higher education administrators should devote additional resources to support their employees to avoid the negative impacts that affect students because of poorly compensated employees.

The general confusion surrounding transfer policies that participants discussed also has the potential to lead to the underutilization of articulation agreements. Because of this confusion, students do not utilize articulation agreements in their original intended ways. Therefore, the resources and time spent designing articulation agreements and transfer credit policies may be unproductive. Policy writers and higher education administrators should see that the intentionality behind the design of articulation agreements and transfer credit policies does not fall short of implementation. As the participants discussed, the mere existence of such agreements is not enough. Educational

administrators should clarify the purpose and the steps required to utilize transfer credit agreements so that students and the services that facilitate understanding these agreements are entirely informed. Otherwise, transfer credit articulation agreements and policies initially intended to benefit students could be considered useless by students. As evidenced in the third theme, students relied heavily on technological resources and showed trust in these resources. Building and continuously improving the existing technological resources can benefit students and facilitate their understanding as they navigate transfer credit policies.

Lastly, participants' distrust of institutional resources could unintentionally harm their success. While students are ultimately responsible for their success, institutions are responsible for facilitating their success. When vertical transfer students experience misinformation, confusing processes, and negative consequences, their distrust in the resources that led them to that point can cause further distrust in any institutional resource moving forward.

This study intended to highlight students' voices and allow participants to share their experiences. However, participation was low, which could be an effect of participants' distrust. Since vertical transfer students already distrust institutional resources, their continued distrust may cause them to ignore opportunities or resources that could better facilitate their success. Institutions need a more transfer-receptive culture with strong leadership along with better faculty and staff training. A transfer-receptive culture and strong leadership support vertical transfer students and provide attention to the resources that further facilitate vertical transfer student support.

Implications and Recommendations for Research

This study was intentionally chosen as a qualitative study to add to the limited research on vertical transfer students' experiences with the transfer credit process. Studies highlighting students' voices are limited in the existing research, and this study sought to remedy that. As a qualitative study, the findings add context to the impact of the transfer credit process. Specifically, literature has shown that articulation agreements can be successful using quantitative measures; however, as evidenced by this study, confusion and emotional distress among students remain.

Furthermore, as discussed in Chapter Two, credit applicability to degree programs has been challenging to measure with quantitative measures. However, as illuminated by this study, most participants strongly felt and were willing to demonstrate how their transferred credits did not apply to their degree program requirements. Allowing students to share their experiences provides greater insight into what policies are or are not working and what institutions can do to support students better and ultimately increase degree attainment. This study argues that, with qualitative research, transfer credit policies and their impacts can be more fully understood.

Along with reporting that they felt uncared for, participants said they felt underprepared and compared their experiences to those of other undergraduate students, specifically transfer students who had participated in FourYear University's Bridge program. Qualitative research could explore this area further and involve students of the Bridge program to investigate if Bridge students indeed feel more prepared. If so, what resources facilitated their preparedness, and are they available to all vertical transfer

students regardless of participation in the Bridge program? Comparing the experiences of Bridge and non-Bridge students can better illuminate the areas that fall short of supporting non-Bridge students.

While participants reported confusion and a general sense of unpreparedness compared to other FourYear University students, some participants credited family members or peers they intimately knew for their successes. Another area for future research could be the experiences of first-generation vertical transfer students or students who are the first in their families to attend college. First-generation students may not have the support systems that participants in this study reported having. This study did not collect first-generation data, but future studies could intentionally select participants who identify as first-generation students to investigate further how first-generation vertical transfer students identify their support structures, if any, and the impact on their experiences with the transfer credit process.

The impact of vertical transfer students' experiences with the transfer credit process on their financial well-being is another area for future research. Participants in this study cited wasted time that they could have used to take different courses as the courses they did complete did not always count towards their degree requirements. Unutilized coursework could increase the financial burden that vertical transfer students experience. Participants also discussed their experiences with delayed graduation timelines and additional, unexpected semesters, which could also increase the financial burden of these students. The financial impact of vertically transferring is an area where additional research could contribute greatly.

Lastly, participants frequently reflected on conversations with advisors at their two-year institution and FourYear University. This study did not include two-year institution or FourYear University faculty and staff in the participant selection. Additional qualitative research could incorporate both students and advisors to investigate further the areas of misinformation that participants identified through interviews with both individuals and include observations of advising meetings.

Conclusion

This study contributed by adding the student voice to the transfer credit process. Literature has studied how transfer credit articulation agreements and policies impact transfer success. However, including students' perspectives on how they experience the transfer credit process can add significant context. Findings from this study align with previous research and support the need for the current initiatives in the research site state. Administrators should continue to implement transfer credit policies while also ensuring that student, staff, and faculty understanding of these policies is facilitated.

APPENDICIES

Appendix A

IRB Approval Letter

To: Tony W Cawthon
Re: [Redacted] IRB Number: IRB2023-0489
Review Level: Exempt
Review Category: 2
Determination Date From: 14-Jul-2023
Determination Date To: 31-Jul-2026
Funding Sponsor: N/A
Project Title: Experiences of Vertical Transfer Students in the Department of Biological Sciences with the Transfer Credit Process: A Phenomenological Study

The [Redacted] University IRB office determined that the proposed activities involving human participants meet the criteria for Exempt level review under 45 CFR 46.104(d). The Exempt determination is granted for the certification period indicated above.

Principal Investigator (PI) Responsibilities: The PI assumes the responsibilities for the protection of human subjects as outlined in the Principal Investigator's Responsibilities guidance.

Non-[Redacted] Affiliated Collaborators: The Exempt determination only covers [Redacted] affiliated personnel on the study. External collaborators have to consult with their respective institution's IRB office to determine what is required for their role on the project. [Redacted] IRB office does not enter into an IRB Authorization Agreement (reliance agreement) for Exempt level reviews.

Modifications: An Amendment is required for substantial changes to the study. Substantial changes are modifications that may affect the Exempt determination (i.e., changing from Exempt to Expedited or Full Board review level, changing exempt category) or that may change the focus of the study, such as a change in hypothesis or study design. All changes must be reviewed by the IRB office prior to implementation. Instructions on how to submit an Amendment is available on the IRB webpage.

PI or Essential Study Personnel Changes: For Exempt determinations, submit an amendment ONLY if the PI changes or if there is a change to an essential study team member. An essential team member would be an individual required to be on the study team for their expertise or certification (i.e., health expert, mental health counselor). Students or other non-essential study personnel changes DO NOT have to be reported to the IRB office.

Reportable Incidents: Notify the IRB office within three (3) business days if there are any unanticipated problems involving risk to subjects, complications, adverse events,

complaints from research participants and/or incidents of non-compliance with the IRB approved protocol. Incidents may be reported through the IRB online submission system using the Reportable Incidents eform or by contacting the IRB office. Review the IRB policies webpage for more information.

Closing IRB Record: Submit a Progress Report to close the IRB record. An IRB record may be closed when all research activities are completed. Research activities include, but are not limited to: enrolling new participants; interaction with participants (online or in-person); collecting prospective data, including de-identified data through a survey; obtaining, accessing, and/or generating identifiable private information about a living person.

New IRB Application: A new Exempt application is required if the research activities continue for more than 3 years after the initial determination. Exempt determinations may not be renewed or extended and are valid for 3 years only.

Non-[Redacted] Affiliated Sites: A site letter is required for off-campus non-public sites. Refer to the guidance on research site/permission letters for more information. Submit the Amendment eform to add additional sites to the study.

International Research: [Redacted] determination is based on U.S. human subjects protections regulations and [Redacted] University human subjects protection policies. Researchers should become familiar with all pertinent information about local human subjects protection regulations and requirements when conducting research internationally. We encourage you to discuss any possible human subjects research requirements that are specific to your research site with your local contacts, to comply with those requirements, and to inform [Redacted] IRB office of those requirements. Review the FAQs for more information about international research.

Contact Information: Please contact the IRB office at IRB@[Redacted].edu or visit our webpage if you have questions.

[Redacted] University's IRB is committed to facilitating ethical research and protecting the rights of human subjects. All research involving human participants must maintain an ethically appropriate standard, which serves to protect the rights and welfare of the participants.

Institutional Review Board
Office of Research Compliance
[Redacted] University

IRB Number: IRB00000481
FWA Number: FWA00004497

Appendix B

Participant Recruitment Email

Dear Students,

My name is Laura Love, and I am currently a Ph.D. candidate in the Educational Leadership, Higher Education program with the College of Education at Clemson University. Prior to my current role at the University of South Carolina School of Medicine Greenville, I worked as an academic advisor in the Department of Biological Sciences at Clemson University.

My dissertation research for my Ph.D. program focuses on community college transfer students and the experiences of these students surrounding the transfer credit process. I am looking to interview Biological Sciences and/or Microbiology transfer students that have transferred from an in-state community college and are willing to share their experiences specifically as it relates to their transfer credit process. If you have transferred from a [Redacted] community college/technical college and are open to discussing your experiences with the transfer process, I would like to talk to you!

If you are interested in speaking with me, please complete the following Qualtrics survey https://clemson.ca1.qualtrics.com/jfe/form/SV_aXWXkqERUvwJejY. The interview will take approximately one hour, and all interviews will be conducted using Zoom. After the interview I also ask that you review your interview transcript to ensure its accuracy. In total, your participation in this study will take approximately 1.5 hours. As a thank you for your time spent, I will provide all participants with a $20 Amazon gift card.

If you have any questions about this study, please email me at lslove@clemson.edu or contact the Primary Investigator of this study, Dr. Tony Cawthon, at cawthot@clemson.edu. For more information regarding participating in this study, please see the Informed Consent document attached.

I hope that you will consider sharing your experiences and look forward to hearing from you!

Appendix C

Participant Recruitment Survey

1. Preferred First Name
2. Preferred Last Name
3. Which race/ethnic category best describes you?
    a. American Indian or Alaskan Native
    b. Asian
    c. Black or African American
    d. Hispanic or Latino
    e. Native Hawaiian or Pacific Islander
    f. Non-Resident Alien
    g. Two or More Races
    h. Unknown
    i. White
    j. Prefer not to say
4. Gender
    a. Female
    b. Male
    c. Prefer not to say
5. Age
6. Which semester and year was your first semester enrolled at [FourYear University] *(Ex. Fall 2020, Spring 2021, Summer 2022, etc.)*
7. What institution did you attend *prior* to transferring to [FourYear University] *If you attended multiple, please provide all institution names.*
8. Would you like to participate in an approximately hour long interview discussing your experiences with the transfer credit process? *Participants will be provided with a $20 Amazon gift card as a thank you for their time.*
    a. Yes
    b. No
9. Email Address *A copy of your responses will be sent to this email.*
10. Phone Number (only displays if answer to #8 is yes) *To be used for scheduling purposes.*
11. Which day(s) of the week would you prefer to be interviewed? *Select all that apply*
    a. Monday
    b. Tuesday
    c. Wednesday
    d. Thursday
    e. Friday
    f. Saturday
    g. Sunday
12. Which time(s) of the day would you prefer to be interviewed? *Select all that apply.*
    a. Morning (8:00am - 12:00pm)

b. Afternoon (12:00pm - 4:00pm)
c. Evening (4:00pm - 8:00pm)

Appendix D

Semi-Structured Interview Questions

Background Questions:

1. Where did you transfer from before coming to [FourYear University]?
    a. What led you to attend a community college before attending [FourYear University]?
    b. Which semester was your first semester at [FourYear University]? (ex. Fall 2020, Spring 2022, etc.)
2. When you started at your community college, did you know that you wanted to transfer?
    a. Did you know that you wanted to transfer to [FourYear University] specifically? If so, why?
3. What was your major before transferring?
    a. Is your major now different? If so, why did you decide to change it?
4. Are you a sophomore, junior, or senior?
5. Do you plan to return to [FourYear University]?
    a. If not, what are your next plans?
    b. If so, when do you hope to graduate? Is this date different than what you initially planned when you started at your two-year college? What are your plans for after you graduate?

Course Credit Questions:

1. How did you select the classes you completed at your prior institution?
    a. Were they specific to your two-year degree program?
    b. Were they general education courses?
    c. What resources did you use to choose the classes at your prior institution?
2. How would you describe your academic advising experience at your prior institution?
    a. Did your advising experience have any impact on your transfer decision and course or major selection? If so, can you describe that impact?
3. When you selected your classes at your prior institution, did you know that they would or wouldn't transfer to [FourYear University]?
    a. How did you know?
4. If you didn't know, would that have affected what classes you chose to complete?

Four-Year Questions:

1. As you transitioned to [FourYear University], did the classes that you did, or did not, complete at your prior institution affect the selection of the classes for your first semester?
    a. Did any of the classes you had already taken meet requirements for any classes you needed to take?
    b. Were you missing any course requirements that you needed to progress in your major?

2. What resources (people, offices, websites, etc.) helped you make sense of how your credits transferred?
    a. Did your credits transfer into the classes you expected them to transfer into?
        i. What are your feelings about how the classes transferred?
    b. Did this impact your anticipated graduation date?
3. How would you describe your academic advising experience at [FourYear University] thus far?
    a. Has your advising experience had any impact on understanding your transfer credits and degree progress? If so, can you describe that impact?

Final Questions:
1. When it comes to planning your classes and choosing your major, what advice would you give to another student looking to transfer to [FourYear University] from a two-year college?
2. Is there anything that you would have done differently when choosing classes and making your transfer decision?

Appendix E

Consent Form

Information about the Research Study
[FourYear University]

Experiences of Vertical Transfer Students in the Department of Biological Sciences with the Transfer Credit Process: A Phenomenological Study

KEY INFORMATION ABOUT THE RESEARCH STUDY
Dr. Tony Cawthon is inviting you to volunteer for a research study. Dr. Tony Cawthon is an Alumni Distinguished Professor and Director of Graduate Studies at [FourYear University] conducting the study with Laura Love.

Study Purpose: The purpose of this research is to highlight the experiences of students who successfully transferred from a two-year to a four-year college, specifically as it relates to their experiences with transferring academic credit.

Voluntary Consent: Participation is voluntary, and you have the option to not participate. You will not be punished in any way if you decide not to be in the study or to stop taking part in the study.

Activities and Procedures: Your part in the study will be to participate in an interview that will be conducted and recorded using Zoom. After the interview, you will be asked to review your interview transcript.

Participation Time: It will take you about one hour for the interview and approximately 30 minutes to review your transcript.

Risks and Discomforts: We do not know of any risks or discomforts to you in this research study.

Possible Benefits: You may not benefit directly from taking part in this study, however your participation will add to the literature surrounding the transfer student experience.

INCENTIVES
For participating in this study you will be provided with a $20 Amazon gift card.

AUDIO/VIDEO RECORDING AND PHOTOGRAPHS
Interviews will be recorded using Zoom. Recordings and transcripts will be stored using [FourYear University]'s cloud storage software using a password protected account.

PROTECTION OF PRIVACY AND CONFIDENTIALITY
The results of this study may be published in scientific journals, professional publications, or educational presentations.

Identifiable information collected during the study will be removed and the de-identified information will not be used or distributed for future research studies.

CONTACT INFORMATION
If you have any questions or concerns about your rights in this research study, please contact the [FourYear University] Office of Research Compliance (ORC) at [redacted] or [redacted]. The [FourYear University] IRB will not be able to answer some study-specific questions. However, you may contact the [FourYear University] IRB if the research staff cannot be reached or if you wish to speak with someone other than the research staff.

If you have any study related questions or if any problems arise, please contact Laura Love at lslove@clemson.edu.

CONSENT
By participating in the study, you indicate that you have read the information written above, been allowed to ask any questions, and you are voluntarily choosing to take part in this research. You do not give up any legal rights by taking part in this research study.

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