Fulfilling the Promise: Nashville State Community College's Commitment to Student Success

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Peabody College, Vanderbilt University
Spring 2019

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Foreword

We, three doctoral students, completed this study in partial fulfillment of the requirements for the doctorate of education degree from the Peabody College of Education and Human Development at Vanderbilt University in Nashville, TN.

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Acknowledgements

We would like to thank the many people at Nashville State and the Tennessee Board of Regents who helped us gather the necessary data and insights needed to complete this study. First, we extend our appreciation to our primary contacts, Vice President Terry Brown and Vice President Ginger Hausser, for guiding our research questions and discussions in a way most helpful to the institution. And our condolences to the family of Ted Washington who, as our initial liaison for the project as the Associate Vice President of Planning and Assessment at Nashville State, sadly passed away in July 2018.

Our thanks to Jeffery Parsell (Nashville State Institutional Research) for answering our countless questions on institutional practices and policies and for coordinating all of our conversations with Nashville State faculty, staff, and students. And thanks to Vice President Carol Martin-Osorio for serving as a direct contact for students. Thanks also to Chris Tingle (Tennessee Board of Regents

Research and Assessment) for providing all administrative data and helping us think through best strategies for overcoming any data limitations.

We would also like to thank Fred Frazier (Nashville State Reconnect Café) for connecting us with all student interviews and for allowing us to use his workspace—the Reconnect Café—for all interviews. His engagement and interaction with students was inspiring and we're grateful for all that he does for the Nashville State community. Thank you also to Donna Whitehouse, Dean Patricia Armstrong, and Dean Julie Williams for answering our questions on new initiatives taking place at Nashville State.

At Vanderbilt University, we would like to thank Dr. Angela Boatman for all her guidance on this project and to Dr. Ellen Goldring, Dr. Will Doyle, and Dr. Claire Smrekar for their tireless efforts to teach us proper quantitative and qualitative methods.

Finally, thank you to our families, friends, and colleagues who patiently supported us during this process and helped shore up our responsibilities when our attention was here.

Executive Summary

Nashville State Community College (Nashville State) is one of 13 community colleges in the Tennessee Board of Regents (TBR) system. It is a diverse community college that spans six campuses—across seven counties—with a main flagship campus located in Nashville, TN. Under new leadership for the first time in nearly 25 years, President Shauna Jackson and the administration are undertaking a comprehensive self-assessment to identify critical issues relating to retention and degree attainment. While they have not identified a specific target goal for fall to fall student retention, Nashville State's current rate of 52.4 percent—down from 57.4 percent in 2011-12—stands in stark contrast to their TN community college peers, whose average rate has increased from 56.1 percent to 57.9 percent in the same time span. Not only will improving retention prove a critical step in improving overall degree attainment rates—and potential earning power of Nashville State students—but it will also benefit the institution directly as both state appropriations and sustained tuition revenue is greatly dependent on student success.

In this study, we utilize a logic model adapted from Tinto's (1975) Interactionalist Theory and the Theory of Student Departure in Commuter Colleges and Universities by Braxton et al. (2004) to measure determinants of Nashville State student departure. We employ a mixed-methods approach to identify *when* students depart and *who* leaves Nashville State, as well as who returns and when after initial departure. We interview staff and students to measure their perception of the institution's commitment to the student welfare as well as their perceptions of the institution's integrity, or the extent to which Nashville State fulfills its promises to students. Examining staff and administrative processes, the first year experience, and academic advising, we specifically look to understand what practices, support systems and experiences—inside and outside of the classroom—assist or impede student persistence.

Specifically, we ask the following research questions:

1. What are the most common characteristics—both demographically and academically—of students that depart Nashville State? When are students most likely to depart and, if they return, who returns and when?
2. Which institutional experiences have a significant influence on student retention? Do these milestones disproportionately affect different students within different academic majors or different Nashville State campuses?
3. What institutional and personal factors do college personnel identify as most influencing students' decisions to depart Nashville State?

4. What institutional and personal factors do students identify as most influencing their decisions to depart Nashville State?

Who Leaves and When? Who Returns and When?

We employed quantitative descriptive statistics, comparison of means tests, and logistic regressions to answer our first two questions. We analyzed 5,992 first-time students with at least six credits attempted in their first fall semester, drawing these students from each academic year between 2012-13 and 2015-16. We then tracked and analyzed these students over the following six semesters. We find over half of Nashville State students departing prior to their Fall Year 2 semester—confirming the low fall to fall retention rate discussed above—with over 80 percent of students departing—prior to award completion—at some point by Spring Year 3.

While background student characteristics, such as race/ethnicity, had some association with departure, what mattered most was how students performed while at Nashville State. The completion rate of credits, participation in the first-year experience course, and successful completion of gateway academic courses proved predictive on nearly every departure analysis for each of the semesters tracked. Institutional experiences, such as campus location and academic department assignment, had little to no association.

We find that, on average, about 15 percent of students who depart *at any time* return at some point within the six semester timeframe. Students who departed, for instance, after Spring Year 2 were just as likely to return to Nashville State as students who departed after Fall Year 1, even though they had less time to return. Further, most students who returned did so at their first opportunity, or the semester following their initial departure from campus. This tells us students' likelihood to return drops precipitously the longer they are away. We find only credit hour completion and English gateway course completion to be associated with students returning, reinforcing the notion that what students do while at Nashville State matters more to student departure and return than do other factors, like background characteristics.

What Institutional and Personal Factors Influence Departure?

Whereas the quantitative analysis was unable to reveal connections between institutional offerings, such as different campus and academic department support and services, our staff and student interviews drew many connections between campus process and college staffing, as well as internal and external influences. These findings congregated into six themes:

1. *Process*

Students expressed significant struggles navigating the processes of being a student at the college, with the lack of year-round academic advising and robust onboarding for new students emerging as some of the most pressing challenges. Additionally inconsistent processes from campus to campus are a common source of frustration to the students but are less known to the faculty and staff who are based at just one campus.

2. *College staffing*

Our staff interviews highlighted that the roles staff members—especially at the satellite campuses—are not always aligned with the expectations of duties they perform, which can vary widely depending on the time of year. For the satellite campuses, student services functions often overlap when staff are managing multiple roles. Students expressed frustration with regards to functions centrally located at the main campus, where college staff could only speak to their silo of expertise when addressing student concerns.

3. *Individual student Issues*

Student interviews in particular informed the theme of individual student issues, encompassing student struggles common on community college campuses such as time management and mental health. Faculty and staff reported greater numbers of mental health concerns among their students and feeling unprepared to handle these issues without a designated campus counseling office available.

4. *External personal factors*

Obstacles away from campus were found to be exceptionally impactful for students. These factors, such as a lack of transportation, limited to no access to child care, and competing work responsibilities, were cited as major barriers to completion by both students and faculty, suggesting that while the college is well aware of the issues faced by their students, they are not well equipped to mitigate those circumstances.

5. *Interpersonal interactions*

Interactions and relationships, particularly with academic faculty, were found to be positively correlated with students feeling secure and supported on campus. When students felt they had someone they could turn to with questions or issues, they were more likely to seek out guidance rather than continue to struggle on their own.

6. External policy factors

Staff and faculty interviews indicated that TN Promise, tuition-free education for recent high school graduates—attracts more high school students whose parents want them to attend college because of the opportunity for free tuition. However, some of these students lacked the desire to attend college right out of high school, ultimately impeding their motivation or ability to persist. Conversely, TN Reconnect—tuition-free education for adults—, as discussed in our student interviews, seems to attract students who have gained the grit and motivation needed to succeed.

Institutional Policy and Program Recommendations

Based on the findings and literature, we make the following five recommendations to improve Nashville State's retention.

1. Rebuild and expand the scope of academic advising.

We recommend that Nashville State take steps to 1) provide at least one full time academic advisor at each satellite campus, with all incoming at-risk students assigned to that staff person, 2) encourage advisors to expand the scope of their advising to encompass non-academic related aspects of the student experience, and 3) train other staff and faculty to support the "college success" aspect of academic advising.

2. Expand and enhance programming for the first-year experience.

We recommend that Nashville State transition the current First-Year Experience program into a full first semester program, making it mandatory for all full-time students, and optional—but strongly encouraged—for part-time students. We also recommend that Nashville State enhance the program beyond its current focus on strictly process and logistics, to cover how to integrate into the college community. Nashville State should also consider developing an opt-in learning community model.

3. Make critical information universal.

We recommend taking steps to ensure that information is readily accessible across all campuses, perhaps through investment in a new software program for database management. A simpler ability to track student progress and alerts across campuses will allow faculty and staff to better assist students in need who take classes at different locations. Similarly, Nashville State must ensure that all campus rules—a form of information of institutional expectations—are similar across all

campuses. Students who commute between campuses need to feel that they are attending one institution with one set of rules.

4. Leverage and scale up successful partnerships

We recommend Nashville State use its recent partnerships with the city of Nashville and Achieving the Dream to build a foundation for assessing and acquiring policies and practices that increase retention across all campuses. For instance, if successful, Nashville State should promote the Nashville GRAD investment by the city of Nashville across the region and look to expand the scope of GRAD to cover students who are non-residents of Davidson County, basing qualification for participation not on geography but on risk and need across its seven county service region.

5. Track and strategically target students who depart

We recommend Nashville State invest in resources to advertise to and serve students who have stopped out. These students' needs differ from first-time students and a targeted strategy to appeal to them will help Nashville State return and enroll them.

Introduction

For the past six decades, America's colleges and universities have wrestled with a trend that stands to threaten what is at the core of the American higher education model: declining student retention and completion rates. A quarter of first year students enrolled at 4-year institutions fail to enroll in a second year of college, with some institutions climbing as high as 50 percent (Seidman, 2012; Vander Schee, 2007). Low retention yields low levels of completion, with universities graduating, on average, just 40 percent of their students within four years (NCES, 2018a). This comes with a significantly negative impact to the student as well as the nation's economy; estimates suggest that the impact on the economy may be as much as $10 billion (Schneider & Yin, 2012). What is worse, these students invest significant resources of time and money into degrees they fail to complete, significantly reducing the return on their investment. These 4-year colleges and universities are only half of the picture, however.

More than 40 percent of all students enrolled in higher education are enrolled in community colleges (Shapiro et al., 2014). With the remainder divided between public four-years, private not-for-profits, and for-profit colleges and universities, the community college system plays a significant role in the education of American students, expanding educational opportunities to traditionally underrepresented populations such as first-generation, minority and low-income students (Fong, Acee, & Weinstein, 2016).

Community colleges as a sector in the United States date back to 1901, with the founding of Joliet Junior College in Illinois (Wiseman, 2012). While just a small segment of the higher education landscape for its first half century, the community college expanded rapidly in the 1960s and 70s, growing from just 600,000 total enrolled students in 1958 to 4,900,000 in 1980—an increase of more than 700 percent in just two decades (Vaughan, 1985). Community colleges now number more than 1,100 and enroll nearly half of the entire undergraduate population in the US, offering degree and certificate programs as extensive as any other sector in higher education (Beach, 2012). With so many students now enrolled in these primarily 2-year institutions, it is not an exaggeration to state that the success of American higher education is closely tied to the success of community colleges and their more than a million students (Beach, 2012). The primary ways in which success is measured for postsecondary institutions are graduation rates and, at a more granular level, student retention rates.

Even a cursory review of extant literature reveals that student retention is a subject of great interest for post-secondary institutions of all types, from technical

schools to flagship 4-year public universities. While the reality is no different in the realm of community colleges, literature surrounding community college retention woes, risk factors, and prescriptions for turnarounds is less prevalent. What research there is makes it clear that there is a significant gap between traditional 4-year retention levels and that of their 2-year and community college, non-traditional counterparts. Nationally, the persistence rate from first-year to second-year at public 2-year colleges is 56.4 percent (Braxton & Francis, 2017), a startling 24.6 percentage points below the 81 percent at 4-year public universities nationally (NCES, 2018b). Ultimately, a third of degree-seeking community college students obtain an associate's degree within six years (NSC, 2017), a cause for concern, even if many students intentionally spread their college education over longer periods of time.

In our research, we define *retention* as a student enrolling in multiple consecutive terms at a particular institution, for example, fall-to-spring and spring-to-fall. Students who are not retained and leave without a degree or certificate will be referred to as *departed*. For this particular study, we largely focus on fall-to-fall departure, or the departure of students from year one to year two, while also exploring semester-to-semester departure through year three. We define *stopping out* as a student who leaves the college before earning a degree or certificate, and *persistence* as a student who enrolls and remains enrolled in the college until attaining a degree (Hagerdorn, 2006). We also refer to students who either are retained or leave with a degree or certificate as *successful*.

Nashville State Community College (Nashville State) serves a seven-county region that is anchored in metropolitan Nashville, TN, while also serving suburban Nashville and rural Humphreys County. Nashville State has experienced a trend of declining student enrollment over the last five years, with a high mark of 10,701 total headcount in spring 2013 to a low mark of 7,379 total head count in spring 2018—a five year enrollment decline of 27.6 percent (Nashville State, 2019a). Nashville State has identified what they perceive to be a significant underlying problem for their enrollment in their fall to fall retention rate. Since 2011-12, first-time, full-time retention rate has declined five percentage points, currently sitting at 52.4 percent (THEC, 2018a). This retention rate ranks them 13th, or the lowest out of all community colleges in the Tennessee Board of Regents (TBR) system, with the steep decline also proving the worst over the same time frame. In addition, Nashville State maintains a socioeconomically and racially/ethnically diverse student body, with approximately 45 percent of their more than 8,200 undergraduates identifying as students of color and 57 percent as part-time (Nashville State, 2019a). Nashville State has experienced a gap in the black and

white retention rates, leading to a decline in the overall percentage of black students in their student body, from 32.5 percent in spring 2012 to 27.2 percent in spring 2018 (Nashville State, 2019c).

Lower levels of retention hurt Nashville State's fiscal potential. Nashville State receives about 46 percent from state appropriations and another 54 percent of its revenue from student tuition (THEC, 2019a) and both revenue sources are greatly reliant on retention. State appropriations are all distributed through the Outcomes-Based Funding formula, which for community colleges is primarily dependent on degree/award attainment and progression metrics toward a degree. Progression metrics—based on students who cumulatively complete 12-credit hours, 24-credit hours, and 36-credit hours—are most tied to retention. Since the formula's implementation in 2010, Nashville State has lost nearly $1 million due to low to no growths in progression metrics—nearly 5 percent of their total state appropriations (THEC, 2019b). Halting the institution's decline in retention can help Nashville State garner more state appropriations.

Relatedly, Nashville State tuition and fees for a full-time student in 2018-19 is $4,935 (THEC, 2019a). A retention rate of just 50 percent means, for an incoming cohort of 1,500 full-time freshmen, the institution loses a potential $3.7 million in tuition revenue—equivalent to 14 percent of total tuition revenue. Insufficient revenue further hurts student retention. With over 70 cents of every revenue dollar going directly back into instruction and student services support (THEC, 2019a), successful retention of students can help Nashville State construct better support services for students.

Two previous Vanderbilt Ed.D. Capstone groups conducted research at Nashville State, one of which is detailed in a July 2014 issue of Community College Review, entitled "Community College Student Success: The Role of Motivation and Self-Empowerment." In this research, Martin, Galentino, and Townsend (2014) conducted a qualitative study of Nashville State students who did persist to graduation in an effort to determine what characteristics are common for students who graduate versus those who do not. They found that students who exhibited the ability to manage external demands, clear goals, self-empowerment, and motivation were able to overcome common background predictors of low persistence (Martin, Galentino, & Townsend, 2014).

Another capstone group (Bell, Irvin, & Sweeney, 2013) conducted a logistic regression of nearly 10,000 anonymous records for students spanning a seven-year period at Nashville State in an effort to study factors that contribute to likelihood to complete an associate's degree or certificate. Their research looked into a number

of key demographic characteristics, including: first generation students, adult learners, race, low-income students, English language learners, part-time students, remedial/developmental students, gender, and degree-seeking status. Significant for our own research, the authors sought to identify milestones that have a significant impact on program completion, as well as to identify more at risk subpopulations and whether or not milestone impact varies based on subpopulation.

They found the following milestones as positively associated with associate degree completion, in order from greatest to least significance: summer enrollment, completion of 80 percent of coursework attempted in the first year, and academic preparation in math and writing placement. They also found that completion of first year remedial/developmental requirements, continuous enrollment, and first-year completion of a Student Success Course were negatively associated with associate degree completion (Bell, Irvin, & Sweeney, 2013). In regards to Nashville State's existing subpopulations, they found degree-seeking students, adult learners, remedial students, and first-generation students were more likely to complete an associate's degree, while those identifying as other race, Black, English-language learners, and part-time students were less likely to complete a degree. They also found that students who complete a gateway course—or an introductory course—in math within their first year are more likely to persist to an associate's degree. In their recommendations, the authors suggested "improving student access to clear, relevant, and actionable information regarding their academics" (Bell, Irvin, & Sweeney, 2013, p. 9), a theme echoed by our own initial study of the context and extant literature. This prior research reveals a long-term awareness of issues related to persistence and retention, and potentially deeper, more systemic issues that contribute to low persistence and retention levels at Nashville State.

Research Questions

To build on prior research conducted at Nashville State, this study answers four overarching research questions focused on when students are departing, why they are departing, and the role processes and structures influence the culture of persistence at Nashville State.

1. What are the most common characteristics—both demographically and academically—of students that depart Nashville State? When are students most likely to depart and, if they return, who returns and when?

2. Which institutional experiences have a significant influence on student retention? Do these milestones disproportionately affect different students within different academic majors or different Nashville State campuses?
3. What institutional and personal factors do *college personnel* identify as most influencing students' decisions to depart Nashville State?
4. What institutional and personal factors do *students* identify as most influencing their decisions to depart Nashville State?

Our focus of departure for all questions is primarily focused on departure at *any time* within the first six semesters. We will specify throughout the study when we refer to specific semester-to-semester departure (e.g. Fall Year 1 to Spring Year 1) or year-to-year departure (e.g. Fall Year 1 to Fall Year 2).

For research questions #1 and #2, we anticipate different departure rates by campus enrollment and assigned academic department due to differentiation in advising and services offered among the different campuses and different academic departments. We hypothesize, with regards to research questions #3 and #4, that students and college personnel will identify personal factors resonant with extant literature as to why students depart—for example, work and family demands, financial conflicts, college knowledge. We also hypothesize, with regards to institutional factors, that both students and personnel will identify gaps in services and advising capabilities as contributing to departure.

In the following pages we will explore extant literature in the fields of student retention and community college persistence, developing a logic model that will drive our research and study of Nashville State's specific institutional context. Then we will employ a mixed-methods approach, using both quantitative and qualitative analysis, to answer our questions; we will review all data collected, our methods, and results, following with a more extensive discussion of key findings. We then conclude with a set of five recommendations for Nashville State.

Literature Review

There are many suggestions posited as to why community colleges struggle so disproportionately with retention. Martin, Galentino, and Townsend (2014) point to the higher percentage of academically underprepared students that enroll in community colleges as opposed to four-year institutions, as well as higher percentages of students coming from lower income backgrounds and minority households. This diverse population makes addressing retention and persistence issues in the community college sector both challenging and a social-justice need.

And yet, understanding what factors contribute to retention issues for these subpopulations, or even more generally exploring the first-year experiences of these students, remains dramatically underrepresented in the existing literature (Walpole, 2003). Much of the existing literature surrounding retention in community colleges has focused almost exclusively on variables that exist outside of the control of both the institution and the student, including socioeconomic background, race, ethnicity, and gender, among others (Fong, Acee, & Weinstein, 2016). Missing from the literature is a robust study of personal factors that may contribute to dropping out, from personal attributes to how individual students interact with specific milestones of the academic calendar (e.g. orientation, midterms, and financial aid deadlines).

Tinto's (1975) Interactionalist Theory on student persistence offers a student-centered lens that connects a student's ability to persist with her commitment to persistence and her commitment to the institution. These commitments are influenced by the student's entry characteristics and, in turn, influence the student's ability to integrate academically and socially (Tinto, 1975). Whereas academic integration is defined as the student's successful connection made to the classroom experience, social integration is the student's successful connection made with peers and the college community (Tinto, 1975). Both academic and social integration each influence the student's subsequent commitment to persistence and commitment to the institution, which, in turn, influences the student's likelihood to persist (Tinto, 1975).

Tinto's (1975) theory relies greatly on academic and social integration and the manner in which each is influenced by and influences the student's ultimate commitment to persistence. In this theory, early departure of students from colleges and universities is associated with the failure of institutions to create a sense of community and belonging. In essence, the Interactionalist Theory suggests that beyond background characteristics of the students, what is significant in influencing student retention and persistence is what the institution does with

students once they arrive at the institution—how the institution interacts with the student.

Tinto (1999), in future work, identifies five signal conditions that support student retention:

1. Expectation, or the phenomenon that students rise to higher expectations and thus higher retention relies on an expectation of success;
2. Advice, in that students require clear communication about college processes and choices, including effective academic advising;
3. Support Systems, or the need for campuses to provide aggressive and transparent support systems for both academic and aspects of personal life;
4. Student-Staff/Faculty interaction, where students can form genuine and consistent bonds with staff and faculty, especially in the first year;
5. Culture of Learning, where faculty and staff foster an environment where learning is valued and understood to be the key to a successful college experience.

In this model, Tinto argues that individual departure from institutions can be viewed as evolving out of a linear process of interactions between the student—with given attributes, skills, financial resources, prior educational experiences, and dispositions—and other members of the institution (Tinto, 1993). The level of commitment with which students arrive has an effect on the extent of their social and academic interaction within an institution, which then has an impact on their own goals and institutional commitment.

While many studies on retention (see Pascarella et al., 2016) utilize the Interactionalist Theory to test any one of the propositions on the influences of persistence, some researchers have determined it not as flexible as needed to extend across all higher education sectors. Specifically, Braxton et al. (2004) propose a theory refinement for students attending commuter colleges and universities: the Theory of Student Departure in Commuter Colleges and Universities. After reviewing prior empirical work that test the Interactionalist Theory in commuter colleges and universities, Braxton et al. (2004) find that social integration matters less in a commuter student's likelihood to persist, while academic integration matters only as a function of the internal campus environment. The student's commitment to the institution, both initial to and subsequent to enrollment, along with the student's entry characteristics, are the primary influences on persistence (Braxton et al., 2004). Tinto (1993)

operationalizes institutional commitment, in part, as the student's belief that a particular institution is "seen as an integral part of one's occupational career" (p. 44). Braxton et al. (2004) would, therefore, argue that students attending commuter schools are most likely to persist if they think the institution is the best option available for helping them realize their ultimate career goals.

Important to Braxton et al.'s (2004) model—and to our study—is the role the institutional environment plays. Unlike in the original Interactionalist Theory, institutional characteristics, rather than purely student characteristics, are found to be an important determinant in Braxton et al.'s model. Specifically, how students perceive the institution's commitment to student welfare and the institution's integrity influences institutional commitment (Braxton et al., 2004). Although perceptions are in the eye of the beholder, Braxton et al. (2004) stress that organizational structure and behavior influences these perceptions. The extent to which an institution values its students, treats them as individuals, and effectively communicates policies and requirements affects perceptions of an institution's commitment to student welfare. Further, the extent to which an institution operates in accordance with a student's expectations in part influences the student's perception of institutional integrity. For instance, how the institution advertises itself to students prior to enrollment can influence student expectations; an institution that fails to match its advertisement can, in turn, lead a student to reflect poorly on its integrity and, therefore, lower the student's commitment to the institution. With Braxton et al.'s (2004) reworking of Tinto's Interactionalist Theory to reflect persistence research on commuter students, institutional characteristics, in addition to student characteristics, are theorized to greatly influence persistence.

Indeed, several studies explicitly connect strong academic advising—an institutional characteristic—to student persistence. Tinto's (1999) suggestions for strong advising and intentionality surrounding faculty-student engagement is echoed by others who find these two characteristics in particular to be important influencing factors on persistence (Ryan, 2012). In a study of retention at a 2-year community college, researchers placed 158 students in an experimental group to receive academic advising from faculty specifically trained in academic advising, and 122 students in a control group with traditional academic advising from untrained staff and no faculty. Their findings suggest that regular contact with their academic advisor was the primary influencing factor in what proved to be a significantly higher retention rate in the experiment group (69 percent) than the control group (40 percent) (Ryan, 2012).

Student perception of academic advising seems to also be a significant influencing factor, beyond the advising's intrinsic value (Afshar, 2011; Braun & Zolfagharian, 2016). Pietras (2010) explored possible correlations between satisfaction with advising services and more objective measures, such as GPA and retention rates. Findings did indicate that when students partake in advising services, they feel better about the institution as a whole (Pietras, 2010), corroborating with Tinto's second through fifth conditions. Martin, Galentino, Townsend (2014) agree, noting that cultural capital in the form of motivation and college knowledge play a key role in persistence, going on to say that, "successful graduates have clear goals, strong motivation, the ability to manage external demands, and self-empowerment" (Martin, Galentino, Townsend, 2014, p. 15).

When it comes to the connections between student perceptions of integrity and the institution's commitment to their welfare, and specific operational activities that the institution engages in, academic advising processes stand out as a significant early engagement for first-year students. Academic advisors are some of the first professionals to interact with students and, depending on the relationship, can facilitate a more positive experience for the student. Studying the 1995 cohort of first-time freshmen in California's 107 community colleges, a 2008 study of the effect of academic advising on student success found that advising has a positive influence on the likelihood of student success, and, more significantly, the author found that active advising has an even greater positive influence on academically deficient students' likelihood to succeed. These findings were also found to be equal across all racial groups studied—white, black, and Hispanic (Bahr, 2008). Another study suggested that this positive relationship between active advising and student persistence may be most critical as an early intervention during the first three weeks of a student's college career (Hatch & Garcia, 2017).

The importance of professional advisors within a community college—rather than a sole reliance on faculty advisors—may further influence persistence. In comparison with their university peers, community college faculty spend much more time engaging with students *in* the classroom. Nearly 85 percent of their time is spent on instruction in comparison to 66 percent of university faculty time (Townsend & Twombly, 2007). Community college faculty therefore have less time available for academic advising *outside* of the classroom. Further, approximately two-thirds of community college faculty are part-time, with a sole focus of teaching the students in their classroom (Townsend & Twombly, 2007). Community colleges that rely on faculty advisors—instead of professional advisors—only have about a third of the faculty available for such services. In order to implement successful

advising models, then, community colleges may need to rely on professional advisors who have the resources to focus on the students outside of the classroom.

Indeed, much of the existing literature has reinforced a development approach to student advising. In a study at the University of Albany, researchers found an overwhelming preference for prescriptive advising, or advising where they are provided logistical information and told what to do and when to do it (Smith, 2002). This self-identified desire for a more direct advising relationship may reveal a greater need for connectivity or engagement among first-year students in order to achieve integration into the academic community. However, research is mixed on the direct association between social and academic integration and persistence in community college students. Indeed, the very nature of community college and the fact that students typically remain in their community while attending may negate or greatly lessen the role that social integration plays in student success for non-traditional students such as those that attend community colleges (Deil-Amen, 2011).

In critiquing Tinto's generalization of the positive influences of social and academic integration on persistence, Deil-Amen (2011) finds that academic integration is significantly more positively influential on commuter students than social integration. To that effect, while commuter students may not be interested in "fitting in" with a campus culture or environment, it does seem apparent that commuter students are interested in understanding how the campus and its processes work (Deil-Amen, 2011), the kind of wayfinding along the college student journey that falls under their perception of the institution's commitment to their success. Recommendations she addresses include collaborating between advisors and instructors to monitor student progress, providing help to students navigating processes, and affirming students' academic goals and aspirations (Deil-Amen, 2011). Further, Sterling and Myers (2016) note that relationship building between student and academic advisor or instructor serves as a form of academic integration that has a positive influence on student persistence at community colleges.

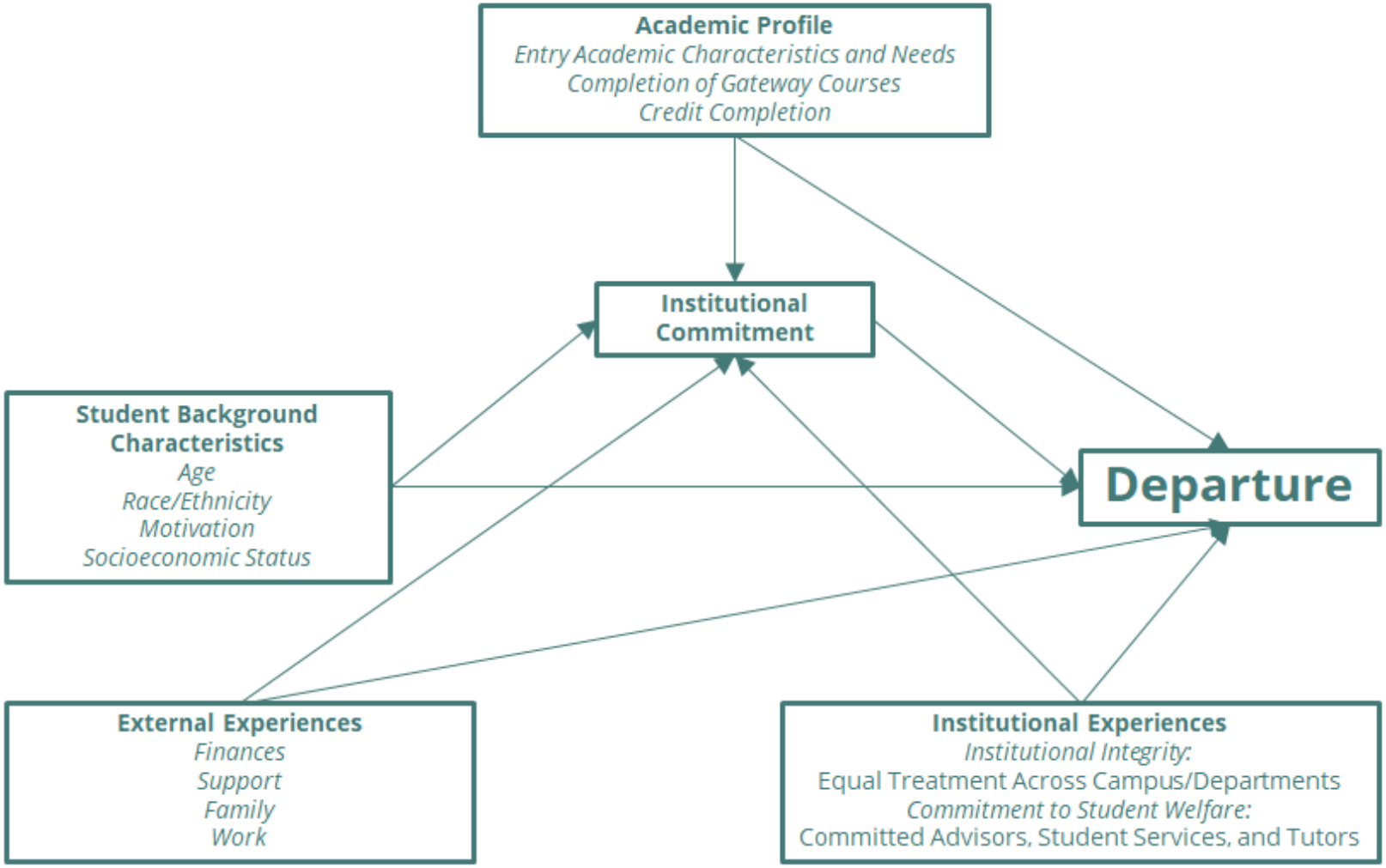
Some studies, however, find services such as advising to have little influence on persistence. A study of a university in southern California found that nearly half of students who stopped out had utilized the university's academic success center—many after as much as 8 hours of meeting with tutors (Mortagy et al., 2018). This serves as a reminder that the services and opportunities an institutional environment serves is just one of the potential influences on student persistence. In general, though, extant literature suggests that the institutional environment,

measured by the student's perception of the institution's integrity and commitment to student welfare, may positively influence persistence at a commuter institution.

Logic Model

We therefore adopt the Braxton et al. (2004) Theory of Student Departure in Commuter Colleges and universities—as influenced by Tinto's (1975) Interactionalist Model—as our logic model in order to test for the influences of institutional environment on persistence at Nashville State. Although Braxton et al. (2004) refine Tinto's (1975) model to better focus on all commuter students, we make alterations to better pinpoint the unique experiences of community college commuter students as well as to better capture the more recent student departure literature discussed above. Figure 1 shows our logic model as so adapted to the community college experience.

Figure 1: Logic Model for Nashville State Community College Departure



Note: Authors' community college student departure theory as adapted from Tinto (1975) and Braxton et al. (2004).

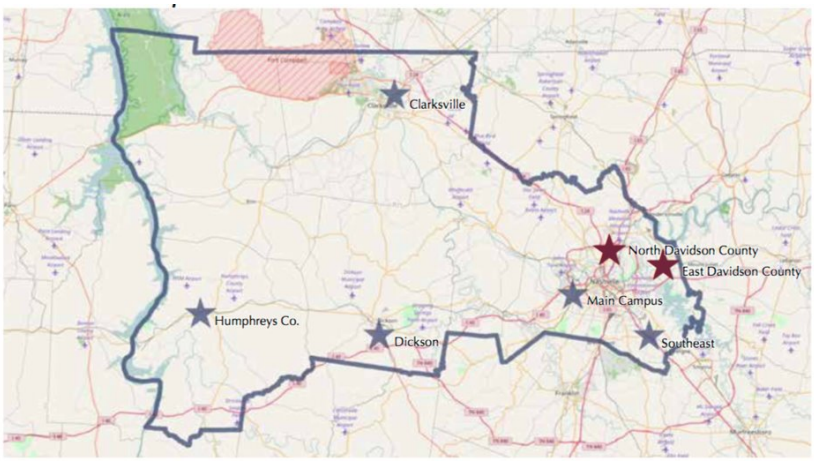
We first alter Braxton et al. (2004) by recognizing, as Martin, Galentino, and Townsend (2014) did in their prior study on Nashville State, that the student academic profile of community college students is one that requires community colleges to provide considerable support to students *after* they enroll in order to make them "college ready"—or prepared to do college-level work. Therefore, the academic profile includes entry academic characteristics and learning support needs—i.e. college readiness—as well as college credit completion rates as evidence. Further, in noting Bell, Irvin, and Sweeney's (2013) findings on the importance of gateway course (or introductory course) completion on persistence at Nashville State, academic profile includes whether or not the student completed gateway courses in their first year as influential on college student departure.

We then alter the model to highlight the importance critical institutional experiences, like academic advising and orientation programs—as found by Deil-Amen (2011) and Sterling and Myers (2016)—influence departure for commuter students. As Bell, Irvin, and Sweeney (2013) recommended in their initial study of Nashville State, providing students with clear information on their academic progress—and the hurdles that will impede future progress—will help students persist. We therefore include in our model these institutional experiences as illustrative of institutional integrity and commitment to student welfare—critical elements of the Braxton et al. (2004) model. Our study first pairs the institutional context with this logic model in order to analyze the effects of institutional experiences on departure.

Contextual Analysis

Nashville State joined the Tennessee Board of Regents (TBR) system of universities and community colleges in 1984 as a technical institute. In 2002, the Tennessee General Assembly and the Governor expanded the mission of Nashville State to a comprehensive community college. With its main campus in Nashville (White Bridge Campus) and a total of six satellite campuses covering the rural-urban counties of Davidson, Cheatham, Dickson, Houston, Humphreys, Montgomery, and Stewart, Nashville State serves a great portion of Middle Tennessee.

Figure 2: Nashville State Main and Satellite Campuses

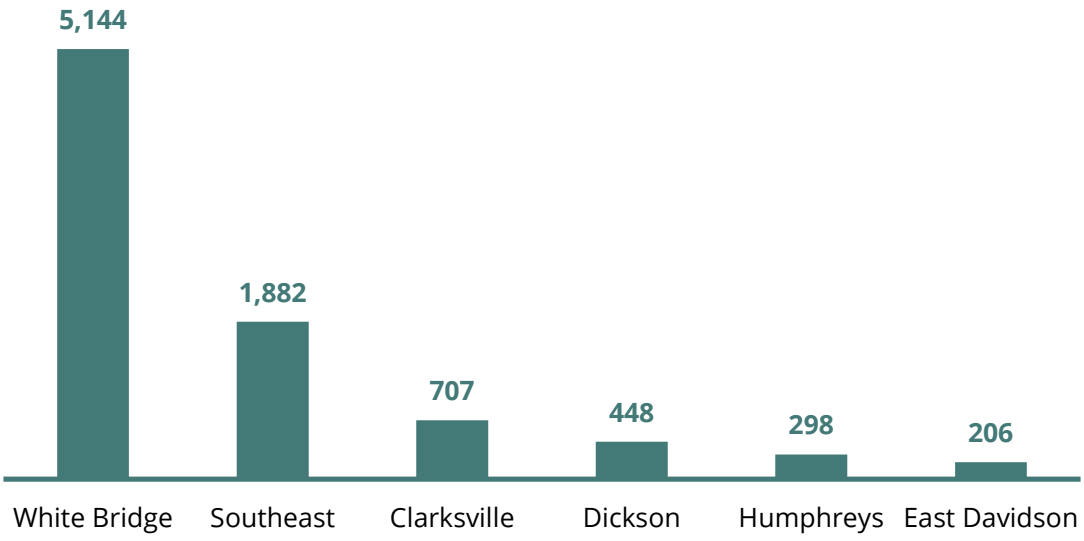


Source: Nashville State Master Plan

In Waverly, the Humphreys County Center of Higher Education serves students in Humphreys and surrounding counties. In Antioch, the Southeast Campus provides learning opportunities for all of southeastern Davidson County. Students can also take classes in Dickson at the Renaissance Center. In Clarksville, a campus provides educational opportunities for residents in Montgomery County. Fall 2017 marked the opening of the East Davidson campus in the Donelson community of Nashville. Nashville State is planning a seventh campus in Madison, located in north Davidson County.

Nashville State has a headcount of 8,284 students as of Fall 2018, with an FTE (full-time equivalent) of 5,170 across all campuses (Nashville State, 2019a). Figure 3 displays the student enrollment by campus. The White Bridge campus enrolls 2.75 times as many students as the next largest campus, Southeast. Nearly 60 percent of all students are enrolled at the White Bridge campus.

Figure 3: Fall 2018 Headcount Enrollment by Campus

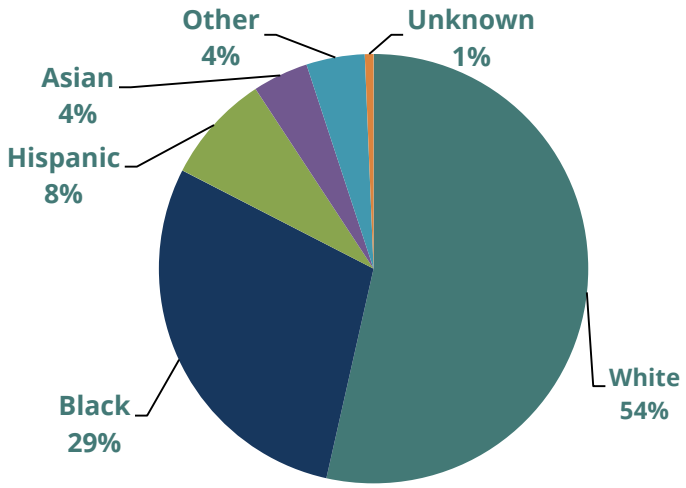


Source: Nashville State Community College

Just over half of all students are white, mirroring a national average of 53 percent for community colleges (St. Rose & Hill, 2013), and nearly a third are black (Nashville State, 2019a). Figure 4 presents the race/ethnicity composition across all students enrolled in fall 2018, and

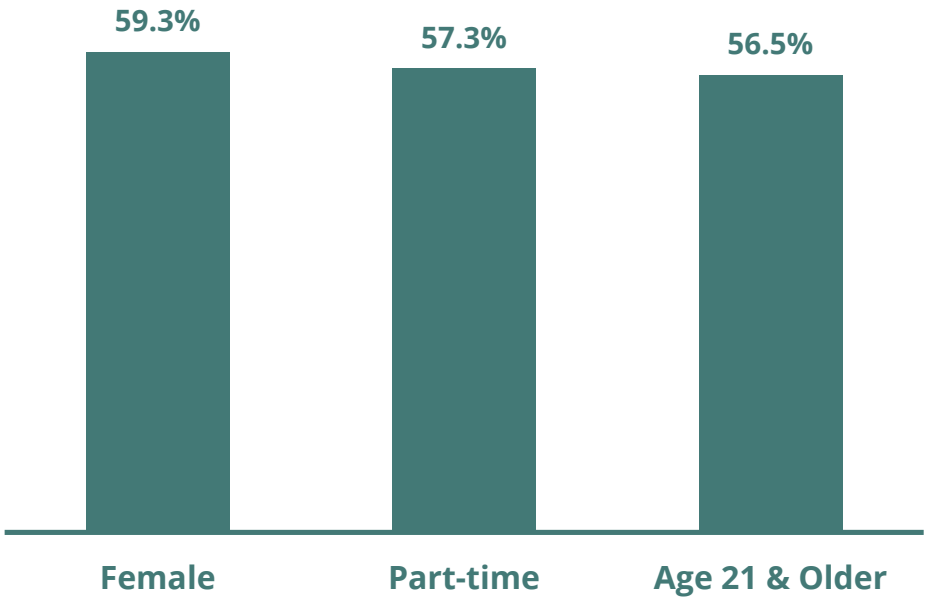
Figure 5 presents the fall 2018 headcount by sex, enrollment intensity, and age. Nearly 60 percent of students are women (Nashville State, 2019a), directly reflecting the nearly 57 percent of the national community college average (NSC, 2018). Another nearly 60 percent of students enroll just part-time, again reflecting the national average (NSC, 2018). Over 56 percent of students are over the age of 20. Nationally, approximately 60 percent of community college students are under the age of 20 (Ma & Baum, 2016). Nashville State therefore caters to a slightly older population that the national average.

Figure 4: Fall 2018 Race/Ethnicity Composition



Source: Nashville State Community College

Figure 5: Fall 2018 Headcount by Sex, Enrollment Intensity, and Age



Source: Nashville State Community College

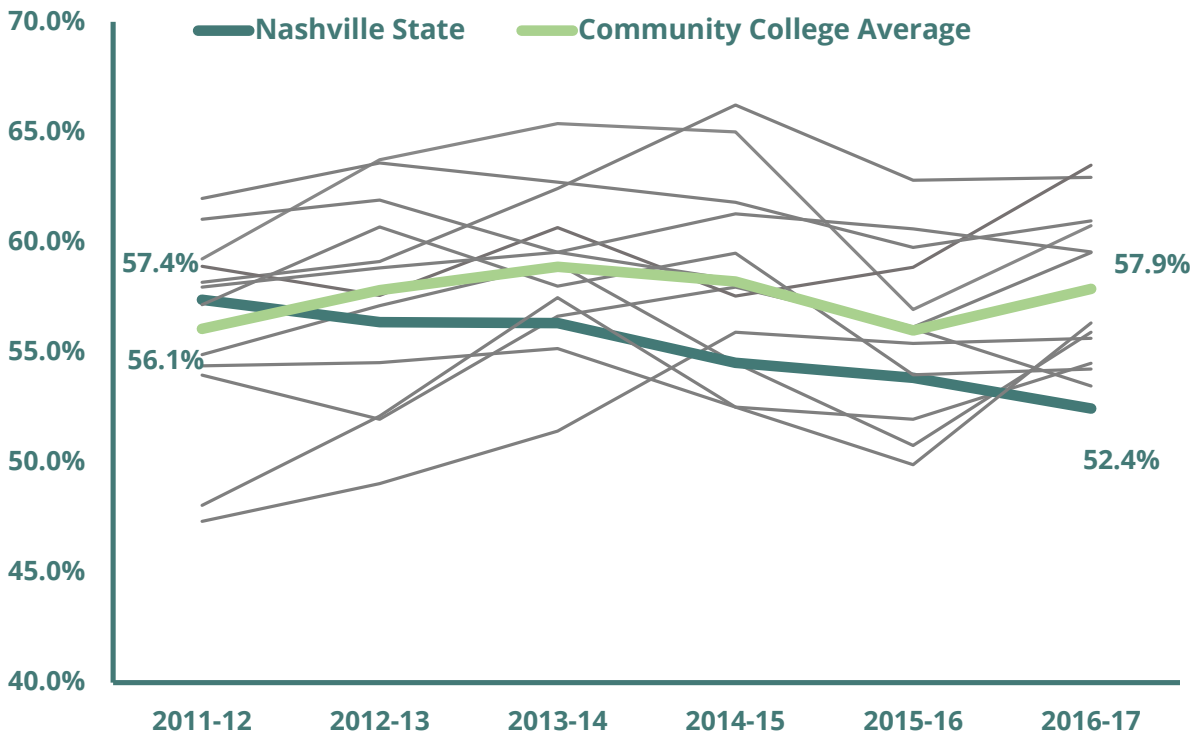
The college grants four types of degrees (Associates of Applied Science, Associates of Arts, Associates of Science, and Associates of Science in Teaching), short-term and long-term certificates, and general education certificates, in 86 available programs of study. Nashville State also grants 24 certificates and participates in the Tennessee Transfer Pathway program (Nashville State, 2019b).

Retention Challenges

Over the last five years, Nashville State has experienced a notable decline in its retention rate. Whereas the average first-time, full-time Tennessee community college fall to fall retention rate has increased from 56.1 percent in 2011-12 to 57.9 percent in 2016-17, Nashville State's has declined from 57.4 percent to 52.4 percent (THEC, 2018a). Figure 6 highlights that Nashville State's first-time, full-time fall to fall retention rate now ranks last of the 13 community colleges in the state, whereas in 2011-12 it ranked seventh.[1] Failing to graduate students from the college is particularly impactful as students who fail to earn a degree are more likely to be underemployed and more likely to default on their student loans (Schneider & Yin, 2012). Nashville State's relatively low retention rate can disproportionately hurt Nashville, place-bound students when compared to the sector overall. Further, as tuition and state appropriation revenue are greatly dependent on the success of students, low retention rates hurt Nashville State's ability to maximize revenue and invest in student services.

[1] THEC's retention rate includes as "retained" students who transferred to another TN public institution.

Figure 6: First-time, Full-time Fall to Fall Retention Rates for TN Community Colleges



Source: Tennessee Higher Education Commission
Note: THEC counts students who transfer to another public institution in TN as *retained.* Gray lines represent other schools in the community college system.

Divergent Campus Experiences and Limited Advising

Our early conversations with Nashville State highlighted the great disparity in service offerings across the institution. Not all satellite campuses at Nashville State have a robust selection of complete degree programs. Some campuses have been used as "portal" campuses, with the intent of transferring students to the main campus to finish a degree after the student takes introductory courses. If a student enrolls in a satellite campus with the expectation of finishing at that campus, the student may negatively perceive Nashville State's integrity, thinking that they enrolled at a campus location that would never meet their needs.

There is also a great reliance by the institution on faculty to support students both in and outside of the classroom. The institution has invested in no professional academic advisors so faculty are tasked with advising students on degree pathways. Overworked faculty may be unable to fully support students in need of navigating the institution's policies for completion. In turn, students may perceive the institution's commitment to its welfare as low, thereby negatively

influencing persistence. Additionally, due to their limited offerings, not all satellite campuses offer a full array of services—like tutoring or access to on-campus faculty advising—that students at the main campus receive. A negative perception of Nashville State's integrity could negatively affect the student's commitment to completing, thereby negatively influencing persistence.

Key to our logic model is the role institutional experiences—as measured by student perceptions of institutional integrity and institutional commitment to student welfare—has on departure. We hypothesize that the current structure of Nashville State's satellite campuses as well as the advising structure may greatly affect departure.

New Leadership and Opportunities

Nashville State has undergone—and is in the midst of—substantial changes in the last few years, with many changes anticipated in the near future. All of these transformations not only influence the type of students Nashville State is educating but also how and to what extent Nashville State addresses prior retention challenges and future practice adoption.

New administration.

Following nearly 25 years of tenure—in which he oversaw the transition of the Nashville State from a technical college to a comprehensive community college—President George Van Allen announced his retirement in September 2017 (Tamburin, 2017). After a semester under an interim, President Shanna Jackson, former Columbia State Community College associate vice president, took the helm, eager to make the college more welcoming to students and citing a "need to work on the retention piece or transfers to universities" (Gonzales, 2018a, para.3). Further, she promised to repair an atmosphere of distrust between administration and faculty/staff. An internal TBR climate report—preceding President Van Allen's retirement—found heightened levels of perceived hostility among the faculty/staff of the administration (Tamburin, 2017). President Jackson's attempt to repair this atmosphere—as well as TBR's attempt to fill key administrative positions, such as Vice President of Academic Affairs and Student Services, in the interim—may introduce a new vision for Nashville State that repairs its retention deficiencies.

New policy landscape.

The financial aid policy landscape in Tennessee has changed drastically over the last four years, greatly impacting how students access all community colleges. In fall 2015, recent high school graduates throughout all of Tennessee had an

opportunity, with the TN Promise scholarship, to access each of the state's community colleges with a last-dollar scholarship—ensuring that all eligible students could access college tuition-free (THEC, 2019c). Nearly 80 percent of all Tennessee high school seniors applied for the scholarship, increasing the state's college-going rate by six percent and increasing first-time freshmen enrollment across the state by 25 percent at community colleges and nearly 50 percent at Nashville State alone (THEC, 2019c)[2]. Early analysis of this program suggests that TN Promise students are retained at higher rates than non-TN Promise students—63 percent compared to 42 percent—although this analysis does not control for other characteristics (THEC, 2018b); nonetheless, the retention rate of TN Promise students is higher than the overall student average.

Financial aid policy introduced just last year should have another substantial impact on students who access Nashville State. TN Reconnect extends the benefits of TN Promise to all adults who lack a college undergraduate degree (THEC, 2019c). The first cohort entered the community college sector in fall 2018: 32,000 students applied and ultimately 15,000 enrolled (Laphen, 2018). Just over 1,600 of these students enrolled at Nashville State (Nashville State, 2019c). Nashville State has been on the receiving end of substantial financial aid policy implementation, greatly changing how students access and persist through the institution.

New partnerships.

An announced partnership—contingent on municipal budget approval—between the city of Nashville/Davidson County and Nashville State could have great implications for student persistence moving forward. Mayor David Briley, in his December 2018 announcement, proposed distributing as much as $2.5 million to help Davidson County residents pay for books, transportation, and living expenses, while also helping Nashville State provided advising and support services for the students (Gonzalez, 2018b). The program—Nashville Getting Results by Advancing Degrees (Nashville GRAD)—is to be modeled on the City University of New York (CUNY) ASAP initiative, requiring close partnership in execution between the institution and the city (Gonzalez, 2018b). CUNY ASAP, in part due to its intrusive advising model, has been empirically shown to increase six-year graduation rates for low-income students (Strumbos & Kolenovic, 2017). Nashville State's adoption of the program may positively affect persistence.

[2] Such an increase at Nashville State is noteworthy since Nashville State had already implemented tnAchieves—the local-based policy antecedent to TN Promise—for all Davidson County recent high school graduates in Fall 2014 (Tamburin, 2015).

Additionally, Nashville State has joined nearly all other Tennessee community colleges in a partnership with the Achieving the Dream (ATD) network, a national organization with over 220 institutions dedicated to improving student success at community colleges (Achieving the Dream, 2019). The partnership has initiated a year-long review of retention analysis in which an internal team, with ATD support, is analyzing who leaves Nashville State and why. In turn, the team will recommend short- and mid-term solutions to address persistence gaps (Whitehouse, 2019). Nashville State, through these new partnerships, is looking to change the culture of retention. Our findings and recommendations are offered as a complement to these efforts.

Data and Methods

We implemented a mixed-methods, concurrent triangulation research design to answer our four research questions. This approach allowed us to simultaneously yet separately collect and analyze our quantitative and qualitative collection. We then were able to compare and contrast our findings between both methods.

A combination of quantitative data analysis and qualitative interviews allow us to triangulate among different methodologies in order to assess the consistencies of our findings (Patton, 2002). Consistent findings can highlight the validity of our design while inconsistent findings can pinpoint the effects of observed or unobserved study limitations (Patton, 2002). Strengthening our data analysis with in-depth interviews grants us opportunities to observe nuances the administrative data cannot produce, such as beliefs, perceptions, motivations, and personal insights into both what hinders, supports, or facilitates retention and persistence.

For the quantitative portion of our research—the first two research questions—, we used enrollment data over a four year period to identify when students left, who left, when students returned, and who returned. We employed means comparisons tests and logistic regressions to determine what characteristics were most associated with departure and returns. For the remaining research questions—our qualitative section—we interviewed campus administrators and a select group of students who had departed in the past and then returned to dig deeper into what personnel and students identify as reasons for departure. These questions were specifically targeted to understanding how Nashville State could improve in order to retain more students.

Data

Administrative.

Student-level data was provided by the Tennessee Board of Regents (TBR), the administrative body that governs Nashville State, the twelve other community colleges, and the state's 27 technical colleges of applied technology. In its administrative capacity, TBR collects detailed community college data related to students' incoming characteristics, courses attempted and completed, degrees received, and transfer activity among the 13 community colleges and the state's six

locally-governed institutions.[3] The students are pulled from the academic years 2012-13, 2013-14, 2014-15, and 2015-16, and all students are tracked longitudinally for their respective following three academic years. We specifically observed first-time students who attempted at least six credit hours in their initial fall semester from each of those academic years.

Independent variables.

Table 1 shows all independent variable categories and respective variables. We received, from TBR, fields for ***background student characteristics***, such as race/ethnicity, sex, and age; we also received fields for the ***student academic profile***, including high school GPA and ACT COMPASS scores, attempted and completed course credits by semester and cumulatively, and completion of English and math gateway (introductory) courses. Finally, we received variables that capture ***institutional experiences***. These include completion of the first-year experience course, campus location by semester, and assigned academic department as determined by declared major. These variables are intended to capture distinctions in institutional commitment (campus location and assigned academic department) and options made available to students to help understand the college experience better.

Table 1: Independent Variable Classifications

Background Student Characteristics	Student Academic Profile	Institutional Experiences
Incoming Age	College Readiness	First-Year Experience Course Completion
Sex	Gateway Completion	Primary Campus Enrollment
Race/Ethnicity	Attempted Credits Completed	Change in Primary Campus Enrollment
		Assigned Academic Department
		Change in Assigned Academic Department

We created binary variables for sex (female equals one), First-Year Experience (FYE) Course completion, gateway English course completion within the first year, and gateway math course completion within the first year. The FYE course is a five week seminar intended to impart college knowledge, such as college resources, registration and financial aid renewal policies, and information literacy, to first-year students; students are encouraged but not required to enroll. Gateway math and English courses are entry-level, creditworthy courses that are critical

[3] The six locally-governed institutions (LGIs) are six universities—Austin Peay State University, East Tennessee State University, Middle Tennessee State University, Tennessee State University, Tennessee Technological University, and the University of Memphis—that were once governed by TBR. In 2017, the state split the six LGIs from TBR, giving each their own governing board. TBR still collects student-level data from each of the six LGIs, allowing us to track transfer activity across the universities.

milestones for completion. At Nashville State, these courses include English 1010 (Composition 1) and any math course between 1000 and 2000—mostly statistics, college algebra, and liberal arts math. Nashville State encourages students to take these courses within their first year.

We created binary variables for four separate race/ethnicity categories: White, Black, Hispanic, and Other Race/Ethnicity. For Other Race/Ethnicity, the student was coded one if they were reported to TBR as Asian, Alaskan Native, American Indian, Multiracial, or Hawaiian or Pacific Islander. We did the same for primary campus location for each semester: Clarksville, Dickson, Humphrey County, Southeast, and White Bridge are all coded one for each semester the student was taking a majority of coursework at any of those locations.[4] We also created a binary variable for if a student changed campus locations from one semester to the next (one if location changed) and then a binary variable for if a student at any time changed semesters over the ensuing six semesters.

Approximately ten percent of the population lacked a high school GPA, with the average age of those missing a GPA being over eight years senior to those who were not missing a GPA. To avoid a sample biased against older, nontraditional students, we computed a composite measure—College Readiness—based on a minimum high school GPA of 2.60[5] or minimum ACT COMPASS scores considered college ready.[6] For the timeframe of our sample, Nashville State accepted COMPASS scores for placement purposes *in lieu* of other standardized tests (Bowen, 2013); because all students are required to have a learning support placement exam, whether ACT or COMPASS scores, but because most older students do not have an ACT score, nearly all (98 percent) of students who are missing a GPA in our sample have complete COMPASS scores.

We created binary variables for each of the academic departments in which a student's major resided, by semester: Business, Management and Hospitality;

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[4] TBR transferred Cookeville Campus to Volunteer State Community College in fall 2017. Subsequently, all students who were enrolled at that campus—and were retained during the administrative transfer—show in the data as having transferred to Volunteer State. Since Cookeville is no longer under Nashville State's administrative purview—and since their classification biases our research—we have excluded all students who started at Cookeville from our sample. As a result of this decision, 730 students, or 10.9% of the overall population, were excluded from our analysis.

[5] There is no Nashville State, Tennessee or national standard regarding high school GPA minimums for college readiness. We average the findings of several studies (Hodara & Lewis, 2017; Sawhill et al., 2012; Geiser & Santelices, 2007; Hodara & Cox, 2016) that observe a high school GPA between 2.5 and 2.8 as "college ready."

[6] The ACT considers the minimum standard for college readiness as a 77 on the Writing test, an 89 on the Reading test, and a 52 on the Math test (ACT, 2010).

English, Humanities, and Creative Technology; Healthcare Professions; Science, Technology, Engineering and Mathematics; and Social and Behavioral Sciences. We received CIP codes and major codes for each student's semester, converted the CIP codes to majors via the THEC's Academic Program Inventory, and then cross-walked the majors to academic departments by visiting each department's websites and matching our data to listed majors therein. Each department is coded one if the major was paired to the department. We created a series of binary variables to track if and when a student changes departments between each semester and, then, whether or not a student changed departments at any point in the first six semesters.

Finally, we created two credit success metrics: the first is the cumulative percent of total credits attempted that the student ultimately earned by each semester's end. The second is a binary variable to gauge credit accumulation success. This variable is coded one when a student passes at least two-thirds of cumulative credits attempted; we selected two-thirds because this allows a student to drop at least one three-credit-hour course if attempting at least nine credit hours in a semester.

All of these variables were reported for each student over the following three academic years by semester, starting with the fall semester in year one (referenced as Fall Year 1), spring semester in year one (Spring Year 1), the trailing summer semester (Summer Year 1), and continuing through to the spring semester in year three (Spring Year 3). This length of tracking follows the 150 percent of expected time to complete an associate's degree, following the IPEDs graduation rate definition (NCES, 2018b).

Dependent variables.

We have a series of binary dependent variables. For our first research question, in which we track students across all semesters, we code students as one for *departed* if from one semester to the next they did not re-enroll at Nashville State and did not receive an associate's degree, a long-term certificate, or a technical short-term certificate.[7] If coded zero—*successful*—then the student either re-enrolled at Nashville State the following semester or successfully attained an

[7] Students who receive an academic short-term certificate and then subsequently stop enrolling are considered stop-outs. THEC does not count such certificates in its Outcomes-Based Funding Formula—the model used to distribute all state operating revenue—as it is not considered an outcome credential but rather a symbol of progression toward an undergraduate award (THEC, n.d.). Therefore, our study excludes academic short-term certificates as a completion metric.

award. We consider these students to have successfully completed a program and, if they stop enrolling, likely did so because they did not seek any further credential. We do not expect students to enroll through the summer so, if they failed to enroll during a summer term but returned in the fall, we coded them as *successful*.

Students are excluded from subsequent semesters' coding if they are ever coded as *departed*; similarly, they are excluded from subsequent semesters' coding if they are coded *successful* for leaving with a degree or certificate. In other words, once they do not re-enroll at Nashville State for one semester, we discontinue tracking them for the purposes of these dependent variables.

We also tracked if the student transferred to another community college or locally-governed institution (former TBR universities). We follow the standard IPEDS definition for retention rate and include students who transfer prior to attaining an award as *departed* (NCES, 2018b). All students who transfer with an award are considered *successful*. Table 2 highlights the definitional distinctions between departed and successful students.

Table 2: Dependent Variable Classifications

	Enrolled at NSCC the Following Semester	Not Enrolled but Earned an Award	Enrolled Nowhere and Did Not Earn Award	Transferred with No Award	Transferred with Award	Earned Award but did Not Transfer
Departed			×	×		
Successful	×	×			×	×

For descriptive purposes, we distinguish within our dependent variable. If a student is considered *departed* and we do not find a corresponding transfer institution, we consider them "stop-outs." If a student is considered successful, we call them "retained" if they have re-enrolled at Nashville State and "award recipients" if they have left Nashville State with a degree or certificate.

Finally, for our analysis on students who return after departing, we code all students who return to campus after having been coded *departed* as *returns*. Students who depart but do not return are *does not return*.

Qualitative interviews.

This project included a qualitative phase that consisted of on-campus interviews of 14 members of the staff and administration at Nashville State and eight TN Reconnect students who had previously enrolled at Nashville State, departed, and then returned. These additional qualitative methods were included

in an effort to uncover additional information not revealed by the quantitative data, such as beliefs, perceptions, motivations, and personal insights into both what hinders retention and persistence by Nashville State students at each unique campus, as well as what currently supports or facilitates retention and persistence by Nashville State students. The staff interviews were conducted during November and December 2018 at each of their respective campuses. The student interviews were conducted in February 2019 at the White Bridge and Southeast Campuses.

All interview participants were provided with a debrief form and asked to sign an informed consent form. See Appendix 1 and Appendix 2 for the debrief form and informed consent form. Interviews were recorded for later transcription and the identity of each interviewee was left confidential by providing codes for each interview and omitting identifying labels on transcripts. We analyzed and identified broad themes from all transcriptions.

Staff interviews.

We interviewed campus administrators across the different academic departments and from each of the five satellite campuses. All interview participants were selected through purposive sampling, according to pre-selected criteria of campus directors and staff directly involved in student advising. We intentionally sought out different sites and staff members with different levels of student interaction, thereby soliciting a range of opinions on elements affecting student retention and persistence.

Staff participants were recruited with the help of the institutional research office, who provided names and email addresses for all requested participants. Each staff participant was contacted by email requesting an opportunity to conduct the interview in person, as well as offering to provide coffee and donuts for the interview setting. See Appendix 3 for the texts of all invitation emails.

Each staff participant interviewed was asked a series of ten questions, and those that identified themselves as academic advisors were asked an additional two questions on the topic of advising. See Appendix 4 for the staff interview protocol. The average interview took 21 minutes, with the shortest taking 11 minutes and the longest 30 minutes.

The interviews were structured in such a way as to better understand three main components of the student life cycle at the college;

1: Why do students choose to attend Nashville State?

2: What struggles did students commonly encounter at Nashville State?

3: Why do students choose to leave Nashville State before completing their intended program?

Each of these components included a two-part question. First, staff members were asked what they had heard directly from students, with a follow-up question as to their professional opinion as a response to the same question. This structure to the questions was chosen as a way to ask the interview participant to think beyond anecdotal stories and reflect more deeply on underlying issues, differentiating between what they heard from students and their own perceptions.

A fourth component was included to identify why students would choose to return to Nashville State after a period of time and if the interview participants had any insights as to why students chose to return. Again, they were asked to think specifically on what they had heard from students before they were asked for their own personal, professional opinion. The final interview questions asked the participants to identify particular processes that they felt contributed to or detracted from student retention. These questions were chosen to identify factors on the college side that could be unintentionally contributing to the student attrition.

Student interviews.

We interviewed eight students. In particular, we took advantage of a unique population on campus: TN Reconnect students who were once enrolled at Nashville State, stopped-out (i.e. *departed*), and *re-enrolled at Nashville State* following implementation of the TN Reconnect program—a tuition-free scholarship for adult students with no prior associate's degree. These students are therefore currently enrolled. Interviewing this specific student sample granted us a convenient opportunity to interview former students who were not retained by Nashville State, allowing us to ask targeted questions related to why they left, why they returned and, if applicable, why they have considered leaving again.

Student participants were also recruited through the Nashville State institutional research office. The office was asked to provide names of all enrolled Reconnect students who had attended Nashville State previously and had departed Nashville State prior to the introduction of TN Reconnect. Specifically, we requested students who had prior Nashville State enrollment, but had not attended for at least a whole year preceding the Fall 2018 introduction of the TN Reconnect program. Nashville State provided names of all students fitting this description—in total, 351 students, who had last enrolled at Nashville State between Fall 1988 and Summer 2017. We decided to focus attention on the students who were last

enrolled since 2011-12 to fit the approximate timeframe of our study; this reduced the population to 235 students.

The TN Reconnect Coordinator at Nashville State—who has frequent contact with Reconnect students—sent an email to all of our selected population, with a guaranteed $40 Nashville State bookstore certificate for the first ten students who registered to interview. See Appendix 3 for the text of the student invitation email. We received fourteen total responses and ultimately interviewed eight students.

Students were each asked a series of 24 questions on the topic of their educational experiences at Nashville State. The average interview took 20 minutes, with the shortest taking just over ten minutes and the longest 28 minutes. See Appendix 5 for the student interview protocol.

The interviews were structured to begin with several basic questions including when the student started, what their initial major was, when they returned to school, and what prompted their return. The second portion of the interview asked the student to reflect on the issues they faced and how Nashville State as a college was able to either mitigate or exacerbate these issues. The goal for these reflective questions was to parse out the true needs and issues of the students, how many of those are similarly identified by the faculty and staff, and what gaps if any are hidden from the understanding of either interview group.

Sample

Quantitative.

We used purposive sampling strategy to select all students. The sample included all first-time degree-seeking students for each academic year within our time frame who attempted at least six credit hours in their initial fall semester. We chose a minimum of six credit hours to be inclusive of as many students as possible while recognizing that most Tennessee state financial aid policies require students to be enrolled at least half-time.[8] Following the standard IPEDS definition of "first-time" (NCES, 2018b), we also include in the sample all first-time students enrolled in those fall semesters who attended Nashville State in the prior summer term as well as all students who received college credits from some prior-learning assessment

[8] We performed the same analyses on all students who attempted at least 12 credit hours in their initial fall semester—to capture "first-time, full-time" students. Because our findings for both sets of analyses were very similar, we provide just the more inclusive six-credit hour minimum analyses here for clarity. We can provide all full-time findings upon request.

opportunity, such as dual enrollment courses or CLEP exams. From this sample we excluded all students who first enrolled in a summer semester and did not subsequently enroll in the fall semester—approximately three percent of the population.

Missing quantitative data.

We removed observations that had missing values for three variables: College Ready, Race/Ethnicity, and Fall Year 1 Credits Attempted. All other variables had complete observations. Table 3 displays the missing values and highlights that just 4.6 percent of the initial 6,280 observations—or 288—were deleted, leaving 5,992 observations. The plurality of missing data originates from the College Ready measure, with 2.2 percent of the administrative data missing both the high school GPA and ACT COMPASS scores. A large amount of missing values may cause bias if it results in a sample that is no longer reflective of the population (Croninger & Douglas, 2005), but our level of missing—under 5 percent—paired with our large sample does not give us concern of bias.

Table 3: Observations Removed Due to Missing Data

Variable	N	# Missing Values	Revised N	% Deleted Cases
College Ready	6,280	136	6,144	2.2%
Race/Ethnicity	6,144	102	6,042	1.7%
Fall Year 1 Credits Attempted	6,042	50	5,992	0.8%
Total	**6,280**	**288**	**5,992**	**4.6%**

Source: Tennessee Board of Regents

Note: Data include Academic Years 2012-13, 2013-14, 2014-15, and 2015-16. Data excludes all students who first enrolled at the Cookeville Campus since TBR administratively transferred that campus to Volunteer State Community College in 2017.

Descriptive statistics.

Descriptive statistics for the sample are reported in Table 4. The background student characteristics identify a student cohort reflective of the institution's current population. As stated above, Nashville State currently has a population older than the national average (just under 20) and our sample reflects that with an average age of 22.2.[9] A larger percent of students—at nearly 56 percent—are women, which is slightly less than the nearly 60 percent of Nashville State's

[9] This holds true when narrowing the focus to full-time students, as well, whose average age if restricted in our sample is 20.8.

population that are currently women yet reflective of their majority status. Approximately one-half are white and a little over one-third are black, both reflecting the overall population of Nashville State.

The student academic profile suggests that just 42 percent of students are considered college ready. This reflects the Tennessee community college average of a little over 60 percent of incoming first-year students requiring learning support of some kind (THEC, 2018a). A quarter of all students complete a math Gateway course in their first year, while 43 percent complete an English Gateway course. Approximately two-thirds of students complete their total cumulative attempted courses by the end of their fall semester; this completion rate inches up to as much as 80 percent by the end of the spring semester in year two, indicative of the fact that students who are still enrolled are likelier to have a higher academic profile than that of students who depart in earlier semesters.

With regards to institutional experiences, just 10 percent of students complete the First-Year Experience course at some point in their first year at Nashville State. In the initial semester, 60 percent of students primarily enrolled at the main campus (White Bridge), with Southeast and Clarksville ranking second and third in size, respectively. Nearly ten percent of students transfer to another Nashville State campus in their spring semester. Over the time frame under observation in this study, nearly one-fifth of students change campus locations at least once, suggesting that a nontrivial number of students are transitory between the five campuses. Nevertheless, over 80 percent of students are confined to the services that are offered at their first primary campus. Finally, a plurality (28 percent) is assigned to the Healthcare Professionals in their first semester, following their initial choice in major. Just a little over eight percent are in the English, Humanities, & Creative Technologies department. The remaining three departments each received approximately one-fifth of the sample. Approximately 11 percent of students transfer between departments throughout the first six semesters. Because advising is conducted by faculty—not professional advisors—the department location is indicative of services provided strictly by faculty.

Table 4: Descriptive Statistics for First-time Students with at Least Six Attempted Credit Hours in Initial Fall, 2012-13 thru 2015-16

Background Student Characteristics	M	SD
Incoming Age	22.2	7.4
% female	55.7	
% White	49.6	
% Black	35.3	
% Hispanic	7.7	
% Other Ethnicity	7.5	
Student Academic Profile	**M**	**SD**
College Ready	41.5	
% Completing Math Gateway, Year 1	26.3	
% Completing English Gateway, Year 1	43.6	
Cumulative Credits Attempted Fall Year 1	12.8	6.6
% Successfully Earned Fall Year 1	67.2	38.8
Cumulative Credits Attempted Spring Year 2	24.1	8.4
% Successfully Earned Spring Year 2	60.4	36.7
Cumulative Credits Attempted Fall Year 2	37.4	11.6
% Successfully Earned Fall Year 2	78.6	22.8
Cumulative Credits Attempted Spring Year 2	49.2	13.3
% Successfully Earned Spring Year 2	80.6	19.9
Cumulative Credits Attempted Fall Year 3	50.6	24.7
% Successfully Earned Fall Year 3	78.5	20.3
Cumulative Credits Attempted Spring Year 3	63.1	23.4
% Successfully Earned Spring Year 3	79.4	18.3
Institutional Experiences	**M**	**SD**
% Completing First-Year Experience Course, Year 1	9.3	
% White Bridge Campus -- Fall Year 1	60.0	
% Southeast Campus -- Fall Year 1	14.6	
% Clarksville Campus -- Fall Year 1	11.6	
% Humphrey County Campus -- Fall Year 1	8.6	
% Dickson Campus -- Fall Year 1	5.3	
% Location Change -- Fall Year 1 to Spring Year 1	9.5	
% Location Change -- Fall Year 1 to Spring 3 Year 3	17.7	
% Business, Mgmt, & Hospitality -- Fall Year 1	20.9	
% English, Humanities, & Creative Technologies -- Fall Year 1	8.2	
% Healthcare Professionals -- Fall Year 1	27.6	
% Science, Technology, Engineering, & Mathematics -- Fall Year 1	22.3	
% Social & Behavioral Sciences -- Fall Year 1	21.0	
% Department Change -- Fall Year 1 through Spring Year 1	5.1	
% Department Change -- Fall Year 1 through Spring Year 3	11.4	
	N = 5,992	

Source: Tennessee Board of Regents

Qualitative.

Staff interviews.

In an effort to capture a wide variety of professional viewpoints, interviews were conducted with campus staff, faculty, deans, and campus directors. These staff included a range of new and veteran faculty members from each major discipline as defined by campus organizational charts. In total 14 staff interviews were conducted including the five directors of each satellite campus, four Deans and four faculty advisors from the main White Bridge Campus, and the Associate Vice President of Student Affairs.

Student interviews.

Of the 1,600 Tennessee Reconnect students at Nashville State, 70 percent are female, 50 percent our white, 37 percent are black, the average age is 33, and half of are enrolled at White Bridge. All students we interviewed were women and ranged in age from 24 to 59 years (average age 36). Three students identified as white and five as black. By design, all students had enrolled at some point at Nashville State between 2011 and 2016; three of whom enrolled intermittently, one going back as far as the 1990s. Five of the eight students were presently enrolled at White Bridge—reflective of the Reconnect population and the overall student population—, one enrolled at East Davidson, and the other two primarily at the Southeast campus. The group was nearly reflective of the overall population of students and of Reconnect Students in race/ethnicity identification, but not so on sex. The group was reflective of the overall age of the Reconnect population but not the age of the overall student population.

Methods

Quantitative.

We imported all student administrative data into Stata, a statistical software package, to complete our quantitative analysis.

Our analysis employed three methods: descriptive statistics, means comparisons, and logistic regressions. Descriptive statistics allowed us to determine when students transfer and when they return if they do. We counted how many students for each semester's entering cohort depart by the next semester, and then counted how many students return following at least a semester's away from campus. This analysis allowed us to pinpoint the semesters that saw the highest rates of departure and then the semesters students are likeliest to return.

We then utilized means comparison tests—two sample t-tests for our binary variables (age, sex, college readiness, gateway course completion, attempted credits completed, first-year experience course completion) and Analysis of Variance (ANOVA) tests for group variables (race/ethnicity, primary campus, assigned academic department)—to determine what differences within each of our independent variables are statistically significant. We followed-up with selected post-hoc Tukey tests to test significance between any two groups within group variables that were determined statistically different through the ANOVAs and passed the equality of variance tests.

Finally, we used logistic regression to test the background student characteristics, student academic profile, and institutional experiences on two selected departure opportunities: Fall Year 1 to Fall Year 2 and a narrower time frame of Spring Year 1 to Fall Year 2. We control for academic year to capture any omitted variables that may be associated with different academic years; various leadership change and financial aid opportunities (the introduction of TN Promise, for instance) could introduce new influences on retention; controlling for academic years could minimize such bias. The selected regression we use is:

$$y = \beta_0 + \beta_1 \text{Background Student Characteristics} + \beta_2 \text{Student Academic Profile} + \beta_3 \text{Institutional Experiences} + \beta_4 \text{Academic Year} + \varepsilon$$

The variables within each set of independent variables are outlined in Table 1 above.

The second model—for Spring Year 1 to Fall Year 2—also captures any change in primary campus and in assigned academic department, allowing us to test how a change in institutional experience may influence departure. Because departments control advising and other services for assigned students, and because campuses offer different services and support, we hypothesize that a student who changes either will experience potentially disruptive treatments, thereby influencing their retention decision. Such a decision can only logically impact the Spring Year 1 to Fall Year 2 retention model, since, at least within our selected time frame, only students that are retained from the first fall semester to spring semester have an opportunity to switch campuses or assigned departments.

Qualitative.

We converted all recorded interviews into transcripts by hand and uploaded to Dedoose, after which all three researchers conducted an open coding process. See Appendix 6 for a sample of open codes.

In total 62 individual codes were discovered spanning six major thematic categories: process, college staffing, individual student issues, external personal

factors, external policy factors, and interpersonal interactions. Each of these six overarching themes, as detailed in Table 5, includes a series of related codes that were found in both the staff and student interviews.

The first theme of ***process*** came out of several of the questions and was the code with the highest number of mentions from across all interviews. The second major set of codes relates directly to the ***college staffing***. This theme was separated out from the process theme in an effort to make a distinction between the roles a staff member fills and the expectations of duties they perform. The third overall theme is that of ***individual student issues***. These codes included positive and negative impacts. The fourth overall theme that appeared consistently in the interviews was that of ***external personal factors***. These seemed particularly tied to the type of commuter student population that Nashville State serves. These codes appeared to be particularly impactful in the opinion of the staff interviewed, suggesting that the staff do have a fairly accurate understanding of the issues faced by their student population. The fifth theme includes current higher education policy in Tennessee and ***external policy factors***; the "Tennessee Promise" and "Tennessee Reconnect" programs. Both of these factors appeared to be salient in the type of student that is attracted to attend Nashville State but they appear to be having very different impacts on the college. The final theme is that of ***interpersonal interactions***. These codes focused specifically on the relationship between Nashville State and the student but also the relationship between the student and their family. The full codebook can be found in Appendix 7.

Table 5: Interview Themes & Codes

Process	*Individual Student Issues*	*External Personal Factors*	*External Policy Factors*	*College Staffing*	*Interpersonal Interactions*
academic checklist	academic issues	family responsibilities	Tennessee Promise	financial aid	building community / relationships
academic advising	classes enjoy	financial issues	Tennessee Reconnect	online courses	lack of support at home
career planning	classes not enjoyed	child care		reconnect café	onboarding
career counseling	college knowledge	geography		registration	parental expectations
courses available for major	desire a change in career	cost		staffing	peer support
disability support services	finish what they started	convenience		student services	school reputation
faculty assistance	fit	homelessness			
NSCC 1010	full-time	life issues			
NSCC different	grit	transportation			
NSCC help	gap in attendance	work responsibilities			
NSCC hurt	maturity				
orientation	mental health				
process	overwhelm				
QEP	part-time				
staff professional development	student challenges				
technology issues'	student expectations				
transfer issues	student self-sufficiency				
utility of courses	swirl				
why chose major	time management				
	why left				

Results

Quantitative

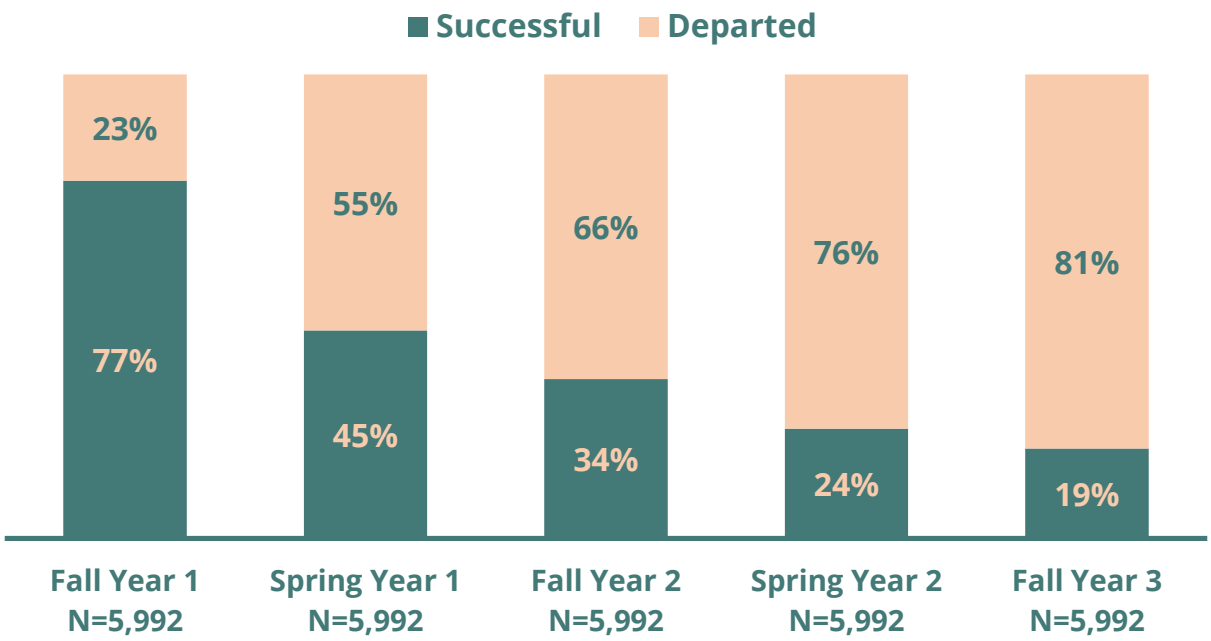
Research Question 1:

What are the most common characteristics—both demographically and academically—of students that depart Nashville State? When are students most likely to depart and, if they return, who returns and when?

Who departed and when?

Figure 7 reports the cumulative percentage of students that enrolled in Fall Year 1 and did *not* continuously enroll in each of the following semesters, thereby being coded *departed* in one of the subsequent semesters. By the start of Spring Year 3, Nashville State lost 80 percent of all students that initiated enrollment in Fall Year 1. Of the 5,992 that started in the sample, 4,831 left Nashville State before earning a certificate or degree. Over half of the entering students—55 percent, or 3,308—left before the start of Fall Year 2; 76 percent were gone by the start of Fall Year 3.

Figure 7: Cumulative Semester Departure



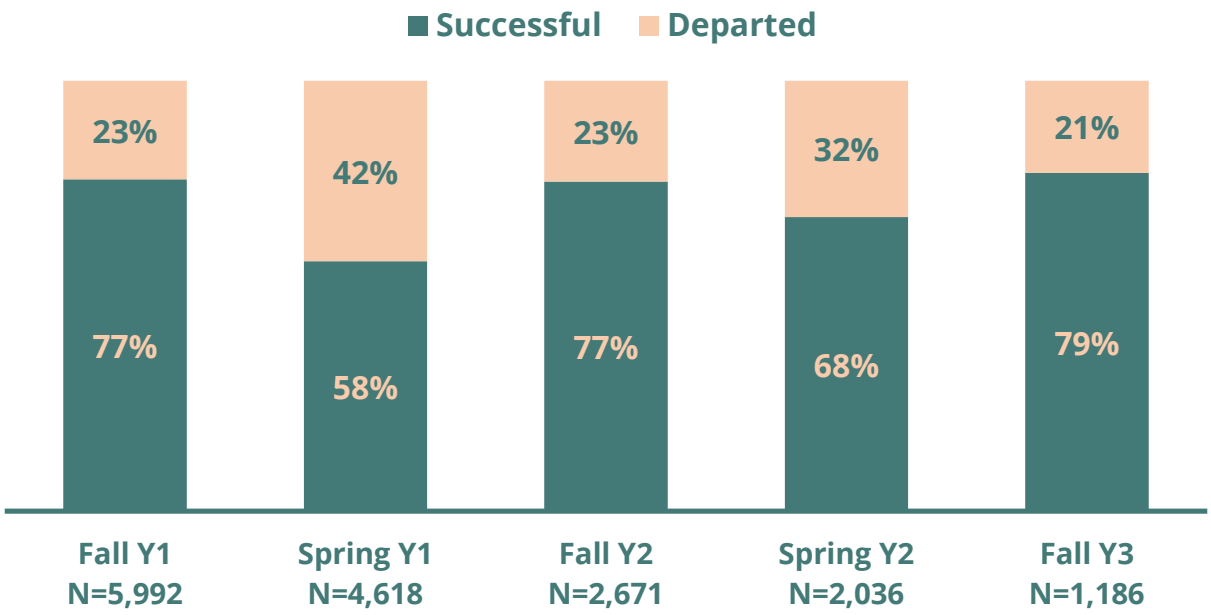
Source: Tennessee Board of Regents

Note: Graph depicts cumulative departure by semester. Students who depart prior to attaining an award or certificate are considered departed. All other students are considered successful.

Figure 8 compares departure by each semester's entering cohort. All students who were coded departed for a prior semester are subsequently excluded

from analysis; similarly, all students who are coded *successful* in a prior semester, but graduated with an award, are subsequently excluded. The largest percent of semester-to-semester attrition occurred between Spring Year 1 and Fall Year 2. Forty-two percent of the entering cohort in Spring Year 1—1,935 of the entering 4,618 that spring semester—were gone by the fall.

Figure 8: Semester to Semester Departure



Source: Tennessee Board of Regents
Note: Graph depicts departure by semester for each semester's entering cohort. All students who qualify as departed in one semester are subsequently removed from analysis. All students who attained a certificate or degree before leaving (considered *successful* for that semester) are also subsequently removed from analysis.

There is some nuance to those who opt to enroll from one semester to the next. Table 6 reports the breakdown of students that were considered *departed* or *successful* over the ensuing six semesters. In total, of all students considered *successful*, 306 (five percent of all students) left campus but did so with a degree or certificate; 855 (just over 14 percent of all students) were retained. Of all students considered *departed*, 452 (six percent of all students) transferred immediately to either a community college or a locally-governed institution following their departure from campus; 270 (just under five percent) enrolled strictly at an LGI. The bulk of these transfers occurred following a spring semester, with nearly two percent of the entering cohort for Spring Year 1 transferring to an LGI prior to Fall Year 2, and nearly two percent of the entering Spring Year 2 cohort transferring to an LGI prior to Fall Year 3. Nearly three-quarters of all students are considered stop-outs—showing no transfer activity within TBR and leaving with no credential.

Table 6: Departure Type by Semester

Departure Type by Semester						
Entering Cohort	5,992	Departed			Successful	
	Entering Cohort	Community College Transfer	University Transfer	Stop-out	Award Prior to Departure	Retained
Fall Year 1 to Spring Year 1	5,992	0.4%	0.4%	22.1%	0.0%	77.1%
Spring Year 1 to Fall Year 2	4,618	0.8%	1.6%	29.9%	0.2%	44.6%
Fall Year 2 to Spring Year 2	2,671	0.2%	0.4%	9.8%	0.2%	34.0%
Spring Year 2 to Fall Year 3	2,036	0.2%	1.9%	8.7%	3.4%	19.8%
Fall Year 3 to Spring Year 3	1,186	0.1%	0.2%	3.9%	1.3%	14.3%
	Percent of Total	**1.7%**	**4.5%**	**74.4%**	**5.1%**	**14.3%**

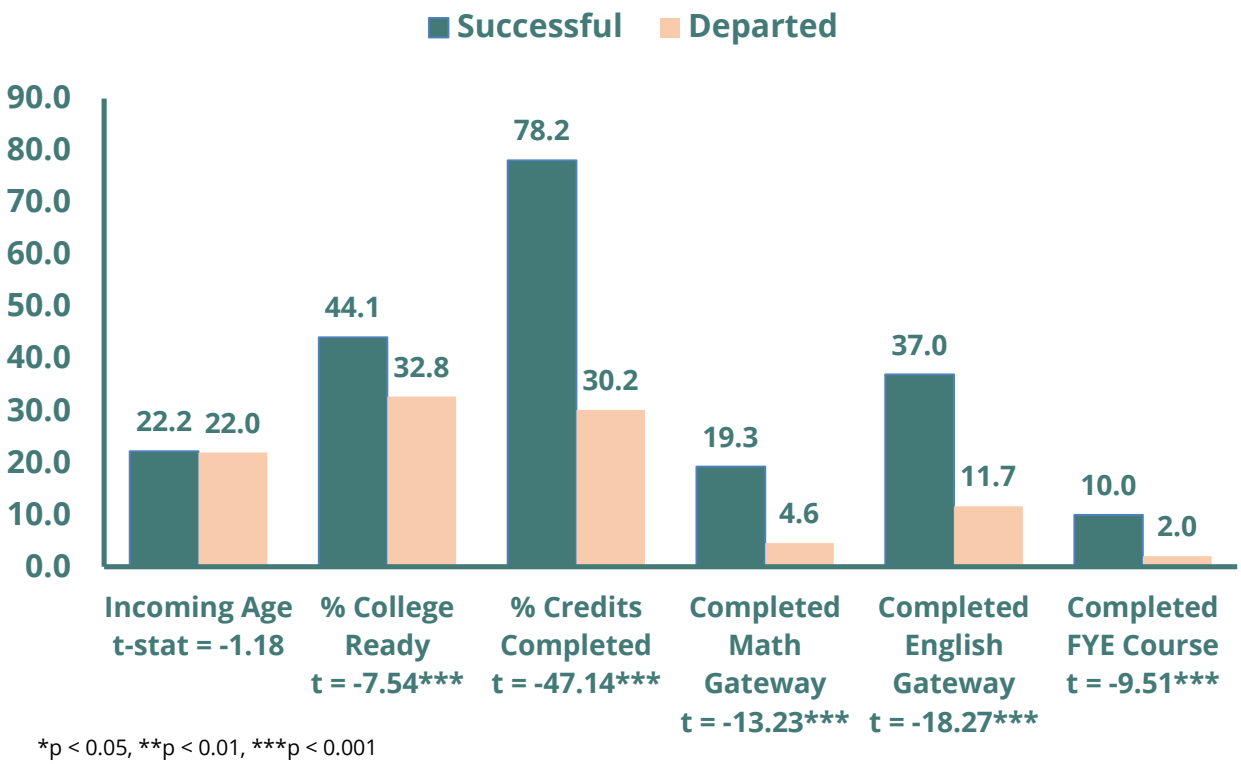
Source: Tennessee Board of Regents

Students who depart do robustly differ on our selected variables from those who are considered successful. Figure 9 and Figure 10 compares means on the dependent variable observations using the two-sample t test for the first two semesters of observations.[10] As expected, departed students were consistently lower on college readiness than successful students—nearly 12 percentile points lower in the first fall semester and 17 percentile points lower for the spring semester; both differences are statistically significant at the 0.001 level. This suggests that within both semesters, students who are less prepared for college have a higher likelihood for departure than those who are more prepared. Likewise, the percent of credits completed are much lower—by as much as 48 percentile points for Fall Year 1 and 34 percentile points for Spring Year 1—for departed students than for successful students. Both differences are statistically significant. Students who depart after their first semester at Nashville State complete less than a third of their attempted credit hours; further analysis not shown in these figures found that 55 percent (758 students) of students who departed after their first semester completed none of their attempted credit hours.

Students who completed a First-Year Experience course within their first semester were much more likely to be successful than students who did not, with ten percent of successful students completing a FYE course in Fall Year 1 and just two percent of departed students doing so. Although the difference persisted in Spring Year 1, it was not statistically significant at the 0.05 level. Finally, students who completed either the Gateway math or English courses within the first year were more likely to be successful than those who did not.

[10] We tested differences in means for all five semesters and for total departure between Fall Year 1 and Spring Year 3. We can provide all tests upon request; just the first two semesters are shown here for simplicity.

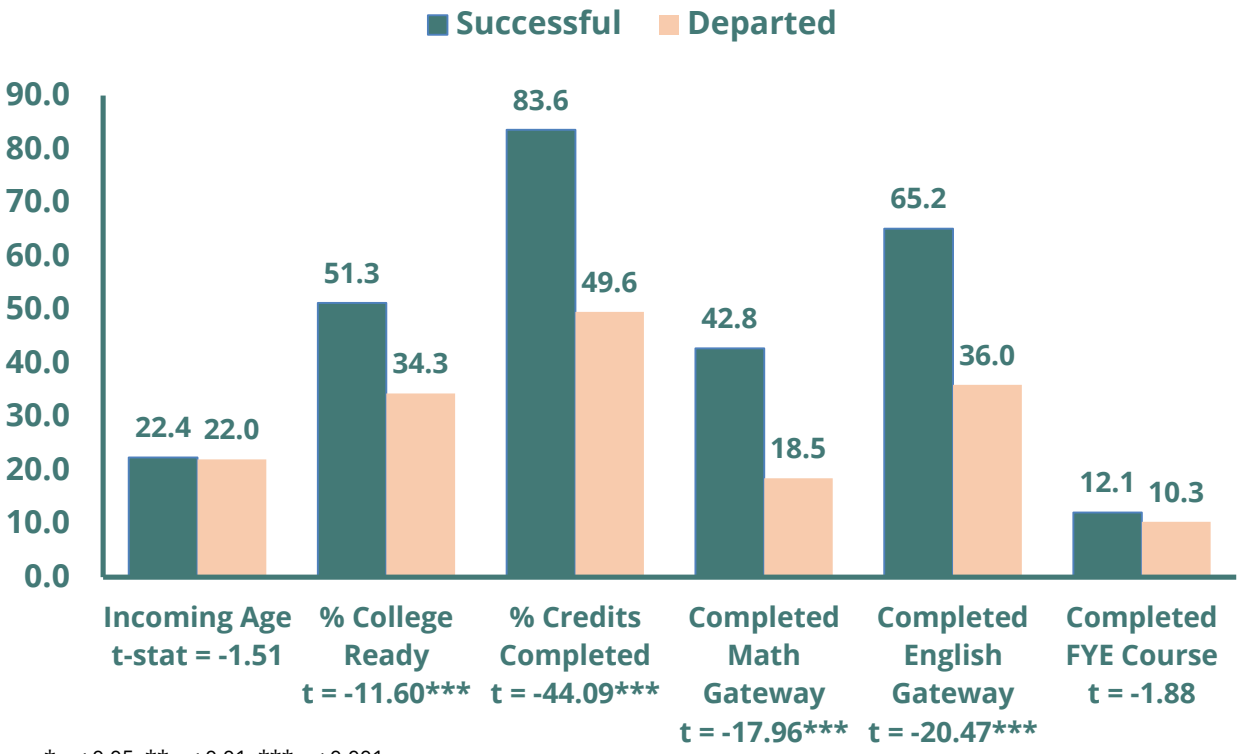
Figure 9: Fall Year 1 to Spring Year 1 Departed Comparisons



*p < 0.05, **p < 0.01, ***p < 0.001
Source: Tennessee Board of Regents
Note: Graph depicts means comparisons of background student characteristics, academic profile, and institutional experiences between students who departed immediately following Fall Year 1 and students who either returned Spring Year 1 or left with a degree or certificate.

Although there are differences in age for both observations, neither were statistically significant. Further analysis did determine statistically significant differences in age for departure between Spring Year 2 and Fall Year 3—with departed students nearly a year-and-a-half younger than successful students—and for overall departure over the full time span of observation, from Fall Year 1 to Spring Year 3—with departed students nearly a year younger than successful students. The timing of statistical significance may suggest that younger students are more likely to transfer with no award toward the end of their second year.

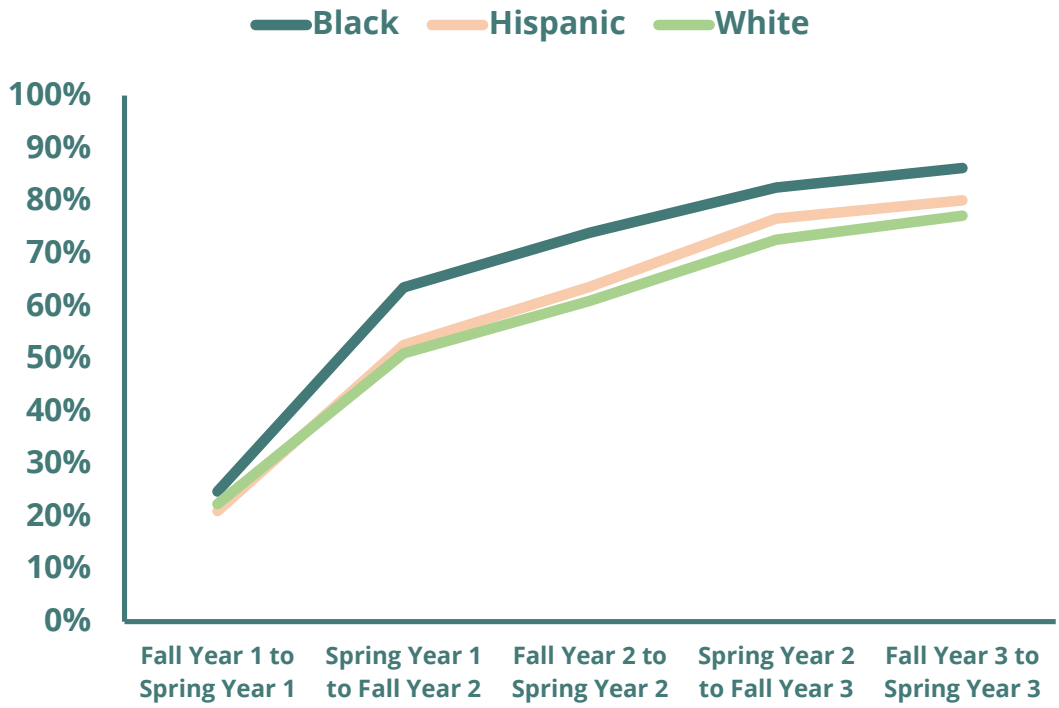
Figure 10: Spring Year 1 to Fall Year 2 Departed Comparisons



*p < 0.05, **p < 0.01, ***p < 0.001
Source: Tennessee Board of Regents
Note: Graph depicts means comparisons of background student characteristics, academic profile, and institutional experiences between students who departed immediately following Spring Year 1 and students who either returned Fall Year 2 or left with a degree or certificate.

We tracked the percentage of students who departed by race/ethnicity over the six subsequent semesters. Figure 11 shows the cumulative departure over the time frame for selected ethnicities. Black students have a consistently higher departure rate than both white and Hispanic students—with a six-semester (Fall Year 1 to Spring Year 3) cumulative 86 percent departure rate, in comparison to white (77 percent) and Hispanic students (80 percent). This cumulative six-semester difference between black students and white (77 percent) and Hispanic (80 percent) is statistically significant at the 0.001 level. The differences between the other students (e.g. between Hispanic and white students) are not statistically significant.

Figure 11: Cumulative Departure by Selected Race/Ethnicity



Source: Tennessee Board of Regents
Note: Graph depicts cumulative departure by semester by race/ethnicity. Students who depart prior to attaining an awrd or certificate are considered departed. All other students are considered successful.

Appendix 8 further breaks down semester-by-semester departure by race/ethnicity and tests, using Analysis of Variance, whether the difference in means among the different race/ethnicity populations are statistically significant. We find only the Spring Year 1 to Fall Year 2 departure rates to prove statistically significant while passing our test for equal variance, with just over half of black students entering Spring Year 1 departing prior to Fall Year 2; here, again, the differences between black students and white students (37 percent) and Hispanic students (40 percent) were statistically significant. Practically speaking, over half of entering black students in the spring semester of the first year were not retained for the following semester—nearly 15 percentile points higher than white students.

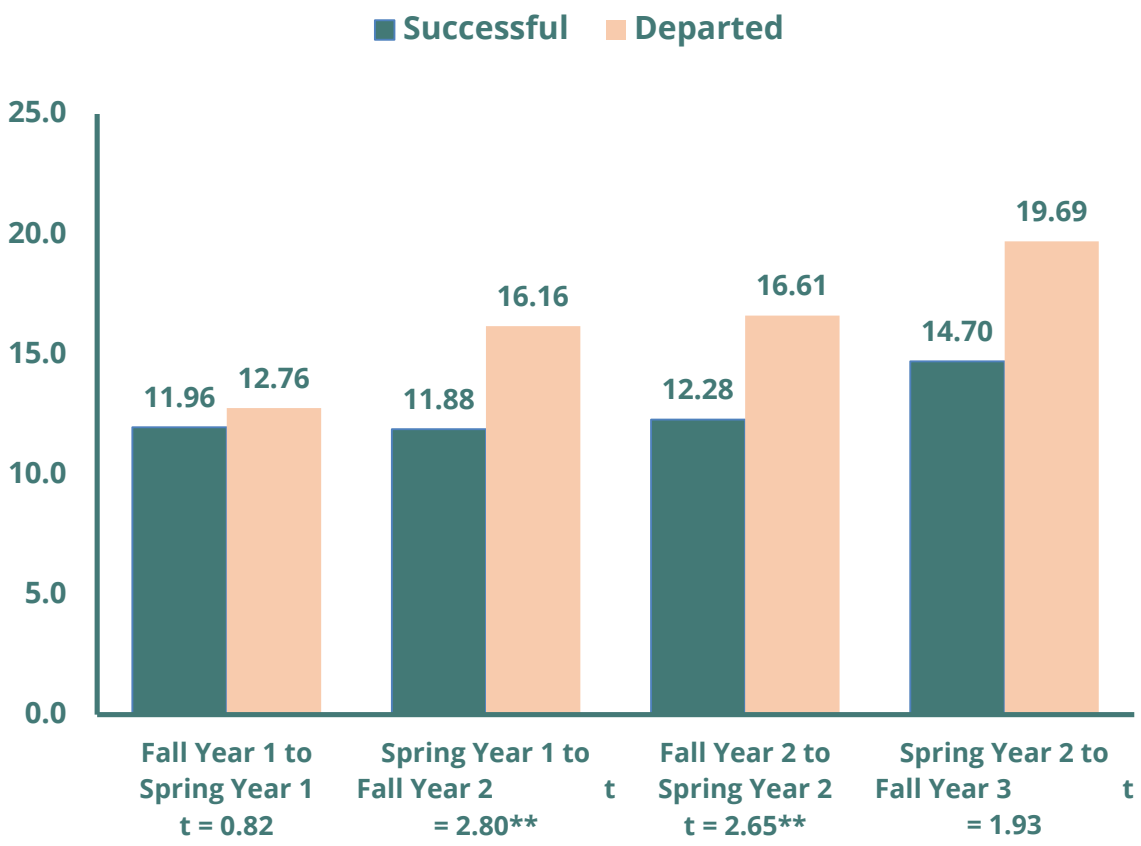
Similar comparison tests—using two sample t-tests—were performed for sex. Although men had a nearly consistent higher departure rate, the difference was only considered statistically significant for the Fall Year 1 semester—with nearly one-quarter of men departing and just one-fifth of women doing so—and cumulatively over the six semesters: by Spring Year 3, 82 percent of men had departed and nearly 80 percent of women. See Appendix 9 for the comparison of

means for sex. Although this cumulative difference is significant, it is not meaningful, indicating that the differences in departure between sexes narrow and matter only early at Nashville State.

Appendix 10 shows per semester and cumulative departure rates by students first campus location. The comparison means for the six-semester cumulative departure rates and the Spring Year 1 and Fall Year 2 cohorts were statistically significant among the campuses. The means for departure rates at the Clarksville Campus across the six semesters were mostly higher (perhaps reflecting the veteran population) but only statistically significant for the Fall Year 2 cohort (we did not perform a post hoc test for the six-semester timeframe since it did not pass our equal variance test). The White Bridge Campus had the highest departure rates in early semesters, being statistically significant higher at 45 percent than Dickson (35 percent), Humphreys (36 percent), and Southeast (39 percent) campuses for the Spring Year 1 cohort.

Whether a student transferred between campuses appeared to have a strong association with departure for two semesters. See Figure 12 for departure following change in campus location. Students who changed locations for their Spring Year 1 semester were over four percentile points more likely (16 percent compared to 12 percent) to depart than students who did not change campus locations. This difference persisted for the following semester, as well.

Figure 12: Departure Following Campus Location Change



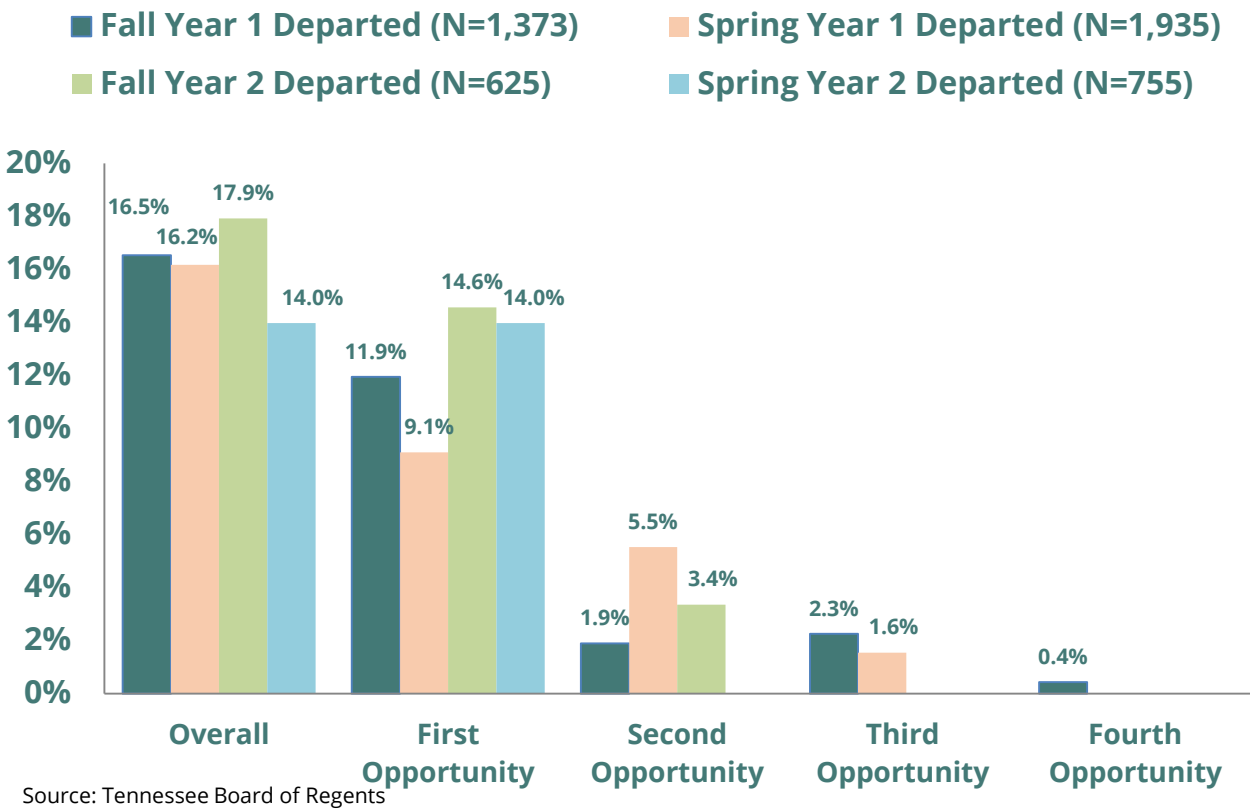
*p < 0.05, **p < 0.01, ***p < 0.001
Source: Tennessee Board of Regents
Note: Graph depicts means comparisons of students who switched primary campuses between semesters and then immediately departed the next semester to those who switched primary campuses and did not depart the next semester.

Appendix 11 shows cumulative departure rates by first assigned academic departments. The only difference in means that was found to be statistically signifiant was for the entering Fall Year 1 semester—students departing prior to the start of Spring Year 1. The departure rate for Healthcare Professions (at 20 percent in Fall Year 1) was six percentile points lower than for Business, Management & Hospitality (at 26 percent). The ANOVA test, however, did not pass the test for equal varaince and so we did not perform a post hoc test to determine whether this difference is statistically different. The observable difference between these two departments does not persist beyond the first semester. We also tested for differences in departure between students who changed assigned academic departments and those who did not. There was no consistency in the differences, nor any of the differences statiscally significant. There appears to be no strong association between assigned academic department and departure.

Who returned and when?

The final component of Research Question #1 asks who returns and when. Figure 13 depicts when students left compared to when they first returned, given either the numerous or few opportunities to return as dependent on when they initially departed.[11] In total between 14 and 18 percent of departed students return at some point by Spring Year 3, but the vast majority of these students—between 9 and 15 percent dependent on departure cohort—return at their first opportunity to do so. In other words, on average, approximately 12 percent of students who depart Nashville State are likely to return after one semester away from campus. The return rates greatly reduce for the following semesters, suggesting that Nashville State's availability to return students drops decisively after a student is away for more than one semester.

Figure 13: When Students Return After at Least One Semester Away



Source: Tennessee Board of Regents

Note: Graph depicts the percentage of students that departed at any time between Fall Year 1 and Spring Year 2 and returned to campus following at least one semester away. An *opportunity* is any semester that follows the semester a student first departed. Students who return during a summer semester are grouped with those who return in the fall.

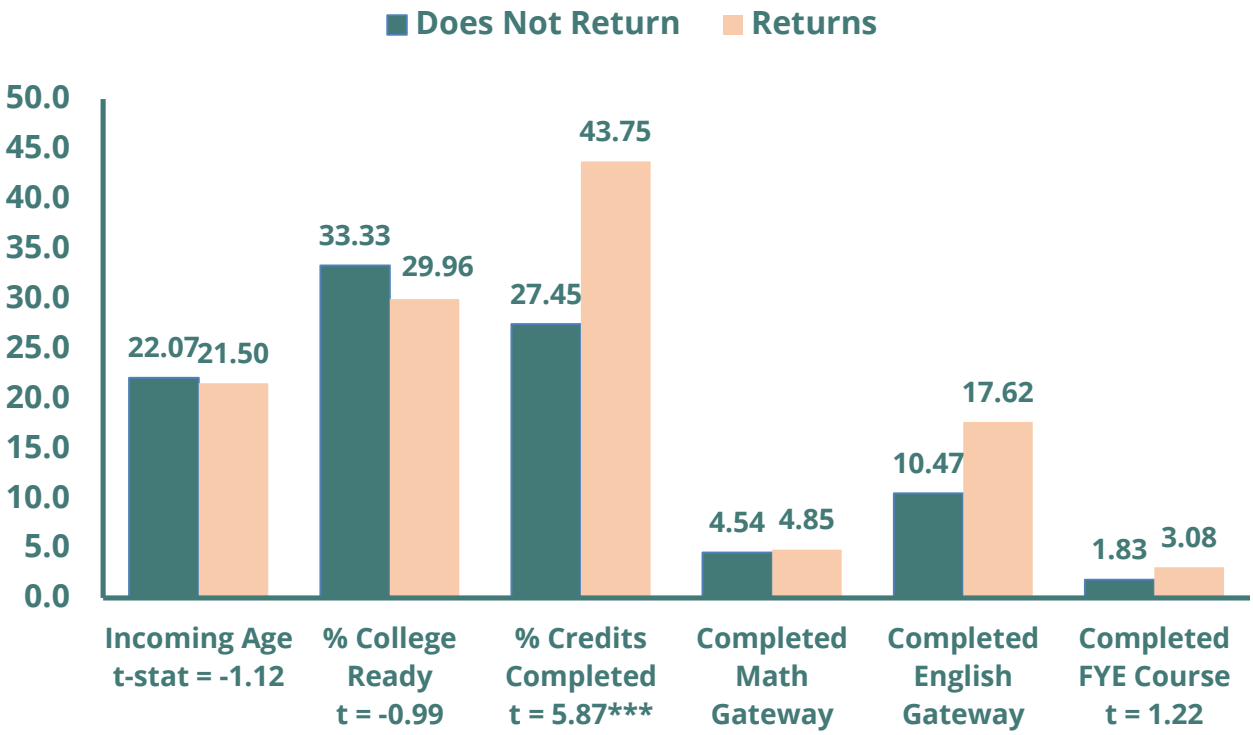
[11] We group students who first enrolled in a trailing summer into the fall semester. So students who departed in Fall Year 1 and returned Summer Year 1 are grouped together with those who return Fall Year 2 under "First Opportunity."

Notably, students who first depart in later semesters appear nearly as likely to return by Spring Year 3 as students who depart earlier, even though they have fewer opportunities to do so. A greater share of students who left either Fall Year 2 or Spring Year 2 returned at their first opportunity to do so than did students who departed after Fall Year 1 or Spring Year 1. This suggests that a student's likelihood to return within a given time frame increases the longer the institution initially retains them. See Appendix 12 for semester by semester student returns.

As with departed students, we compared the characteristics of students who returned compared to those who did not. These variables captured means attained when students first enrolled at Nashville State, not what they attained after returning. We focus on students that departed immediately following Fall Year 1 and returned at any time by Spring Year 3.[12] Figure 14 shows the difference in means and respective t-statistics for selected variables. We find no statistically significant difference in age, college readiness, or completion of the First-Year Experience course between those who returned and those who didn't. Significant differences were observed for cumulative credits completed and completion of the English Gateway course. Students who returned were, on average, doing so after having completed 44 percent of their attempted credits, compared with students who never returned completing just a quarter of their credits. Although the difference in the English gateway course completions wasn't as large, students returning are more likely to have completed their English gateway course prior to departure than those who did not. This significance does not hold for completion of the math gateway course.

[12] We conducted tests for students who departed at any point before Spring Year 3. We can provide those tests upon request.

Figure 14: Fall Year 1 to Spring Year 1 Departed: Who Returns?



*p < 0.05, **p < 0.01, ***p < 0.001
Source: Tennessee Board of Regents
Note: Graph depicts means comparisons of background student characteristics, academic profile, and institutional experiences between students who departed immediately following Fall Year 1 and returned by Spring Year 3 and students who departed but did not return by Spring Year 3.

We also tested for differences across first campus location, assigned academic department, race/ethnicity, and sex. See Appendix 12 for all comparisons of means. The only statistically significant difference was observed in first campus location. Using the analysis of variance (ANOVA) test—and observing whether the F-statistic is statistically significant—to measure differences across all five campuses, we determine that the differences in means between students who returned after departing immediately following Fall Year 1 was statistically significant at the 0.001 level across the five campuses. Table 7 presents the total percentage of students who returned by first campus location. On average, a fifth of students who attended Southeast in Fall Year 1 and then immediately departed returned to Nashville State at some point by Spring Year 3. In comparison, just 12 percent of Humphreys Co. students who departed returned. Returning behavior of students who depart differs across Nashville State's locations.

Table 7: Total Returned by First Campus Location

Campus	Departed	Returned	% Returned
Clarksville	577	75	13.0%
Dickson	247	34	13.8%
Humphreys Co.	376	46	12.2%
White Bridge	2,949	447	15.2%
Southeast	682	140	20.5%
Total	**4,831**	**742**	**15.4%**
		F-test	**4.99*** **

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: We ran an Analysis of Variance to test the difference in means within the respective groups between students who departed at any time but did not return and students who departed at any time and returned at any time.

Research Question 2:

Which institutional experiences have a significant influence on student retention? Do these milestones disproportionately affect different students within different academic majors or different Nashville State campuses?

We first answer this question by focusing squarely on retention in the first year since most students are lost by the end of the Spring Year 1 semester. Specifically, we focus on student departure from Fall Year 1 to Fall Year 2 and student departure from Spring Year 1 to Fall Year 2. Table 8 shows the Fall Year 1 to Fall Year 2 results and Table 9 shows the Spring Year 1 to Fall Year 2 results. Table 8 differs from Table 7 by measuring the impact of a change in a student's primary campus and a change in a student's assigned academic department on departure.

Table 8: Logistic Regression of Background Student Characteristics, Student Academic Profile, and Institutional Experiences on Fall Year 1 to Fall Year 2 Departure

Background Student Characteristics	Coefficient	SE	p-value
Female	-0.04	0.07	0.624
Black	-0.04	0.08	0.565
Hispanic	0.04	0.13	0.755
Other Race/Ethnicity	-0.45***	0.13	0.000
Incoming Age	-0.01*	0.00	0.011
Student Academic Profile	**Coefficient**	**SE**	**p-value**
College Ready	-0.09	0.07	0.224
Gateway Math Completed - Y1	-0.70***	0.08	0.000
Gateway English Completed - Y1	-0.85***	0.07	0.000
At least Two-thirds Credit Completion	-1.87***	0.07	0.000
Institutional Experiences	**Coefficient**	**SE**	**p-value**
Completed FYE Course	-0.91***	0.11	0.000
First Assigned Academic Depart.			
Business, Mgmt., & Hospitality	0.02	0.10	0.796
English, Humanities, & Creative Tech.	-0.02	0.13	0.854
Science, Tech. Eng., and Math	0.03	0.10	0.733
Social & Behavioral Sciences	0.01	0.09	0.874
First Primary Campus			
Clarksville Campus	-0.03	0.10	0.802
Dickson Campus	-0.15	0.15	0.309
Humphreys Campus	0.04	0.12	0.765
Southeast Campus	-0.08	0.09	0.404
Academic Year			
2013	0.10	0.10	0.282
2014	0.00	0.09	0.994
2015	0.16	0.10	0.099
Constant	2.18***	0.17	0.000
Pseudo R^2	0.261		

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: The First Assigned Academic Department comparison variable is Healthcare Professions, the First Primary Campus comparison variable is Whitebridge (Main) Campus, and the Academic Year comparison variable is 2012.

In both models we find little significance or meaningful differences in student background statistics. Only students whom we coded *other* for race/ethnicity were

found to have a lower likelihood for departure, in comparison to white students—translating to about a 35 percent less chance of departure; age had a significant but small likelihood of prediction for departure, where one year of seniority brings a student just a one percent less likely chance of departure.

With regards to student academic profile, students who completed gateway math and English courses in year one were, as expected, less likely to depart than students who did not. For the Fall to Fall retention timeframe, students who completed a math gateway course had about a 50 percent less likelihood of departure in both models. Students who completed an English gateway course had about a 60 percent less likelihood of departure. The impact was significant, but less for the Spring Year 1 cohort, with students completing their math and English gateway courses having about a 30 percent and 40 percent, respectively, less likelihood for departure. Similarly, credit completion was both significant and substantial in both models, with students who completed at least two-thirds of their attempted credits having, in both models, an 85 percent less likelihood for departure. College readiness—the composite of high school GPAs and ACT COMPASS scores—was not significant in either model.

With regards to institutional experiences, only completion of a First-Year Experience course had an impact on departure; students who completed an FYE course within the first year were about half as likely to depart as students who didn't. No significant impact was detected based on assigned academic department, primary campus location, or changes in assigned academic department or primary campus location, as the second regression measures. Our models fail to show that anything beyond FYE completion within institutional experiences as having an impact on departure.

The pseudo R-squared—used to measure model fit—for both models were good but not strong. For the Fall Year 1 to Fall Year 2 departure model (Table 8), the R-squared of 0.261 suggests that about a quarter of the variance in departure is explained by variance in the model; for Spring Year 1 to Fall Year 2 departure (Table 9), a pseudo R-squared of 0.210 suggests that a fifth of the variance in departure is explained by the variance in the model. We discuss potential reasons for good but not strong model fits in our Limitations section.

Table 9: Logistic Regression of Background Student Characteristics, Student Academic Profile, and Institutional Experience—Including Change in Academic Department and Primary Campus—on Spring Year 1 to Fall Year 2 Departure.

Background Student Characteristics	Coefficient	SE	p-value
Female	-0.02	0.08	0.787
Black	0.04	0.09	0.652
Hispanic	0.03	0.14	0.828
Other Race/Ethnicity	-0.44**	0.14	0.002
Incoming Age	-0.01	0.01	0.051
Student Academic Profile	**Coefficient**	**SE**	**p-value**
College Ready	-0.13	0.08	0.115
Gateway Math Completed - Y1	-0.36***	0.09	0.000
Gateway English Complete - Y1	-0.48***	0.08	0.000
At least Two-thirds Credit Completion	-1.94***	0.08	0.000
Institutional Experiences	**Coefficient**	**SE**	**p-value**
Completed FYE Course	-0.58***	0.12	0.000
First Assigned Academic Depart.			
Business, Mgmt., & Hospitality	-0.04	0.11	0.676
English, Humanities, & Creative Tech.	-0.07	0.14	0.626
Science, Tech. Eng., and Math	-0.02	0.11	0.827
Social & Behavioral Sciences	-0.04	0.10	0.725
First Primary Campus			
Clarksville Campus	-0.05	0.11	0.636
Dickson Campus	-0.16	0.17	0.324
Humphreys Campus	0.04	0.13	0.740
Southeast Campus	-0.08	0.10	0.451
Experience Change			
Spring Semester Department Change	0.06	0.14	0.694
Spring Semester Campus Change	0.00	0.11	0.998
Academic Year	**Coefficient**	**SE**	**p-value**
2013	0.07	0.11	0.511
2014	0.05	0.10	0.629
2015	0.02	0.11	0.885
Constant	1.50***	0.19	0.000
Pseudo R^2	0.210		

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: The First Assigned Academic Department comparison variable is Healthcare Professions, the First Primary Campus comparison variable is Whitebridge (Main) Campus, and the Academic Year comparison variable is 2012.

Qualitative

Research Question 3:

What institutional and personal factors do *college personnel* identify as most influencing students' decisions to depart Nashville State?

Staff members interviewed all had very consistent answers to the interview questions when asked about what they hear from students. They felt students were very honest in giving feedback to their offices and that their feedback closely aligned with what they understood of the student experience in their professional opinion. Deans, directors, and academic advisors all referenced the positive reputation of the school in the area as being a strong draw for students to attend. The range and high caliber of programs appear to be a particular point of pride especially for the faculty members who are actively in the classroom with students. The staff also cited the employability for graduates of their programs into a range of industries in middle Tennessee as important factors in why a student would choose to attend the college over other options in the area.

For many of the study participants, issues surrounding the structure, staffing and campus processes loomed as a significant barrier to student success. This first theme of ***process*** incorporates student services, onboarding of students, and the functional business offices of the college. One particular function that came to light was that of academic advising. In every staff interview, the subject of the academic advising system and how students come to access their advisor was addressed as a well-known and common issue. As cited in one staff interview:

"It's common knowledge that our advising system is broken...."

At Nashville State, academic advising is currently managed entirely by faculty members within their disciplines. However, there is no minimum daily or weekly mandated availability of these faculty members outside of the general guideline of "office hours" that can be organized and structured ad hoc by the individual faculty member. This is problematic in that the faculty member's schedule often does not line up with when students are taking courses. For example, a student may be taking evening courses, but their advisor may only offer advising hours in the morning. Additionally, many faculty are on nine month appointments, leaving a gap in advising staff during the summer and winter breaks—coincidently also a very busy time for course registration. During these times deans and campus directors are often asked to step-in to handle student questions, advising, and orientation.

This lack of consistently available advising was mentioned in nearly every interview as a major barrier to student success.

In the interviews with the faculty advisors, each one mentioned a passion for their work with students but also expressed concern at the volume of their advisee caseloads and not being able to meet the demand. Additionally, several advisors saw their role as most impactful when they were able to mentor and guide their students rather than just answer transactional questions, and expressed a desire to be able to have more time for conversations around goal setting and career exploration.

The second major theme of ***college staffing*** also arose throughout our interviews. In more than one staff interview it was mentioned that campus directors and deans often handle tasks that are atypical for their position and report commonly filling in for frontline responsibilities. This lack of consistent process around the student services appear to result in very different levels of service depending on time of year as well as across academic divisions. Processes and student service staffing also appear to vary widely from campus to campus. In interviews, the satellite campus directors report lower levels of staffing and having faculty and staff members simultaneously filling multiple campus roles. Because these campuses are serving fewer students and operating with a smaller number of staff, it is common to see overlapping student services offices. However, when looking at academic advising specifically, the staff that were interviewed overwhelmingly reported gaps in their system as a significant known barrier for their students.

Despite the lower number of staff at the smaller campuses, the interviews reported a very high satisfaction with the care and concern shown by the faculty and staff at these campuses. On an individual level, the college appears to be making a positive impact on the students, however it is when that effort is scaled to a larger population that it fails to consistently provide that level of service to all incoming students. For example, this comment from a staff member at a satellite campus illustrates how stretching staff too thin can impact students:

> *"Because if you have someone for example here that primarily deals with admission—although they have learned how to advise during that press time, when we have lots of students coming in that need to be admitted—that need to be advised—that need to see financial aid, and we have all those same folks doing multiple positions. I don't think that's serving the students the best way that we could."*

Because Nashville State serves a population that is predominately lacking in college knowledge, onboarding new students to the expectations of college is an important functional area. Interviews reveal that the college has implemented a new orientation program to properly onboard new students with the appropriate steps to get started, including initial testing, choosing a program, and registering for classes; however, while the orientation is advertised as mandatory, in practice it is not, due to staffing constraints at particular points during the school year. Relatedly, staff interviewees reported positive responses to the new NSCC 1010 course, an extended orientation class that runs for five weeks at the beginning of the term. The advisors interviewed all reported teaching the course and feel that it has positively impacted their students, helping with goal clarification, congruency in aligning interests to programs of study, and strengthened faculty-student interactions. They see this class as a way to start off on the best foot, remediating deficiencies in met student expectations and giving the student an outlet for their questions:

> *"One thing I would say ...NSCC 1010.... its curriculum is really about giving students information they can use now, reminding them of information they probably already have, and letting them know the resources that are available."*

While positive steps have been made at the college, it is clear from the staff interviews that staffing levels are not meeting the needs of the student population in an efficient and consistent manner.

Staffing levels at the college are particularly important when addressing common ***individual student issues***. These factors typically affect the student internally as an individual, including issues such as maturity, grit, academic preparedness and time management. These issues are not unique to Nashville State and have been widely researched as correlating closely with persistence and retention (Deil-Amen, 2011). Because of the population that Nashville State serves, the faculty and staff interviews report being well aware of these issues even if they are not always able to positively remedy or have the bandwidth to properly address them:

> *"Especially the first time students, they're not aware of the difference in expectations of being a college student....they're not used to managing their time, and then life very quickly gets in the way and they've never been taught how to prioritize and deal with those types of obstacles, and it's easier to just walk away."*

Likewise, a faculty advisor summed it up as:

"They don't know how to 'do' college."

Many of the staff interviewed reported that students with academic issues are not being well prepared for the rigors of college. While the students may have initially chosen Nashville State because of fit, availability of program, or geographic location, their expectations did not match their experience as they had overestimated their ability and underestimated the amount of time needed to be successful. From the staff perspective, this gap in clearly understanding what college will be like and what will be demanded of them causes a strong dissonance and results in the student encountering a stumbling block that causes them to lose confidence and stop out:

> *"So, I just believe it's an expectation issue—on both parties. You know, what we're expecting as a college from the student and what the student is expecting from the college on their—on their side."*

Another significant issue the staff interviewees reported are student mental health concerns and the lack of an appropriate outlet for them on campus—another cross-over between the major themes we found. Nashville State currently does not have counselors on staff available to meet with students, and the faculty advisors reported in their interviews that they feel unprepared to fill this additional role with their students. One staff member addressed this issue, stating:

> *"We have to have the conversation for mental health services. We have so many students here who are suffering from stress and anxiety and we don't have any resources here. All we have is like a list of resources in which we can tell students, 'here, call these folks, call this, call that.' But that, that's a struggle. And faculty—it's really hard on faculty because they're not trained. I had one student who had a suicide attempt this semester, the faculty—she's amazing, she called [an off-campus counseling service] with the student and has gotten…like the student has been contacting her, emailing her, texting her after class."*

While these issues are not unique to Nashville State, they are compounded by the existing issues with processes and campus staffing. The faculty and staff report all working to the best of their abilities but still feel the college could be doing more in terms of resources. One staff member voiced frustration in being unable to track students across campuses, noting that although Nashville State has

an early alert system—one that helps tracks which students have individual personal issues or academic challenges—the processes and technology in place limit the ability of administrators and advisors to see real-time updates across campuses. These virtual firewalls magnify the staff's inability to support students that traverse across the service area.

Many of these internal struggles students are facing are compounded by ***external personal factors.*** As explained in the staff interviews and corroborated in the student interviews, the faculty and staff do have a significant sense of the outside factors that are impacting their students. Staff interview participants identified various life issues as consistent barriers to retention among their students, encompassing issues such as transportation, work responsibilities, financial issues, and family responsibilities. Their answers to the question, "why do students choose not to finish their intended program at Nashville State Community College?" reveal their perception of a complex web of life issues for their students, as evidenced in these excerpts:

> *"We had a semester where I know one student was kicked out of her house and living out of her car…Other things that I hear are just life situations that get in the way: child care. Umm, you know they, they think that they can come and everything is worked out and then they have child care issues, or taking the bus every day isn't as easy as they thought…doctor's appointments, etc., start getting in the way. Students encounter so many barriers in their life that the first wall that's thrown up—instead of looking for ways to go around and move on, they're already ready to say, 'oh, okay, I knew I couldn't do it.'"*

Similarly, another staff member explained:

> *"Community college is so different than a university—a university they have their own different struggles, for sure. But we don't have the student whose job is to take classes. We're just one component of our students' lives."*

These external factors are often outside of the student's control but yet still fall to the student to manage and overcome. While the staff at Nashville State report being well aware of the common issues their students are struggling with, there has been little in the way of structural institutional support designed to meet these needs, although that is changing. One program at the White Bridge campus that seems to have particular utility is the Metro Transit Initiative, where students are issued bus passes and the Metro system tracks and bills the college on a

semester basis. The interviews revealed that while the program has been widely well received it is currently limited to just the main campus, even though the satellite campuses report wanting to implement it too.

Because Nashville State services a population that is largely first generation and significantly under-resourced, these students are often facing significant monetary barriers while in college. From the interviews it is estimated that the majority of students attending school full time are also working part or nearly full-time jobs, and in some cases more than one job at a time. Even though the TN Promise and Reconnect programs cover tuition costs for many students, which does not mean the student can still afford to attend college. The periphery costs of textbooks, course materials, technological needs, and transportation to and from campus were often cited by both the staff as real worries each semester. The staff interviews reveal that new ideas for managing these issues creatively are readily offered but that institutional barriers exist that keep these potential solutions from being implemented; for example, on faculty member referenced a potential collaboration opportunity that could help students with family obligations:

> *"I would love to see an on-site daycare. That would give our early childhood students…. you know some hands-on practical experience. And they could figure out early on, that 'yes this is for me', or 'not for me.' But we keep running into snags like how to fund it and how to, you know, where it would be, and what would the rules and regulations would be. But I think on-site daycare would really benefit a lot of our students."*

In addition to managing issues facing students in coming to Nashville State, the college is also managing the repercussions of ***external policy factors*** that have shaped the landscape of the students who attend the college. The impact of the government financial aid programs TN Promise and TN Reconnect surfaced several times during the interviews but each for substantially different reasons.

The TN Promise program targets first-time college freshmen coming directly from high school. Staff report hearing from students that they are pressured into attending because a parent or guardian wants them to, not necessarily because they themselves desire to. That disconnect often manifests in disengagement and academic failure. Staff worry that this could be problematic as these students are creating a permanent academic record that will follow them in the future should they decide to come back to a college or university; students will have to contend with a transcript of failing grades and attempted coursework that may make them

ineligible for future financial aid. Similarly, in speaking about parental pressure, a staff interviewee stated:

> *"I think some of them do because parents are not always open to hearing that their child does not want to go to college especially when it is free. And sometimes that's the worst thing we can do to a high school graduate is force them into college right away."*

Contrast this with what the interviews suggest about the impact of the TN Reconnect program. TN Reconnect students who are coming back after an academic absence are reported by the staff as being more focused, driven, and having mastered some of the maturity issues that caused problems the first time they attempted college. The staff and faculty recognize this shift and the value that the mature student brings with their grit and determination to be successful, as well as a stronger work ethic that they have developed in their time away from campus. It also appears that students who are coming back after a period away are more familiar with managing a bureaucratic system and are better able to self-advocate and navigate the campus systems after having been in the workforce. As stated by one of the staff interviewees:

> *"They're just at a point in their life when they're ready. So the first time you come to Nashville State or any community college you may be coming for whatever reason. When you come back, it's because you want it...There's a desire to succeed that is different. The desire to succeed as opposed to an expectation of success."*

Overall from the professional staff interviews, we found that the faculty advisors, campus directors, and deans all report an overall general satisfaction with their jobs as well as a belief that, despite the challenges they face, that they and their colleagues are able to do good work. Overwhelmingly, they expressed a desire to make a personal positive impact with their students and believe Nashville State is working towards that mission. Sentiments around the new president and leadership are positive and hopeful, and the staff have many ideas for potential changes they would like to see, as one reported:

"Well I've been here [many years] so I think it's a great place to work, and I think we do wonderful work, and we have wonderful people… it's just… there is just… things are changing and there's more questions, and you know and I think Tennessee Promise, and Tennessee Reconnect, there's just so much one has to know but I don't think anybody can…have enough people kind of specialize and we do have people but we have the faculty too they just can't do all of it."

Research Question 4:

What institutional and personal factors do *students* identify as most influencing their decisions to depart Nashville State?

In terms of institutional factors, ***process*** differences between the campuses were a commonly mentioned barrier in the student interviews, particularly with availability of program resources and courses. In one interview, a student who cannot drive mentioned the convenience of living blocks away from a smaller satellite campus but having to expend as much as $40 for cab fare in order to access tutoring at the White Bridge campus. She stressed the severe strain placed on her academic performance as well as her personal finances. Seemly trivial things such as inconsistencies in parking were also mentioned with frustration by students:

"So, at the Southeast campus [students] park in the blue lines. At the White Bridge campus you park in the white lines [and the faculty and staff park in the blue]. So if I got classes back and forth…..and one day I accidentally parked in the wrong spot and I told them, I said: 'You know I really just got confused because at one campus it's blue and at one campus it's white. And I was in a hurry, so I made a mistake.' And you know to me when you make a big deal out of that it just, it doesn't make sense…..We always try to follow the rules and I didn't want to be an exception to the rule. But I just wanted [the parking attendant] to understand…."

These students are typically coming to college with a lack of the college knowledge that university level or non-first-generation students have. When processes are unclear, inconsistent, or not intuitive, they become major sources of frustration, leading to the perception that the college "doesn't care" about the student and their experience.

Upon encountering a stumbling block, those students who report being able to self-advocate and seek out additional assistance when they needed clarity mention that they were eventually able to get the help they needed; they just needed to be persistent and explicit in their communication, often having to speak to multiple staff members before being able to get a solid answer:

> *"I met with a financial aid advisor who, in trying to figure out all the classes and what I needed to take for the degree, just told me to get on the DegreeWorks program to figure out. Umm, that's pretty hard to navigate. That wasn't helpful. That confused me. Instead of walking me through it. And I ended up having to communicate that to her explicitly and saying; 'I need you to help me. Because I don't understand this.' So, she did."*

These students often expressed frustration when a campus office was not able to give them a complete picture of their situation and could only speak to their silo of expertise. This experience seems to appear more frequently at the larger, main White Bridge campus and less at the smaller satellite campuses where staff are by necessity cross-trained to manage more responsibilities with fewer people. The limitations in ***college staffing*** appear to impact students less when the student is more mature and self-directed in a proactive manner towards their college experience.

Relationships were also cited as a balancing measure for ***external personal factors***. Off campus issues and competing demands on a student's time are problematic, but having an approachable instructor who was transparent and communicated quickly to student concerns can mitigate those issues. All of the students we interviewed reported working at least part-time and the majority reported working more than full-time while juggling family responsibilities. These additional demands on the student's time do take a toll. However, having a supportive faculty member who fosters an open line communication was seen by students as instrumental in their enjoyment of the class and their ability to be successful, especially for students taking a course online. In their interviews, students who were taking online classes appreciated when a faculty member was very responsive via email. Students who were taking an online class where they were expected to mostly interact with material online rather than the professor reported lower satisfaction with their course and the faculty member. Having a sympathetic and supportive faculty member—no matter the delivery method—was cited by these students as being a strong factor in helping them balance their responsibilities inside and outside of the classroom.

When asked to reflect on what struggles they faced when they first attended Nashville State, several of the students reported not being able to manage life and school. One student confessed:

> *"I left because life got in the way. I have children, a full-time job, and I just wasn't able to juggle all of those things and finish school."*

This echoes reports from the faculty advisors when discussing their TN Promise students who are first attending Nashville State and the struggles they see these new students encountering. The students almost unanimously reported wishing they had had someone to guide and push them back then; now that they returned, they reported having found that motivation in themselves as well as a commitment to coming back to finish what they had started. Despite this new found self-awareness, understanding the college's processes still represented the most significant barriers to student success. Upon returning to campus those students who were able to identify a strong on-campus mentor or faculty member reported this relationship; being able to reach out when they have trouble has made the difference in their ability to be successful as a returning student.

Because of the limited college knowledge that students bring with them to Nashville State, problems arise when students have difficulty understanding the college process and what steps need to be taken each semester to progress. These problems are magnified when ***individual student issues*** are coupled with the lack of professional staff available to consistently help these students; the implicit rules of how to be a college student often get missed for a significant proportion of the student population. Several mentioned that they did not attend an orientation upon coming back to school and that their interaction with an advisor was limited. In multiple student interviews, students cited missing deadlines and registering late for courses as significant stumbling blocks that snowballed into larger pressing issues such as financial holds, failing courses, and falling off track in their program during their initial time as a student. None of the students interviewed reported being required to do an orientation upon coming back to college, however all of the student interviews included some frustration with not understanding processes or having to rely solely on online information for degree planning and course registration. For example, frustration with not being able to find the information they needed to conduct their business with the college such as how to file paperwork with admissions, knowing which documents needed to be submitted to financial aid, and understanding what to do if they had a hold on their account:

> *"And so I have the wrong [advisor] listed. The right one knows he's supposed to be my advisor but I still ask the wrong one the questions. Because I see him twice a week and he seems like he's a little more involved…I can go and change it but it doesn't seem to matter. It's not going to matter until I've got to graduate and one of them has to sign."*

The students interviewed also reported varying levels of satisfaction with the online portals and tools they are expected to use to manage their student account. These students stated that some things are very self-explanatory—such as the academic checklists—but other things, such as the DegreeWorks system, were less intuitive and required them to connect with a faculty or staff member for explanation.

Students who identified a faculty or staff member they felt comfortable reaching out to reported being able to funnel any questions they had through this favored connection regardless of whether this was a relevant question for their area of expertise or not. For these students it appears that these individuals can be a reliable touch point when they are unsure of a process or expectation; these ***interpersonal interactions*** are extremely important to the student not only in managing processes but in feeling as though they are supported by someone invested in their success.

For students, goal clarification and security around their choice of major and career path was cited as an extremely important motivator. Indeed, in almost every student interview, students themselves cited their lack of certainty around their program or intended career as a factor in why they stopped attending college the first time they attempted. Several students also included that when they did not find immediate utility in their course-work, they were more likely to become discouraged with their program and decide to stop out. They did not push through and seek out career counseling to learn how they could adjust their coursework to pursue a different degree.

Because these students lacked a clear goal for their attendance, they were less committed to the academic experience and eventually stopped attending. Upon returning to school, having a clear goal that aligned with a desired career change and finding a faculty member with whom they can lean on for support was cited as making the student feel more confident in their ability to be successful in college. It appears the faculty mentor relationship is important in not only the utility of campus wayfinding but in the socio-emotional wayfinding as well.

The student interviews are enlightening when specifically analyzing the impact of TN Reconnect, an ***external policy factor***. These students are among the

first ones to come back under the new Reconnect guidelines and their experiences can help shape the direction of the program going forward. The various methods of promoting the TN Reconnect program appear to be working in getting the message out to potential students, as all of the student interviews reported the prevalence of advertisements in multiple places (including billboards, television, and radio spots) as factoring into their decision to re-enroll. This exposure over time rather than just one moment led to them being able to marinate on the idea of returning, encouraging themselves that they can and should go back to school. Once they had decided to come back, having a positive first experience with the process and a friendly face available to answer their questions and explain the financial processes made the student feel more confident that they could complete their goal of coming back. One student reported that she attended an open house at the Reconnect Café on the White Bridge campus where a coordinator walked her through the requirements and the steps to enroll—from the admission process, to financial aid, and to class registration. Having this one-stop knowledgeable resource was critical to the student understanding the process and completing the necessary steps to come back to Nashville State under the Reconnect program.

Discussion

Quantitative

We conducted our retention analysis understanding that Nashville State has the lowest fall to fall retention rates in the community college system in Tennessee for first-time, full-time students, with approximately one-half of students returning in their second year. Our analysis confirms the low retention rate holds for all students—with nearly 55 percent of students leaving before the start of Spring Year 2 and just over 80 percent by Spring Year 3—but reveals that most of these students don't immediately enroll elsewhere. Although Nashville State's Carnegie Classification is "High Transfer-High Traditional" (Center for Postsecondary Research, 2017), we found that just over six percent of students transfer to another community college or a locally-governed institution prior to receiving an award.[13] Nearly 75 percent of all students stop-out before enrolling elsewhere, meaning Nashville State has an opportunity to engage a vast majority of students they lose to departure.

Indeed, our analysis finds that approximately 15 percent of students who leave at any time re-enroll within three years; the vast majority of those who return, however, return at their first opportunity—just a semester after departing. Understanding who exactly leaves—and who returns—may help Nashville State re-enroll this population.

Our analysis found mixed evidence on the relationship between student background characteristics and departure. Race/ethnicity did not prove to have consistent explanatory power over departure, particularly when controlling for other factors. The same held true for sex, where the difference between men and women diminished to insignificance in our regression. Age had little predictive power. Student background characteristics also had no predictive power as to who returned. The mixed evidence for background characteristics influencing student departure and returns suggests that Nashville State cannot pinpoint any one segment of the student population based on race, age, or sex.

The student's academic profile proved to have strong predictive power of departure, although our college readiness conclusions are mixed. Students we considered college ready had a greater likelihood of success, but this difference

[13] Our analysis does not capture students who transfer to a non-LGI university, but analysis from THEC suggests that likely less than just one percent of students transfer to a University of Tennessee institution immediately leaving Nashville State (THEC, 2018a).

vanished when controlling for all other variables. What mattered most is how students performed when at Nashville State. As expected from a prior capstone finding (Bell, Irvin, & Sweeney, 2013), students who completed gateway math and English courses were more likely to be successful. And student's credit completion rates proved most predictive of success. Both gateway completion and credit completion also proved determinative of whether students returned or not. Students who stop out in good academic standing are the likeliest candidates for re-enrolling.

Finally, institutional experiences proved to have some but little impact on departure and returns. As predicted, students who completed the First-Year Experience course were less likely to depart. Surprisingly, little to no differences were observed within campus enrollment and within assigned academic departments. We did find statistically significant differences in departure when students transferred campuses—with higher numbers of students departing the semester after they transferred—but this difference dissipated in the regression. Institutional experiences had no influence on whether students returned, although a statistically higher amount of students from the Southeast campus returned than from other campuses.

We expected to observe substantial differences in departure for campus enrollment and assigned academic departments. As indicators of institutional commitment to success, we hypothesized that students at different campuses, in receiving differing amounts of student services, would depart at different rates. Likewise, students within different academic departments, in being subjected to different advising protocols, would depart at different rates. The lack of findings in the light of our qualitative findings suggests our institutional experience measures were not adequate in capturing institutional commitment. The opportunity for the interviews to delve deeper into this topic adds nuance and explanations we could not observe in the administrative data alone.

Qualitative

We identified similar themes in both our staff and student interviews. Common in both sets of interviews were concerns on process, needs addressed by college staffing, individual preparation issues, and external factors, such as family responsibilities, the impact of interpersonal relationships with the college, and state policies like TN Promise and Reconnect.

Both students and staff expressed concern with the processes students are put through in order to enroll, register, and continue at Nashville State. Staff

frequently named academic advising, for instance, as a substantial weakness while students mentioned having to go out of their way to engage with an advisor. Similarly, both staff and students noted the difference in processes, such as engagement with early-alert and parking rules, across campuses. Both sets of interviews identified insufficient and disjointed processes across Nashville State as influences on departure.

Similarly, staff and students identified siloed student services or stretched-too-thin college staff as a significant barrier. The inability, for example, for a financial aid advisor to identify that the student had an admission issue, for instance, served as a barrier for few students; on the opposite end of the spectrum—at smaller satellite campuses—staff identified having to wear different hats and having to fill multiple positions. College staffing is not distributed well across divisions and campuses. These siloed elements are made worse by an early alert system that proves inaccessible in truly tracking student concerns across campuses.

Staff more so than students identified individual student issues, such as college knowledge and academic preparation, as a barrier to student retention. The student's inability to manage time or to navigate academic obstacles, staff mentioned, prevents them from persisting. Although they didn't explicitly mention these as issues, several students mentioned missing financial aid deadlines or not communicating early with professors as reasons for not persisting. These instances are reflective of a lack of college knowledge, indicating that some individual, background student characteristics do influence persistence at Nashville State.

Both students and staff identified external personal issues as influential to persistence and return. Staff witness many students juggling—often unsuccessfully—transportation, work , and family responsibilities, while several students cited the stress that comes along with parenting and working while enrolled. Two students specifically referenced having to leave Nashville State the first go-around due to medical and family responsibilities—and both lamenting that Nashville State could have been more supportive then.

Finally, the influence of external policies, such as TN Promise and Reconnect, have altered why and how students access Nashville State, and have, as a result, potentially influenced persistence. Staff noted that many Promise students attend Nashville State solely because it is free—having been pressured to do so by a parent—and lack motivation to persist. Conversely, Reconnect students discussed the role Reconnect advertisements played in their returning to Nashville State—feeling pulled to attend Nashville State rather than pushed. In this case, Reconnect

may be associated more with persistence if the returning adults feel more motivated.

Synthesis

In testing for the influences of institutional commitment and integrity at Nashville State we relied on quantitative measures we expected to detect differences in treatment on departure. As a mixed-method study, our qualitative questions provided us an opportunity to dig deeper into the context. In short, beyond the first-year experience measure in our quantitative analysis, we found no consistent indication that the institutional experiences—as measures of commitment and integrity—greatly impacted departure. But the findings we uncovered in our interviews suggest, perhaps, that our quantitative measures fell short of capturing institutional commitment to student welfare and integrity, rather than a misaligned theory.

Braxton et al. (2004) define institutional commitment to student welfare and institutional integrity as the perception that students have about how the college goes about its daily business as an educational institution. Regardless of intentionality of a program, intuitional process, or educational mission, it is the perception of how this work is carried out that is more influential to the student. Implicit norms and expectations must be made explicit for them to be translated from the college to its constituents. Key in this translation is how the college goes about the business of bringing in and managing students in its pipeline through to graduation. It is in the processes that Nashville State appears to stumble in its commitment to providing a quality education in middle Tennessee. From both staff and student interviews it is clear that more work is needed particularly in the onboarding of new students into the institution. While the college has a committed staff of energetic and devoted faculty, it is not able to scale these important interactions across to all students who enter the college. The lack of a consistent holistic orientation program that clearly outlines procedural steps in becoming a student, registering for courses, and managing classroom expectations appears to be a well-known obstacle at Nashville State. The need for step-by-step directions for students needs to be available both online and when a student visits in person (Smith, 2002).

It is also important to mention that campus processes need to be made explicit and put into terms that students will understand, using language that is familiar to them (Townsend & Wilson, 2009). These simple step-by-step instructions for common processes should be available both online and in person and in a

variety of formats that speak to all ranges of accessibility needs. This means also that front line staff need to be knowledgeable not only in their own office's work, but also in how their part of the student lifecycle dovetails into the larger college landscape. Our quantitative analysis highlights that students exposed to such instructions—through a first year experience course—depart at a lower rate; the problem, at least during the time frame of our analysis, suggests that most students do not participate in the course.

At Nashville State, offices are siloed. The Nashville State campus system operates on a satellite campus model with the main and satellite campuses spread across a several county distance. This model appears to exacerbate the silo issues and causes unique challenges for students moving between campuses. Because the satellite campuses also function as portals to the main campus, students are expected to begin their coursework at a smaller campus but eventually transfer to the main campus in order to complete most programs. As we found in our interviews, transportation between campuses can be a hurdle for students, especially when different campuses have different rules (like the different colored lines for parking) or when students who opt to attend one campus out of convenience has to expense cab fare to access services at another campus.

Our quantitative analysis, though inconsistent in its findings, also highlights a disparity in students who change campus during their time at Nashville State. Students who transfer campuses are more likely to depart the following semester, suggesting that a treatment effect at the campus-level is affecting students differently. Further, academic courses as well as student services are not common across campuses and basic offerings are not available at all. Directors at the satellite campuses report knowing about a transit initiative (whereby students are provided free bus passes) and while they see a need on their campuses for the same program, are unable to take advantage of the program at their campus. This disparate system puts students into an unequal situation that is especially problematic when they move between campuses and notice the obvious disparity.

In addition to knowledgeable staff, having committed faculty who take the time to explain and clarify both classroom materials as well as institutional processes are highly valued by the students in terms of assessing institutional commitment. Students who feel like they have a mentor in their corner that is supportive of their success leads to higher retention and a stronger sense of personal commitment to the goal of graduation (Pietras, 2010). At Nashville State, the current Quality Enhancement Plan (QEP) focuses on the first-year experience attempts to meet both of these needs. A key component of this program is the

NSCC 1010 course: a five-week academic skills and college foundations course that is designed to not only acclimate students to the expectations of college but also give them a primer on time management and study skills. This course outlines the differences between the high school experiences they were familiar with and how college expectations will be different. Again, our quantitative analysis shows participation and completion of this course to be strongly associated with retention.

These courses are led by veteran instructors who are well versed in student transition issues and can provide these new first time in college freshmen with a faculty mentor relationship that ideally will last throughout their time at Nashville State. Having an academic foundations course has been shown to increase retention, positively impact persistence, and lead to higher graduation rates as well as student commitment and positive connection to campus, particularly for those who are undecided on a major (Woolfork-Barnes, 2017). One of the assignments in the NSCC 1010 course is a reflection on career outcomes and goal clarification around intended major. While this assignment begins to address the need for students to choose a major and career path it is not supported beyond this class assignment. It has been shown that students who enroll in college with a firm goal in mind are retained at higher rates than those who do not, and those who are able to take introductory course in their first semesters to guide them in the decision making process are retained at higher rates than those who do not (Harackiewicz et al., 2002).

There is a strong need of support for students as this has been shown to be correlated with students leaving the campus when they no longer feel they have a clear idea of what they want to study. The student interviews uncovered that students often struggled in silence and rather than seek out guidance they instead simply stop out and fail to register for classes the following semester. It was only after they spent time outside the college system in the workforce that they discovered a new intended career path that the college could prepare them for. If this time to decision could be shortened and students could be given a more structured path to self-discovery, they would be less likely to interrupt their education and more able to pivot into a new curriculum path, using their existing credits towards a new program of study.

At Nashville State, academic advising is managed largely by faculty advisors in the academic disciplines on nine-month contracts rather than full time professional advisors available year-round. These faculty members are also teaching a full load of four to six courses on top of being the assigned advisor for a caseload of students. As both students and staff noted, this not only leaves a gap in

the months when faculty are not available on campus in the summer—a time when many first time in college students begin the going to college process—but it also leads to inconsistences when a student needs to move between academic disciplines or campuses.

Our findings highlighted that there is a widely accepted belief at Nashville State that the existing model of advising is not effectively meeting the needs of the student population. A change to the system needs to be made to ensure accessibility and availability of consistent quality advisement. It is not enough to have curriculum checklists or online degree tracking software if it is not also combined with a qualified relationship between a college staff member and the student. This lack of advising relationship can be theorized to have a direct corollary relationship with depressed retention and graduation rates. When students cannot figure out what they need to do in and do not feel supported it is no wonder that many simply fall out of the pipeline.

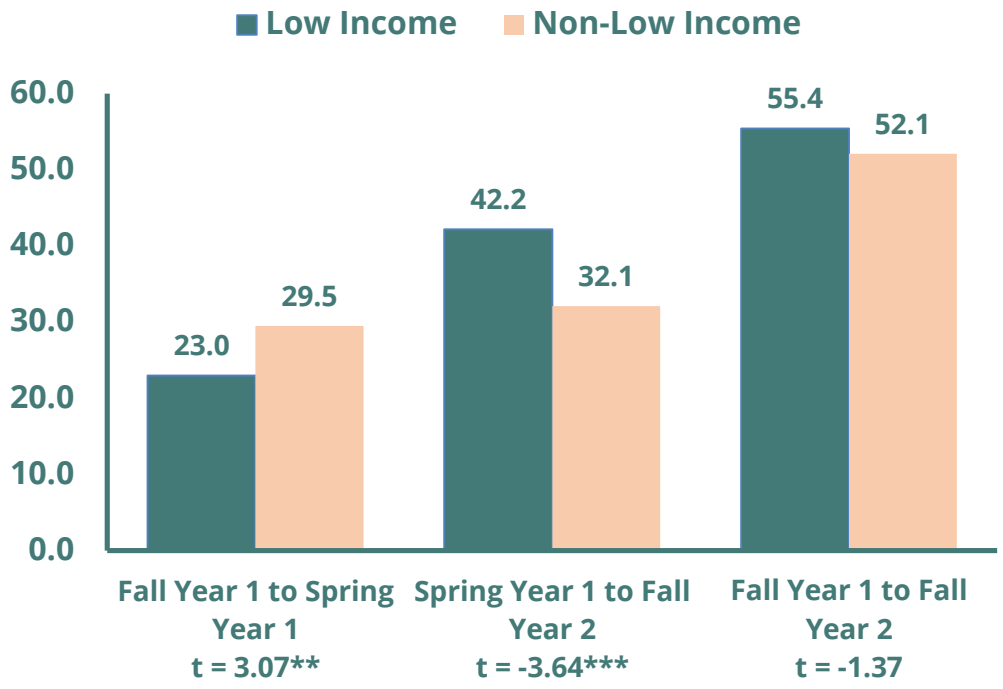
Finally, students—all of whom had once enrolled at Nashville State, departed, and then returned—cited the success of Reconnect advertisements as reasons for their return. Our quantitative analysis observed that students are most likely to return—if they do so at all—after just a semester of departure. This suggests that students who leave may not immediately think of themselves as departed, intending to return at some point. Our student interviews suggest that targeted advertising of students who leave may be successful in getting those students to return.

Limitations and Future Study

Due to the nature of the research questions and data collection barriers, there are a few limitations that could impact validity of our results. First, due to institutional personnel changes, we gathered administrative data from TBR rather than directly from Nashville State. While the TBR data allowed us to track students across institutions—to determine who transfer and where—it was not able to provide robust data on key variables. For instance, TBR did not begin collecting socioeconomic background data (based on Pell-eligibility status) on students until 2015-16, the last year of observation for our retention analysis. We know from prior research—both focused on community colleges in general (Fong, Acee, & Weinstein, 2016) and on Nashville State (Bell, Irvin, & Sweeney, 2013)—that low-income students are more likely to stop out.

For our research, however, we don't anticipate that the socioeconomic exclusion greatly influenced our results. We received socioeconomic data for the 2015-16 cohort and found nearly 63 percent of those students to be Pell eligible—a large percentage of the overall student body. We then conducted two sample t-tests between low-income and non-low-income students for our departure dependent variables (Fall Year 1 to Spring Year 1, Spring Year 1 to Fall Year 2, and Fall Year 1 to Fall Year 2) and found differing results. Figure 15 shows the comparisons of means. Differences in departure by income status differ across the departure observations, with students who are not Pell eligible departing at higher rates from Fall Year 1 to Spring Year 1 and at lower rates from Spring Year 1 to Fall Year 2—both observations statistically significant at the 0.01 and 0.001 levels, respectively. Finally, there is no statistically significant difference for socioeconomic status for Fall Year 1 to Fall Year 2 departure. These mixed results suggest that our inability to capture socioeconomic status for all cohorts did not greatly limit our findings.

Figure 15: 2015-16 Low-income Comparisons of Means with Departure



*p < 0.05, **p < 0.01, ***p < 0.001
Source: Tennessee Board of Regents
Note: Graph depicts means comparisons of low income (Pell eligible) student departure to non-low income student departure over the first two semesters of enrollment (Fall Year 1 to Spring Year 1 and Spring Year 1 to Fall Year 2) and from Fall Year 1 to Fall Year 2. Data only available for first-time students who enrolled in 2015-16.

Additionally, common metrics used to measure entry academic characteristics were not robust in the administrative data, hence why we used a composite metric based on high school GPA and ACT COMPASS scores. Further, TBR data for this time frame did not include a comprehensive collection of ACT scores, so we couldn't use a standardized metric. A more consistent metric that relied on just one standardized score could have made our results more reliable.

A major limitation in the qualitative section of this study is the limited sample of students included in the interviews. All students interviewed were women and ranged in age from 24 to 59 years old. Two male students volunteered and were scheduled for an interview but failed to attend. The sample was reflective of the Reconnect population on age and race/ethnicity but just reflective of the overall student population on race/ethnicity. Although the sample we selected—students who had formerly enrolled at Nashville State, departed, and then returned—granted us a convenient group to ask questions as to why students left and returned, the extrapolation of these findings to the general student population is limited.

Finally, the timeframe of our retention analysis largely preceded the adoption of TN Promise, which was first introduced as TN Achieves at Nashville State in 2014-15 for Davidson County residents—and then introduced for all students as Promise in 2015-16. Because we could not capture the complete integration of TN Promise within our analysis, any effect that the TN Promise has on retention is muted. Although we did control for academic year in our logistic regressions, the influence of Promise on retention—particularly at Nashville State—must be considered in future research.

Aside from the limitations described above within each method, an overarching limitation of our study is the extent to which new administrative and state policies influence retention today. As already discussed, the institution has had substantial turnover in administration and recently celebrated the inauguration of its first new president in 25 years. The institution is starting to implement new practices and policies to arrest the decline in retention. Any interpretation of our findings need to take into consideration that both students and staff are experiencing a different reality than they would have experienced this year or five years ago—the time frame that most closely corresponds with our methods. Changes in policy and administration may limit the extent to which we can recommend changes at Nashville State.

Recommendations

Based on the literature about retention, persistence, and institutional commitment to student success, our qualitative and quantitative findings lead us to make a series of recommendations. Given information provided by staff and administration, these recommendations will not come as a surprise but will likely affirm the direction already taking place at Nashville State. The institution should strongly reinforce the need for specific policy and practice changes. Our recommendations center on process and practices that are high impact on the student experience, especially in regards to the first-time student, with special attention to the academic advising and first-year experience components at each of Nashville State's campuses. These two programs and their intended functions were consistently cited in interviews amongst staff and students alike; the importance of the first-year experience course was also evident in the quantitative analysis. Our recommendations are made understanding that Nashville State is both aware of its issues surrounding retention and persistence and that dramatic reorganizations and financial investments may not be feasible or appropriate at this time. However, these also represent the building blocks for a firm foundation on which Nashville State can begin to revamp the mechanics of its commitment to student success.

Recommendation #1: Rebuild the Academic Advising System

In *Leaving College*, Tinto (1993) states, "Though the intentions and commitments with which individuals enter college matter, what goes on after entry matters more. It is the daily interaction of the person with other members of the college in both the formal and informal academic and social domains of the college and the person's perception or evaluation of the character of those interactions that in large measure determine decisions as to staying or leaving" (p. 127). In other words, the suite of services, as well as the philosophy that guides the systems, processes and staff at Nashville State in regards to student success is even more critical to student retention than the characteristics of the incoming students.

Critical to Nashville State creating a culture in which students persist is the re-engineering of the academic advising program that is rooted in research-based literature. As evidenced in the interviews with advisors and campus directors, the academic advising arm of Nashville State is "broken," and needs to be fixed. A quick glance at the literature suggests a host of potential changes, from professional advisors across the board to moving everything to technology-based advising. However, our recommendation is to take a multifaceted approach to addressing

the advising issues in order to meet a set of identified issues that is widely varied in nature.

Provide academic advisors for each satellite campus.

All campus directors were consistent in their reflection that the burden of advising their entire student bodies is simply too much for the current number of staff and faculty. Faculty, while knowledgeable of their own subjects, are generally neither available enough nor fluent enough in the rest of the student's academic needs to provide the kind of holistic advising that the current student population needs. Indeed, Nashville State's current advising model seems predicated on an assumption that students come in with a certain level of college knowledge that the data and interviews suggest they do not have. In understanding a student's goals and motivations, the need for quality consistent academic advising cannot be understated. Much of the cannon of literature surrounding student retention comes from Tinto's work from the last thirty years and is well supported by more recent studies. In one study, community college students in particular expressed a desire for proscriptive advising where students are given clear instruction on what to do and when to do it, in the context of their coursework and how to complete their program (Smith, 2002).

In a best practice scenario, advisors would have the time and professional training to assist the students in comprehensive advising, where advisors and students co-create a pathway to graduation based on the students' life goals, career expectations, skills, and hobbies. Further, advisors would ideally stay engaged with each student through the course of their time at Nashville State so that they can assist the student as he or she adapts and modifies the plan over time to fit their changing perspective (Gordon, 2006). Currently, while this kind of personalized, enhanced advising is possible for a narrow band of particularly at-risk students, the bandwidth is simply not there to expand the program beyond that.

The research is clear that more intensive focus on the student's needs in advising, with more time dedicated to the student's needs beyond signing up for classes, leads to both better outcomes as well as better student perception of the institution's integrity and commitment to their own success, which in turn increases the likelihood of persistence (Jaggars & Karp, 2016; Kuh et al., 2011). Nashville State should hire a minimum of one new full-time, professional academic advisor for each campus, assigning that person with, if possible, all students that incoming student data would flag as at-risk for stopping out—principally, as this study found, the student's academic college readiness.

Encourage holistic academic advising.

As discussed in the literature review, community college students begin with a statistical disadvantage to their 4-year college counterparts, especially in terms of college knowledge, due to factors related to limited educational opportunities for education beyond high school curriculum and other socio-economic issues (Goldrick-Rab, 2010). The academic advising model should be expanded to incorporate and encourage non-strictly academic related material or processes, and all staff and faculty should receive training on how to provide assistance to students on how to succeed in college. In addition to proscriptive transactional advising, the model of appreciative advising would be a strong framework for academic advising to follow (Bloom et al., 2008). Community college students in particular respond well to transactional advising that focuses on step by step following of processes: what to register for and when to do it. However, it is shortsighted to limit advising to just the proscriptive. Including the tenants of appreciative inquiry into their advising practice will allow advisor to better meet the needs of the entire student. The six phases of the appreciative advising model have been shown to be effective at both the community college and university levels of advising and is one of the leading methodologies in current advising practices (Bloom et al., 2008).

Recommendation #2: Expand and Enhance Programming for the First-Year Experience

Multiple interviewees referenced the first-year experience program, its limited success, as well as the need to expand the program. Indeed, Nashville State has already begun to reimagine the course. Research suggests that the first year is a highly critical time of transition for most college students and that a robust and comprehensive first year experience may increase likelihood of retention from first to second semester (Pascarella & Terenzini, 2005). These positive outcomes are not necessarily tied to the 4-year college setting. A 2010 Achieving the Dream study at Northern Virginia Community College showed that 85 percent of FYE students retained from fall to spring semester, as compared to only 6 percent of students who did not participate in the FYE program (Bradley, 2011). The trend continued for fall to fall retention, with seven percent of FYE students retaining, compared to 49 percent of non-FYE students (Bradley, 2011). A well-designed FYE course can greatly influence persistence.

Currently, Nashville State offers a five week course as a FYE. While most existing research seeks to discern between the effectiveness of mandatory versus

optional attendance in these types of programs, what is consistent across most school types is that the program is at least one entire term, and as much as the entire first year of schooling (Bers & Younger, 2014). Nashville State should consider expanding its FYE program to a mandatory first term course for all full-time students, and strongly encouraged for all part-time students and adult learners to enroll.

Expand the scope of the first year seminar.

Nashville State already manages to include in its FYE an array of, "practical knowledge and relevant skills for first-year college students…[including] orientation to college resources, policies, processes, utilization of technology, and information literacy." ("NSCC 1010 - first year experience - Acalog ACMS™," 2019) Research has shown that focusing on the transition into the academic community can be positively associated with student retention (Bers & Younger, 2014). Nashville State should structure the lengthened FYE to include time devoted to life issues associated with being a student, so that the seminar both addresses process and the individual's experience while in higher education.

Learning communities have also been identified in the literature as interventions that represent potential promise in having a positive impact on student retention (Goldrick-Rab, 2010). Nashville State should consider coupling a network of learning communities to the FYE so that students are encouraged to create best learning and study practices in a community with other students, and to minimize the opportunity for isolation of at-risk students.

Recommendation #3: Make Critical Information Universal

Nashville State already employs an early alert system, and several staff interviewees cited the program as a positive contributor to student retention and persistence. However, several interviewees also indicated that critical information, such as notes made by advisors, staff, or faculty in regards to individual students at one campus is not readily available at another campus. This reduces the effectiveness of an early alert system for students who might attend multiple campuses. Nashville State should invest in software that makes information on individual students universal among its various sites so that critical information can be available to help inform staff and faculty interactions with those students.

Not only is the need for critical information on students to be universally accessible, but so too are the need for critical services to be universally accessible across campuses. The example of providing tutoring at each of the satellite campuses would have a profound impact on students at that campus both in terms

of practical application of assistance but also in student perception of the college being invested in meeting their needs.

It is also important to think of the information that conveys rules and how that impacts the students on a daily basis, across all campuses. Just as one student voiced frustration on the different colors for student parking between White Bridge and Southeast campuses—Nashville State needs to review all rules across campuses to make sure that students who commute between campuses feel as though they are at one institution with *one* set of rules.

Recommendation #4: Leverage and Scale up Successful Partnerships

Through its new leadership and retention-focused outlook, new opportunities and partnerships are readily available for Nashville State. Nashville State leadership should leverage these opportunities and shift the institution into an ever-learning enterprise that constantly assesses and acquires policies and practices that will increase retention across all campuses.

In December 2018, the city of Nashville announced it would launch, in partnership with Nashville State, Nashville GRAD: Getting Results by Advancing Degrees. This program, modeled after CUNY ASAP (City University of New York: Accelerated Study in Associate Programs), seeks to increase degree completion through a comprehensive and student life-cycle suite of academic, financial and personal life support services. Should its purported municipal partners approve the program, Nashville State will implement the program in fall 2019 (Mulgrew, 2018). The details of the original model of this program align well with the gaps identified in our analysis, as well as recommendations #1 and #2. However, the program as currently envisioned will only serve students who are residents of Davidson County. Nashville State should consider scaling up the program to include students outside of Davidson County if Nashville GRAD is found successful.

Institutional integrity and commitment to student success will in part be linked to initiatives like GRAD that are explicitly aimed at investing financial and people resources in increasing student degree attainment. Narrowing the scope of the program to only benefit students who are residents of Davidson County, despite Nashville State serving a region of seven counties, could have a detrimental impact on student perception of institutional integrity and commitment to student success. Further, our analysis of the quantitative data reveals that while Davidson County students do appear to demonstrate a need for this intervention, students at other campuses also demonstrate a similar need, particularly at the Clarksville campus where attrition is in near lockstep with the White Bridge campus.

While geography-based implementation is a convenient and simple approach to the intervention's scope, a more effective scope would use college readiness as a basis for filtering which students do or do not qualify as eligible for the GRAD intervention. This could be scaled by expanding to one county at a time, using the filtering process to target at-risk students in counties outside of Davidson, limiting rampant cost increases and wasteful investments in students who do not have the need.

Additionally, Nashville State's connection with Achieving the Dream has provided the institution with well-honed data analytics that best identify who departs Nashville State. The partnership also allows Nashville State to tap into a wealth of knowledge on student persistence. Nashville States should work to incorporate the data analytical tools and recommended retention-focused programs that Achieving the Dream offers. But Nashville State should continue identifying who departs and why beyond the partnership with Achieving the Dream, and Nashville State should engage in perpetual review of gold standard policies and practices for improving retention.

Recommendation #5: Track and Strategically Target Students Who Depart

Nashville State, through its Achieving the Dream partnership, is already implementing new tracking protocols to determine who is leaving—much as we have done in this study. We recommend ensuring that this tracking is continued but, more so, to use information on who is leaving to better target them for return. Nearly 15 percent of all students who depart return to Nashville State after just one semester away; the amount who return drop precipitously thereafter. Nashville State's window of opportunity to get as many students who left to return is small.

We know, from the students we interviewed, that the targeted Reconnect advertisements—in billboards, on television, on fliers throughout Nashville—greatly influenced students upon their return. But we also know from the interviews that students who did return desired more comprehensive student advising and support services; their return with prior credits raised a lot of concerns and questions on their end. From our interactions with campus personnel, we know that the Reconnect Café has served a valuable resource for returning students, serving as a one-stop shop for all of their needs. We also know that this position is not funded by Nashville State and is contingent on outside support.

We therefore recommend Nashville State to invest in resources to advertise to and serve students who have stopped out. These students' needs differ from first-time students and a targeted strategy to appeal to them will help Nashville

State return and enroll them. By utilizing the new tracking protocols, Nashville State can better determine who leaves, better informing on how to appeal to their needs for successful return.

Conclusion

This study contributes to the literature on retention and persistence for community college students, an area of growing interest and study in the field of college student retention. Building on the research done by two previous capstone groups into student retention and persistence declines at Nashville State, we used Tinto's (1975) Interactionalist Theory and the Theory of Student Departure in Commuter Colleges and Universities by Braxton et al. (2004) as a framework to explore what interactions between the institution and the student may be positively or negatively influencing student departure.

Our recommendations are based both on extant literature on community college student retention, as well as our qualitative findings which showed significant influence for academic advising, process, and staffing challenges at Nashville State. We include recommendations to expand academic advising and the first-year student experience program, expand investments in students lacking college readiness, invest in comprehensive information software, and make efforts to more fully and strategically track students who depart.

We also provide a unique finding in relation to the first semester recapture rate for Nashville State students that depart after one semester. This phenomenon bears further investigating as it may prove significant in understanding the community college student self-concept, as well as institutional practices toward engaging with students who depart.

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Appendices

Appendix 1: Participant Debriefing Form

We thank you for participating in this study!

We now have some very important information to share with you about this study.

The purpose of this study is to better understand how students make decisions about their educational choices. Specifically this study aims to understand what institutional and personal factors most influenced a student's decision to depart Nashville State Community College, and to what extent did these factors play or did not play a role in encouraging students to reengage with Nashville State as a TN Reconnect student. It is our hope that by better understanding these factors, Nashville State Community College can better serve its students.

If you have any concerns about this study, you can direct those concerns to the researcher who conducted the study today or contact Kasandrea Sereno at Kasandrea.sereno@vanderbilt.edu.

If this study reveals personal concerns that you have about yourself with which would like to find some help, here is a list of campus mental health resources that may be of service to you: NSCC Access Services (615-353-3721);. Alternatively, you may seek help from these community mental health resources: United Way (615-244-7444).

The research experimenter who interviewed you for this study is a graduate student at Vanderbilt University and part of a research team of graduate students. Each of the research team members are graduate students in Peabody College and this study is part of their doctoral capstone project.

Lastly, in order to really answer the research question, it is important that the purpose of this study NOT be shared with anyone who has not participated in this study. Furthermore, because this study is available to other Nashville State Community College students, we ask that you be especially careful to not discuss this study with anyone who may be eligible to participate until all of the data for the study has been collected, which will likely be after the fall semester of 2018.

Again, we thank you for your help with addressing this important research question and we greatly appreciate your keeping the purpose and design of this study confidential.

Appendix 2: Informed Consent Document

- I…… Voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview within five months after the interview, in which case the material will be deleted.
- I understand that I will not benefit directly from participating in this research.
- I agree to my interview being audio-recorded.
- I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- I understand that disguised extracts from my interview may be quoted in a dissertation report and presentation.
- I understand that if I inform the researcher that myself or someone else is at risk of harm they may have to report this to the relevant authorities – they will discuss this with me first but may be required to report with or without my permission.
- I understand that a transcript of my interview in which all identifying information has been removed will be retained for five months.
- I understand that under freedom of information legislation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Signature of research participant

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Signature of participant Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

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Signature of researcher Date

Appendix 3: Requests for Interviews

Email to Campus Directors and Deans

Hello! My name is Kasandrea and I am a part of the research team from the Vanderbilt University capstone project currently working with Nashville State and researching campus retention.

As part of our project we are requesting an interview with each of the Academic Deans and Campus Directors to learn more about the structure of your office, the programs offered, and how academic advising is managed within each division.

In addition to speaking with you, we are looking to connect with a faculty advisor in your area as well, and would appreciate any help you could provide in identifying someone on your staff who have had the most experience leading advising efforts and facilitating an introduction to that individual.

We know that with the upcoming holiday break available time is a premium for everyone so we are hoping to be as minimally invasive as possible and we would also like to bring coffee and donuts for those being interviewed.

Ideally we would like to schedule an interview time with you for either Friday November 30th, or Monday December 3rd. These interviews would be approximately 30-45 minutes in length. Ideally if it would be possible to schedule the interview with one of your faculty advisors for that same day as well, that would be the best format and the least amount of disruption to your campus. Would either of those dates work for you? If so is there a particular time that day that would be best for your schedule?

Thank you so much, and we look forward to meeting with you!

~Kasandrea Sereno

Vanderbilt EdD Candidate

NSCC Research Team

Email to Campus Student Services Staff

Hello! My name is Kasandrea and I am a part of the research team from the Vanderbilt University capstone project currently working with Nashville State and researching campus retention.

As part of our project we are requesting an interview with you as the director of student services at the main campus to learn more about the structure of your campus and the student services offered.

We know that with the upcoming holiday break available time is a premium for everyone so we are hoping to be as minimally invasive as possible and we would also like to bring coffee and donuts for you as well.

Ideally we would like to schedule an interview time with you for either Friday November 30th, or Monday December 3rd. This interview would be approximately 30-45 minutes in length. Would either of those dates work for you? If so is there a particular time that day that would be best for your schedule?

Thank you so much, and we look forward to meeting with you!

~Kasandrea Sereno

Vanderbilt EdD Candidate, NSCC Research Team

Email to students requesting interviews

Nashville State has asked doctoral students from Vanderbilt University's Higher Education Leadership and Policy program to work with us to understand how the college can better support students toward graduation. They are interviewing campus administrators and students for different perspectives. They would like to interview you, a TN Reconnect student who has re-enrolled at Nashville State, to hear your unique perspective on why you initially left Nashville State and why you've returned. Your participation is voluntary but involves:

- A one-on-one interview on campus, flexible around your class schedule, in early January
- A time commitment of 20 to 30 minutes
- A guaranteed $40 bookstore certificate for the first ten to register for an interview.

Your name will be kept confidential. To volunteer for an interview or for more information, please contact: Steven Gentile, Principal Investigator, at steven.p.gentile@vanderbilt.edu

Appendix 4: Staff Interview Protocol

Introduction

- Hello, my name is _____ and I am coordinating the study related to student retention at Nashville State Community College. I am interested in better understanding your perception of the factors that impact a student's retention at Nashville State.
- What is your position at Nashville State?
- What responsibilities do you hold as _____ of the _____?
- How long have you been in this role?
- How much of your role is student facing?
    - Do you meet directly with students?
    - If not, how much of your time would you say is spent directly managing student concerns?
- Why do you think students choose to attend NSCC?
- Do you hear specific reasons that students tell you/your office about why they chose to attend NSCC?
- From what you hear from students, what struggles do they commonly encounter at NSCC?
- From what you hear from students, why do they choose to leave NSCC before completing their intended program?
- In your opinion why do students choose to leave NSCC? (is this different from what students tell you?)
- In your opinion, what are effective processes NSCC has implemented to retain students?
- Is there anything NSCC could do differently to keep students from leaving?
- Some students choose to leave and then later come back to NSCC after a period of time. Do you hear from students on why they chose to return?
    - In your opinion why do these students choose to return to NSCC?

Additional Questions for Active Academic Advisors

- What advising components are you offering to students that seem most important to you?
- What advising components is NSCC not offering but should?

Appendix 5: Student Interview Protocol

Introduction

- Hello, my name is _____ and I am coordinating the study related to student retention at Nashville State Community College. I am interested in better understanding your perception of the factors that impact a student's retention at Nashville State.
- What is your age?
- What is your ethnicity?
- When did you initially enroll at Nashville State?
- When did you depart Nashville State? Why did you leave the institution?
    - Was there anything Nashville State could have done differently to help you continue at Nashville State?
    - Similar question—was there anything you think you would have done differently then to ensure that you would have continued at Nashville State?
- Have you attended any other college since you first attended Nashville State?
- What prompted you to begin attending college again?
    - How important was the Tenn Reconnect program was to your decision to return to school?
- When you started to apply for Tennessee Reconnect, what did Nashville State do to make the enrollment process easier? What did Nashville State do to make enrollment harder?
- What program are you working towards at Nashville State and about how many credits are you taking per semester?
    - How did you choose this program?
- What have been the biggest challenges to going back to school?
    - Are you currently working?
        - Full or Part Time?
        - On campus or off?
- Thinking back over the last semester, was there a moment when you considered not coming back in the Spring semester? What was the primary reason for that consideration? What helped you overcome that reason?
- Do you enjoy attending Nashville State? Do you think attending Nashville State was a good idea?
- Have you made friends or connections at Nashville State?
- When you started at Nashville State did you attend an orientation or meet with an advisor?
    - If so, did you find this experience helpful to you in understanding your options and requirements for the degree program of your choice?

- Do you have an academic advisor that you meet with now?
- Do you know exactly what coursework you still need to complete for your program?
- Was there someone at Nashville State that helped you register for courses?
- Do you know where to go if you have questions about program requirements?
- How confident do you feel that you will graduate?
- Is there anything that is currently making it difficult for you to be in school right now? (i.e. transportation, course availability, etc.)
- Thinking about the support offered at Nashville State, how would you describe the services at Nashville State?
    - The admissions process
    - Academic advising
    - Availability of Courses
    - Quality of Instructors
    - Atmosphere of the institution
- What if anything could Nashville State do to better support you as a student?

Appendix 6: Sample of Open Codes from Dedoose

Extract from Transcription 1	Open Codes
MR. HUTCHISON: Okay, thank you. So from what you hear from students, why did they choose to leave Nashville State before completing their intended program? STAFF 1: Umm, some move on to a four-year institution prior to their finishing their program, but then they do the reverse transfer. Which, for example, if they left here and have a semester or two left, they go to Austin Peay—umm, they begin taking classes there but the classes their taking are also the ones they need to finish their Associates with us, as soon as those classes are completed, uhh, a degree from us can rewarded—that's a reverse transfer.	**Process, Transfer Issues**
Other things that I hear are just life situations that get in the way: child care. Umm, you know they, they think that they can come and everything is worked out and then they have child care issues, or taking the bus every day isn't as easy as they thought.	**Childcare, Family Responsibilities, Life Issues, Transportation**
Veteran students—I've had quite of few that have left because of the severity of either their PTSD	**Mental Health Issues**
Right now our economy is flourishing. We have some students that leave because they've got a job now that's paying well and they want to pursue that route.	**Life Issues, Work Responsibilities**

Appendix 7: Codebook

Theme	Code	Description	Example
Process	**academic checklist**	NSCC provides degree pathways sheets for each major that are available online for students to view that would inform them of what courses need to be completed for their program.	We have advising sheets of course, they look, and I always send them the links to that.
	academic advising	Any metion of academic advising at Nashville State either by an assigned academic advisor or other staff member at the college. Can be used positively or negatively.	Well, we're going to propose moving away from a only faculty model for advising for students have to find the faculty member. Just really ends up too many fall by the wayside and just never can make a connection with a faculty advisor.
	career planning	Formal planning for a career after college, either with a faculty or staff member or by the student themselves.	So we want to ... Integrate Career Services better. Help students make plans. So one of the big points of the NSCC 1010 so we call it, the first year experience course, is to um. Help students make a plan for their whole time so that they can graduate.
	career counseling	Any mention of career counseling by a staff or faculty member at the college or high school.	Well one thing we're not offering but would be great would be initial career counseling. Initial counseling is picking their major
	courses available for major	Were required courses open and available at a time the student could take the course at the time the student could register.	I kind of worried about prerequisites and if I was taking them in the right order. Or if I had the skills to, you know, to succeed in that particular class. Because, you know, I tried to kind of tried to look at the order they're in but you've got to kind of balance those with scheduling, when its offered. And when I'm available for courses, and that sort of thing. Because I live in Dickson and I can't just drive over here. It's either one class or it's all day.
	disability support services	Available accomodations provided by the college.	We might be managing situations based on the student's built disability for working with the access center to make sure they get the right accommodations and then you know just some of the logistics of managing the accommodations.
	faculty assistance	Were faculty available inside or outside of class to assist with a student's need.	We are trying to change that culture. Though students just don't have a culture to address that with their instructor. But they may not feel comfortable doing so. Or may not understand that they can do that

Theme	Code	Description	Example
Process cont.	**NSCC 1010**	The Nashville State introductory freshmen course.	It's only required if you are a have never attended college before. Because we definitely get students that are here to take, have college, they wouldn't want to be in this class
	NSCC different	What Nashville State could do differently to better assist the student.	Because even though we have open computer labs and you know we're open to 9:30, Monday to Thursday. And then Saturday—we are open on Saturdays. We close, umm, we close at 3:00. But still—there's somebody might need to write a paper on a Friday night or Sunday--Sunday.
	NSCC help	What Nashville State as a college did that helped a student.	My online instructor, he's wonderful. If I email him any questions he usually responds within the next hour or so. Um, if I have any questions, or if I'm not understanding anything, I thought it would be kind of hard, but his response time is like, wonderful. So, I don't have to wait for anything like the next day or anything like that.
	NSCC hurt	What Nashville State as a college did that hurt a student.	Yeah. You go online and look up like your transcripts and your and what class you should take next, it's almost like they don't really want to meet you in person. They would rather you do it online. And then if you have questions, then you can meet with an advisor. I don't know, that's kind
	orientation	Any mention of an onboarding activity that students could partake of upon becoming a student and before the first day of classes.	Our.. the new student orientation I think it has potential to be very beneficial... but isn't quite there yet....
	process	Any mention of a system process at Nashville State. Often includes step by step procedures, or what a student, faculty, or staff member should do to conduct business at the college.	And I think that students don't connect the dots—and they don't, they don't—this is a process, there's procedures. And I think that they just don't understand that. They don't know enough to come and talk to us.
	QEP	The Quality Enhancement Plan at NSCC, currently focused on the First Year Experience.	Our QEP is focused on the first-year student. So we're trying to..... As a college, improve the experience of our first-year students

Theme	Code	Description	Example
Process cont.	**staff professional development**	Any professional development or training provided to staff and faculty to either increase their capacity to interact with a student or perform their job functions better or more efficiently.	We have so many students here who are suffering from stress and anxiety and we don't have any resources here. All we have is like a list of resources in which we can tell students, "here, call these folks, call this, call that." But that, that's a struggle. And faculty—it's really hard on faculty because they're not trained
	technology issues	Any issues with campus student technologies (degreeworks, course registration system, financial aid document system.	For example, the use of technology is huge now, even for, like, an English class. No one just turns in a paper anymore. You're turning it in via a "Turn It In" you know there's D2L Shells. There's—it's not just like typing a paper up and handing it in. Even in Psychology there's MyPsychlab. Math has MyPsychLab. There's a huge technology component that I don't think that we do a good enough job in training students. We just assume—even for a, even for the traditional age student. Just because someone can be a whiz on their phone doesn't meant that they understand, "OK, I need to go into D2L—I need to do all of these things." And my experience is in ground classes and not online. But I can only imagine—I don't have any online class responsibility, but--but that's difficult. Like do people have internet at home?
	transfer issues	Problems or issues that arise from transfering to another school from Nashville State.	And then we talk about the difference between like an AAS and ASA degree. And I'll say, do you want to trans—like what do you want to do. "Well, I want to go to a four-year." And well, "OK we need to get you out of this major and you need to be in a transfer major.
	why chose major	Student statement of why their chose their previous or current major.	And how did you choose that program? STUDENT 5: Because I wanted to learn to maintain a website
	academic issues	Any issues related with academic performance inside the classroom.	Some struggle with academics. often they they leave because they fail they failed classes. So then they lose scholarships. Fail classes and they have to retake classes and they don't want to.

Theme	Code	Description	Example
individual student issues	**classes enjoy**	Courses or experiences in courses that students enjoyed.	My online instructor, he's wonderful.
	classes not enjoyed	Courses or experiences in courses that students did not enjoy.	It was so tense I couldn't sleep....it was horrendous and I really didn't think I was going to get it. And I'm not used to that.
	college knowledge	Knowledge of college that a students comes in with about the processes and procedures of how to apply, register, navigate the campus landscape, and the expectations about college a student brings with them.	So they not understanding that it really does matter that you attend class and definitely not understanding that it will require work outside of class. And so there's no time set aside for that. So they may think "oh it's free. I can come here and it I don't have to pay" but not understanding well you may have to sacrifice time to prepare for class. There's not, there's sense of that starting out.
	desire a change in career	Student states they wanted a change in their career.	Almost always, it's for a job. They understand that they're going to need a degree to move ahead. And so it's a ticket to a better-paying job. So it's very practical.
	finish what they started	Student states that they wanted to come back to finish what they started.	And so they get that there's a practical purpose to this, so that it has value to them and often by that time they might have a family. And so they and they want to, also be role models. They talk about wanting to be role models for their own family now. So it just has a much more powerful meaning to them or they wouldn't have come back.
	fit	Academic, financial, and social fit of the campus and the student.	We aren't selective so we'll take any student, so it's the cost, it's not selective, and they can live at home, or there older, you know continue to work, they can come here and it's not.... part time. It's not.... they can do whatever they want.
	full-time	Attending classes full time. (12 credits or >)	Ummm, last semester I took nine. Umm, I signed up for 12 and dropped one because the course load just seemed enormous. And I'm glad I did because I wouldn't have made it. This semester I do have 12 hours and they're fine, they're all good.
	grit	A measure of a student's resolve and courage when it comes to persevering through a challenge in college.	You know, and he has the fortitude and the will, to continue to say "okay well I can do it I just need to take two classes a semester instead of 3".
	gap in attendance	A measure of time between when the student was actively taking courses.	About 10 Years.

Theme	Code	Description	Example
individual student issues cont.	**maturity**	Decription of a students maturity or lack there of.	Just understanding for the traditional aged students that if my class starts at 8:00 that doesn't mean I can come in at 8:10.
	mental health	Referring to the mental health of a student. May be positive or negative.	We could provide psychological counseling for our students. A lot of our students...that that pressure, that stress, um becomes too much, and it's not just school it's outside things that are happening that are are barriers for them to be able to be successful in school. And I think that if we had more psych- if we had more access to psychological counseling person
	overwhelm	Referring to a student feeling overwhelmed.	It's not being prepared for college and not knowing how to be a good college student they just get overwhelmed and stop attending.
	part-time	Attending classes part time (0-6 credits)	And how many credits are you taking this semester? Student: Um per semester. Just 6.
	student challenges	Challenges faced by the student specifially.	The biggest challenges? It—it's mostly the, over at the East Davidson campus, there are no tutors. So, that's really a hassle for me.

Theme	Code	Description	Example
individual student issues cont.	**student expectations**	Expectations of what the college experience will be like; held by the student	I don't think that they're prepared for college. I just don't—I don't think that when they come in they have a proper expectation of what is expected of them and what to expect of the college itself. And, so, they come in with a set of expectations. We have a pre-set of expectations from them, and because those expectations don't meet, it causes frustration and they just give up instead of either finding the resource to help them with that. Or, umm, readjusting their expectations. So I just believe it's an expectation issue—on both parties. You know, what we're expecting as a college from the student and what the student is expecting from the college on their—on their side.
	student self-sufficiency	The ability of the student to be self-sufficent in handling or managing their campus business	I went to their website and applied directly. I never reached out to Nashville State or anything, for any asistance with it.
	swirl	When a student attends more than one college or major and transfers from school to school without earning a credential.	I ended up taking out a loan when I was 18 and went to culinary school. Got myself a trade. Figured that would be the most appropriate thing to do. And, umm, that set me back significantly financially. Umm, I took out a private loan—not really knowing what I was getting into.
	time management	Ability for a student to effectively manage their time and balance responsibilities in a mature manner.	So time management is one thing I've really had to deal with a lot of students about.
	why left	Student statement on why they left school.	And even just understanding that we have so many students who don't tell us that they're having problems. You know, I was working with a student the other day who was registering for Spring and he's like, "I've dropped this class and I really haven't been going to my other classes." And I'm like, "Why?" And he's like, "Well I changed my major and I thought, you know, these classes don't matter." And I just wanted to shake him and say, "They matter!" I did tell him they matter.
	family responsibilities	Family responsibilties help by the student that may interfere with the student's ability to attend and do well in college.	Sometimes they leave because of family issues.

Theme	Code	Description	Example
external personal factors	**financial issues**	Student issues related to money and not having enough for living or college expenses	Because you know with one of the things that we're seeing is with Tennessee promise and with Tennessee reconnect just because of student gets free college doesn't mean they can afford to take.. to be in school. They can't take the time off of work. They can't take the time away from their families and often I find and this kind of goes back to your earlier question, that it's the it's a work-life-school balance that is out of whack.
	child care	Student issues related to needing to secure childcare for one or more of their own children.	I was working with a, a student this morning; one of our programs is more of an evening program. We are trying to um, develop online classes but she has childcare issues, so to take an evening class and be away from her children, would be difficult to do so that's certainly one.
	geography	Refers to the location of the student in relation to the location of the college campus.	And some specific programs so for example our program which is an AAS degree, it's in photography, we're the only Community College in Middle Tennessee that offers this degree. So when we have a very specific degree you know some of it is going to be program choice.
	cost	Refers to the cost of attending college including books, tuition, transportation.	We're working really hard right now on getting ways to do wraparound support. So our foundation has shifted from largely a scholarship body to working on way to working on ways to provide transportation. So they have started passing out MetroCards for for Metro Transportation. Working on ways to develop book scholarships. Or you know, just different types of assistance, because it's sort of the beyond financial aid matter.

Theme	Code	Description	Example
interpersonal interactions	**lack of support at home**	Lack of support from a parent or family member that supports the student in attending college.	Because, you know, my umm, my home life" she's like "I really need to move out."
	onboarding	Everthing related to getting a new student up to speed on the processes and procedures nessasary to enroll and attend classes at the college.	Getting in the door. Admissions. Dealing with the.... initial, initial advising when they first become a student. The.... financial aid. Getting all of their records sent. A lot of the just basic kind of bureaucratic red tape kind of stuff that you have to do to get admitted into a college. Often throws up barriers for our students.
	parental expectations	Expectations of what the college experience will be like; held by the student's parent	Like, Tennessee Promise is an amazing program, but it, I feel sometimes it forces students who probably wouldn't have started right after high school, to start. And so, their parents are pushing them, but the students aren't succeeding, and then they end up stopping, because they, it was never their desire to come to college anyway. So, I would say, reasons that are unstated, students just aren't ready, and, um, it's just not their time. They were forced to start.
	peer support	Support available to the student from peer students, particularly postive in nature.	Their friends have attended and then they tell them—"hey, I love it out there," "the faculty there are great"
	school reputation	The reputation of Nashville State Community College in the community.	Our program is pretty well known in the photography community as having a good reputation for photography, so we'll get students who come out of the, you know, some of the local photography clubs for example, where they've heard about Nashville State and they were wanting, sometimes they're just coming to take a class.
	financial aid	All references to financial aid monies, the financial aid office, or the staff that work in that office.	Just making the financial aid process more understandable

Theme	Code	Description	Example
college staffing	**online courses**	Refers to coursework taken online at Nashville State. Can be postive or negative in sentimate.	Yeah, and he was more like, find stuff online and look in the syllabus stuff, he was a really, I don't know, difficult professor. The one professor for English, she was very helpful. And I spoke to her on the phone, and I was able to tell her kind of what was going on, but I did pass that class.
	reconnect café	All references to the Tennessee Reconnect office at the Whitebridge campus and the staff that work in that office.	Also trying to have transactional places. Like one stop kind of centers so that those questions can be answered too. Trying to quickly, efficiently, and also to have like call centers and online online information that's more accessible.
	registration	All parts of the process of registering for courses including the online platform student portal.	I always ask the instructors make sure you know your classes especially in October, and all the deans I think do this, to tell your students advising is happening this month. Come see your advisor, so that when registration opens up the first week of November they are ready to go and they can get the classes they need in the schedule they want.
	staffing	Refers to the level or number of staff members in an office, particularly if the staff levels are suboptimal or if staff are handling more than one position.	I think that individually, faculty who have good relationships with their students have some impact but there's no way that we can reach every single student who's in our classes who stops attending. There's just, you know, not the time, there's not the resources to be able to do that.
	student services	The student services offices of the college; all business offices, and student affairs offices.	Help students on their path. Or support students that's the better word. Connect them to the resources they need; and all of that.
external policy factors	**TN Promise**	The Tennessee Promise program whereby recently graduated high school students can attend community college in the state and receive a scholarship that covers the full cost of tutiton.	I also think that because we're Tennessee, we have Tennessee Promise and Tennessee Reconnect—there's such a great value to our degree.
	TN Reconnect	The Tennessee Reconnect program whereby adult students can attend community college in the state and receive a scholarship that covers the full cost of tutiton.	This second round was a lot easier because the Tennessee Reconnect—I mean, not paying for the books was a little [shrugs]. But I was able to make it work, with the renting and Amazon.

Appendix 8: Semester Departure by Race/Ethnicity – ANOVA and Selected Post Hoc Tests

Ethnicity	Entering Cohort	Fall Y1 to Spring Y1	Spring Y1 to Fall Y2	Fall Y2 to Spring Y2	Spring Y2 to Fall Y3	Fall Y3 to Spring Y3	Fall Y1 to Spring Y3
Black	2,114	24.7%	51.6%	28.5%	33.0%	22.7%	86.2%
Hispanic	462	21.0%	40.0%	23.3%	35.7%	16.8%	80.1%
White	2,969	22.3%	36.9%	20.6%	30.4%	21.5%	77.2%
Other	447	20.4%	32.9%	23.8%	31.5%	20.9%	77.4%
Total	**5,992**	**22.9%**	**41.9%**	**23.4%**	**31.6%**	**21.4%**	**80.6%**
	F-test	**2.33**	**33.04*****	**5.93****	**0.88**	**0.51**	**22.9*****
(DF between, DF within) | p-value		(3, 5988) | 0.073	(3, 4614) | 0.000	(3, 2667) | 0.001	(3, 2032) | 0.452	(3, 1182) | 0.676	(3, 5988) | 0.000
Bartlett's test for equal variances: chi2 | p-value		**5.70 | 0.127**	**3.38 | 0.337**	**12.60 | 0.006†**	**0.80 | 0.851**	**1.67 | 0.643**	**97.56 | 0.000†**

*p < 0.05, **p < 0.01, ***p < 0.001

† Assumption of equal variances is violated.

Source: Tennessee Board of Regents

Note: Each test is an Analysis of Variance to test that the difference in means within the respective groups for each semester departure is statistically significant.

Spring Year 1 to Fall Year 2 Post Hoc Test

By Ethnicity Comparisons	% Difference	t-statistic
Diff Hispanic vs Black	-11.6	-4.08***
Diff White vs Black	-14.7	-9.21***
Diff Other vs Black	-18.7	-6.53***
Diff White vs Hispanic	-3.1	-1.12
Diff Other vs Hispanic	-7.1	-1.96
Diff Other vs White	-4.1	-1.46

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: Post hoc tests were conducted for each observation that proved both statistically significant and met the equality of variance test.

Appendix 9: Semester Departure by Sex – Two Sample t-tests

Sex	Entering Cohort	Fall Y1 to Spring Y1	Spring Y1 to Fall Y2	Fall Y2 to Spring Y2	Spring Y2 to Fall Y3	Fall Y3 to Spring Y3	Fall Y1 to Spring Y3
Male	2,656	24.7%	43.3%	24.6%	31.5%	22.5%	81.9%
Female	3,336	21.5%	40.9%	22.5%	31.7%	20.7%	79.6%
Total	**5,992**	**22.9%**	**41.9%**	**23.3%**	**31.3%**	**18.0%**	**80.6%**
	t-test	**3.00***	**1.65**	**1.28**	**-0.12**	**0.78**	**2.21***

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: Two sample t-tests comparing departure between males and females for each semester of departure.

Appendix 10: Semester Departure by First Campus Location – ANOVA and Selected Post Hoc Tests

First Campus	Entering Cohort	Fall Y1 to Spring Y1	Spring Y1 to Fall Y2	Fall Y2 to Spring Y2	Spring Y2 to Fall Y3	Fall Y3 to Spring Y3	Fall Y1 to Spring Y3
Clarksville	694	21.3%	39.2%	28.1%	38.2%	23.7%	83.1%
Dickson	317	21.8%	35.1%	23.6%	26.2%	26.6%	77.9%
Humphreys Co.	514	20.8%	35.9%	17.3%	28.8%	26.0%	73.2%
White Bridge	3,594	24.0%	44.8%	24.2%	31.7%	20.3%	82.1%
Southeast	873	21.2%	38.7%	20.4%	30.5%	20.1%	78.1%
Total	**5,992**	**22.9%**	**41.9%**	**23.4%**	**31.6%**	**21.4%**	**80.6%**
	F-test	**1.64**	**6.15***	**2.99***	**1.85**	**0.83**	**7.75***
(DF between, DF within) | p-value		(4, 5987) | 0.162	(4, 4613) | 0.000	(4, 2666) | 0.002	(4, 2031) | 0.116	(4, 1181) | 0.505	(4, 5987) | 0.000
Bartlett's test for equal variances: chi2 | p-value		**5.49 | 0.241**	**1.67 | 0.797**	**10.58 | 0.032†**	**1.94 | 0.747**	**3.00 | 0.557**	**29.98 | 0.00†**

Post hoc tests	Spring Y1 to Fall Y2		Fall Y2 to Spring Y2	
First Campus	**% Difference**	**t-statistic**	**% Difference**	**t-statistic**
Dickson vs. Clarksville	-4.1	-1.09	-4.5	-1.11
Humphreys vs. Clarksville	-3.3	-1.03	-10.8	-3.05*
White Bridge vs. Clarksville	5.6	2.41	-3.9	-1.52
Southeast vs. Clarksville	-0.5	-0.17	-7.7	-2.47
Humphreys vs. Dickson	0.8	0.20	-6.3	-1.47
White Bridge vs. Dickson	9.7	2.96*	0.6	0.17
Southeast vs. Dickson	3.6	1.00	-3.2	-0.81
White Bridge vs. Humphreys	8.9	3.40**	6.9	2.40
Southeast vs. Humphreys	2.8	0.92	3.1	0.92
Southeast vs. White Bridge	-6.0	-2.88*	-3.8	-1.62

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: Post hoc tests were conducted for each observation that proved both statistically significant and met the equality of variance test.

Appendix 11: Semester Departure by First Assigned Department – Analysis of Variance

First Department	Entering Cohort	Fall Y1 to Spring Y1	Spring Y1 to Fall Y2	Fall Y2 to Spring Y2	Spring Y2 to Fall Y3	Fall Y3 to Spring Y3	Fall Y1 to Spring Y3
Business, Mgmt., & Hospitality	1,252	26.0%	42.5%	23.5%	28.7%	24.9%	81.5%
English, Humanities, & Creative T	491	21.6%	41.8%	23.2%	32.6%	26.3%	81.7%
Healthcare Professions	1,654	20.1%	41.9%	23.7%	34.4%	22.7%	81.3%
Science, Tech. Eng., and Math	1,335	22.3%	40.0%	23.1%	31.8%	18.1%	78.8%
Social & Behavioral Sciences	1,260	24.7%	43.4%	23.4%	30.1%	17.8%	80.4%
Total	**5,992**	**22.9%**	**41.9%**	**23.4%**	**31.6%**	**21.4%**	**80.6%**
	F-test	**4.21***	**0.62**	**0.01**	**1.03**	**1.77**	**1.08**
(DF between, DF within) | p-value		(4, 5987) | 0.002	(4, 4613) | 0.650	(4, 2666) | 1.000	(4, 2031) | 0.393	(4, 1181) | 0.132	(5, 5987) | 0.366
Bartlett's test for equal variances: chi2 | p-value		**13.98 | 0.007†**	**0.15 | 0.997**	**0.04 | 1.000**	**1.27 | 0.866**	**7.06 | 0.133**	**4.89 | 0.299**

*p < 0.05, **p < 0.01, ***p < 0.001

† Assumption of equal variances is violated.

Source: Tennessee Board of Regents

Note: Each test is an Analysis of Variance to test that the difference in means within the respective groups for each semester departure is statistically significant. No Post Hoc tests are conducted since no tests that proved statistically significant passed the assumption of equal variance test.

Appendix 12: When Students Return and Who Returns

	Total Departed	Summer Year 1	Fall Year 2	Spring Year 2	Summer Year 2	Fall Year 3	Spring Year 3	Total Returned
Fall Year 1 Cohort	1,373	3.9%	8.0%	1.9%	0.2%	2.0%	0.4%	16.5%
Spring Year 1 Cohort	1,935			9.1%	1.3%	4.2%	1.6%	16.2%
Fall Year 2 Cohort	625				3.8%	10.7%	3.4%	17.9%
Spring Year 2 Cohort	755						14.0%	14.0%
Total	**4,688**	**1.2%**	**2.3%**	**4.3%**	**1.1%**	**3.8%**	**3.1%**	**16.2%**

Source: Tennessee Board of Regents

Note: Table identifies the first semester students returned to campus following departure. For example, the first row identifies when students who did not return their Spring Year 1 semester returned to campus. Their earliest opportunity to return was the trailing summer semester, following their first year.

Returned by Race/Ethnicity

Ethnicity	Departed	Returned	% Returnec
Black	1,823	296	16.2%
Hispanic	370	61	16.5%
White	2,292	327	14.3%
Other	346	58	16.8%
Total	**4,831**	**742**	**15.4%**
		F-test	**1.36**

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: We ran an Analysis of Variance to test the difference in means within the respective groups between students who departed at any time but did not return and students who departed at any time and returned at any time.

Returned by Sex

Sex	Departed	Returned	% Returned
Male	2,175	350	16.1%
Female	2,656	392	14.8%
Total	**4,831**	**742**	**15.4%**
		t-test	**1.28**

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: We ran a two-sample t-test to test the difference in means within the respective groups between students who departed at any time but did not return and students who departed at any time and returned at any time.

Returned by First Campus

Campus	Departed	Returned	% Returned
Clarksville	577	75	13.0%
Dickson	247	34	13.8%
Humphreys Co.	376	46	12.2%
White Bridge	2,949	447	15.2%
Southeast	682	140	20.5%
Total	**4,831**	**742**	**15.4%**
		F-test	**4.99*** **

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: We ran an Analysis of Variance to test the difference in means within the respective groups between students who departed at any time but did not return and students who departed at any time and returned at any time.

Returned by First Department

First Department	Departed	Returned	% Returned
Business, Mgmt., & Hospitality	1,020	136	13.3%
English, Humanities, & Creative Te	401	57	14.2%
Healthcare Professions	1,345	210	15.6%
Science, Tech. Eng., and Math	1,052	179	17.0%
Social & Behavioral Sciences	1,013	160	15.8%
Total	**4,831**	**742**	**15.4%**
		F-test	**1.51**

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Tennessee Board of Regents

Note: We ran an Analysis of Variance to test the difference in means within the respective groups between students who departed at any time but did not return and students who departed at any time and returned at any time.