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Exploring The Impact Of A Targeted Support Program For Underrepresented Minority Students At A Predominantly White Regional Institution

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EXPLORING THE IMPACT OF A TARGETED SUPPORT PROGRAM FOR UNDERREPRESENTED MINORITY STUDENTS AT A PREDOMINANTLY WHITE REGIONAL INSTITUTION

BY

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DEDICATION

This dissertation is dedicated to my sons, Zachary and Benjamin. May you always know how loved you are and always chase your dreams.

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ABSTRACT

This study involved examination of the impact of Freshman Academy, a targeted support program for students at a predominantly White regional institution, on the academic success of 1st-year underrepresented minority students, as measured by 1st-year grade point average and retention. Vincent Tinto's interactionalist theory and student departure models, Alexander Astin's theory of student involvement, and critical race theory formed the foundational theoretical framework for the study. Preexisting archival institutional data were employed in this quantitative study that used demographic analysis, linear regression, and multinomial logistic regression. The analyses included preentry characteristics and collegiate characteristics based on students' institutional experiences. Preentry covariates included race and ethnicity, gender, residency, Pell Grant eligibility, first-generation student status, parental education level, high school grade point average, and ACT composite score. Collegiate covariates included Rodney Gross scholar program participation, NOVA program participation, student athlete status, housing, and participation in living learning communities. Freshman Academy participation was significantly correlated with the success of 1st-year underrepresented minority students, as measured by grade point average and retention.

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CHAPTER 1

INTRODUCTION

Many researchers over the years have explored retention models and the factors that impact the retention and persistence of college students—in particular, subpopulations of students. Degree completion rates for full-time undergraduate students at 4-year institutions have continued to increase over time (National Center for Education Statistics, 2019, 2020). Despite the overall increase, gaps have remained in retention and graduation rates between white students and students belonging to racial minority groups (Education Trust, 2016; Flores et al., 2017; Green & Wright, 2017; Kentucky Council on Postsecondary Education [CPE], 2019, 2021; National Center for Education Statistics, 2019, 2020). States and schools have continued to explore ways to address the continuing gaps in student success and degree attainment. Some states have implemented performance-based funding models to provide an impetus for institutions to work toward student achievement. Some of these models have included a focus on increasing enrollment, improving academic success, and closing the degree attainment gaps between student populations.

Kentucky has been focusing on diversity, equity, and inclusion with the goal of achieving desired educational outcomes for all student populations and closing the existing gaps between White students and underrepresented minority (URM) students. The Kentucky CPE has been a driving force behind institutions in the commonwealth focusing on this goal. With the implementation of a performance-based funding model

and the *Kentucky Public Postsecondary Education Policy for Diversity, Equity and Inclusion*, the state has placed importance on addressing continuing educational disparities.

Background of the Study

Kentucky CPE

When the Council on Higher Education created The Commonwealth of Kentucky Higher Education Desegregation Plan in 1982, the Kentucky CPE initiated a multidecade commitment to working toward "diversity and inclusion at Kentucky's public postsecondary institutions" that would include "increasing the enrollment and success of African-American students," "increasing the number of African-American employees on campus," "enhancing Kentucky State University," and "improving campus climate" (Kentucky CPE, 2016, p. 2). The Kentucky CPE created the Committee on Equal Opportunities to manage this commitment, and in 2008 the committee collaborated "with public institutions, to develop a process that would help to ensure that the significant progress made in promoting diversity was preserved and further enhanced throughout public postsecondary education" (Kentucky CPE, 2016, p. 2). The Kentucky CPE instituted an initial plan in 2010 and revisited it after a 5-year implementation process. The Kentucky CPE implemented the *Kentucky Public Postsecondary Education Policy for Diversity, Equity and Inclusion* in 2016. The Committee on Equal Opportunities received policy oversight and has been working directly with the public postsecondary colleges in the state. The policy was

> grounded on the premise that to truly prepare students for life and work in an increasingly diverse society, the public postsecondary institutions within the Commonwealth shall develop a plan to embrace diversity and equity within

> constitutional and legal parameters, commit to improving academic achievement for all students, create an inclusive campus environment, and produce culturally competent graduates for the workforce. (Kentucky CPE, 2016, p. 3)

The three focus areas of the policy are opportunity, success, and impact. In regard to opportunity, the Kentucky CPE (2016) said that colleges in the state "have a responsibility to provide residents with the opportunity to receive a rich and fulfilling educational experience that cannot be fully obtained without exposure to different perspectives and cultures of those around them" (p. 5). Although the first step may be creating opportunities for inclusion and participation in the postsecondary setting, success depends on institutions being able to "commit to helping those students be successful when they arrive on campus" (Kentucky CPE, 2016, p. 7). The third focus area, impact, encompasses campus climate, inclusiveness, and cultural competency. The Kentucky CPE (2016) said that "in order for students to be successful and receive the full benefits of diversity, the campus climate must be one that is supportive and respectful of all people" (p. 9).

The focus areas of the policy are directly in line with the Kentucky CPE's broader strategic agenda, and thus the policy is almost an extension in thought and theory of what the state postsecondary public institutions and Kentucky CPE were already focusing on. Additionally, Kentucky passed the Postsecondary Education Performance Funding Bill in 2017. This bill uses a series of metrics to determine state funding allocations to institutions. The *Kentucky Public Postsecondary Education Policy for Diversity, Equity and Inclusion* ties directly into some of the metrics used to determine funding, including retention rates and degree attainment of low-income and URM students.

Eastern Kentucky University

At the time of this study, Eastern Kentucky University (EKU) was a public, 4-year, predominantly White institution situated in Richmond, Kentucky. Its enrollment was over 16,000. EKU offered a variety of certificates and degrees, including 2-year, 4-year, master's, and doctoral degrees, and the Carnegie Classification of Institutions of Higher Education (n.d.) thus classified it in the category "master's college and university: larger programs." EKU's vision was to "be a premier university dedicated to innovative student engagement and success, advancing Kentucky, and impacting the world," and the institution expounded the following as its mission:

> As a school of opportunity, Eastern Kentucky University fosters personal growth and prepares students to contribute to the success and vitality of their communities, the Commonwealth, and the world. Eastern Kentucky University is committed to access, equal opportunity, dignity, respect, and inclusion for all people, as integral to a learning environment in which intellectual creativity and diversity thrives. (EKU, n.d.-h)

The vision and mission of the institution were clearly in tune with the Kentucky CPE's strategic plan, and the university articulated the importance of providing access and educational opportunity to a diverse population. To achieve the desired vision and mission, EKU has made moves to provide various student support programs and services. At the time of the study, EKU offered a variety of support programs and services targeting URM populations, including scholarships, mentoring programs, academic outreach, engagement opportunities, activities, advising, and a newly formed residential learning community. One program in particular, Freshman Academy, formed the focus of this study. EKU (n.d.-c) defined the program as follows:

> [Freshman Academy] is an interactive learning experience that promotes the retention of all students, with particular focus on minority students. It is designed to provide first year students with the information, encouragement and direction they need in order to navigate college life and reach their academic, personal, and

> professional goals at Eastern Kentucky University. The Academy connects first-year students with their fellow classmates, and introduces them to EKU faculty, staff and student leaders who will provide on-going support throughout their college career at EKU and beyond. (p. X)

Chapter 2 provides a more comprehensive overview of the program, its history, and its components.

Problem Statement

As the population of the United States has become increasingly diverse, schools have been faced with the question of how to provide solutions to the racial divide that has existed in education. The impact of the racial divide in educational attainment has contributed to economic divides for URM populations, as demonstrated by disparities in earnings and socioeconomic status based on educational attainment. This impact can persist beyond the life span of an individual, influencing the lives of their children and families and possibly contributing to generational poverty in communities with large URM populations. The global pandemic that started in 2020 has exacerbated these economic effects in the United States, where the pandemic has had disproportionate economic and health impacts on minority communities. At the state level, universities have also experienced economic pressures. In Kentucky, reduced funding for postsecondary education has had implications for universities as they have worked to find new sources of revenue and implement policies to increase existing sources of revenue, such as performance-based funding.

Gaps have remained in college student persistence and degree attainment between White students and URM students. Recent changes in performance-based funding in Kentucky have stressed the academic success of URM populations, with explicit goals tied to persistence and degree attainment. Although some institutions have had some

success in implementation of changes and measurement of their outcomes, others have struggled, which has impacted their bottom lines.

EKU has been one of the higher education institutions feeling the pressure of the performance metrics implemented by the Kentucky CPE. Tables 1–4 draw on data for EKU and other institutions obtained from the Kentucky CPE interactive dashboard. The tables display the 1st- to 2nd-year retention rates for first-time, full-time undergraduate students who began seeking a bachelor's (4-year) degree (Kentucky CPE, 2021). Undergraduate URM enrollment at EKU ebbed and flowed between 2010 and 2019, with a significant drop after 2011 followed by a gradual increase and then a substantial decrease in 2018–2019 (see Table 1). URM 1st-year retention rates had a substantial increase from 62.8% (2016–2017) to 71.98% (2017–2018), surpassing the Kentucky CPE's 2020–2021 target of 67%; yet the rate fell back down below the target to 65.50% in 2018–2019 (see Table 1). The 1st-year retention rates for URM and non-URM students from 2010 to 2019 in Tables 1 and 2 indicate that non-URM rates have continued to surpass those of URM students by as much as 15.18 percentage points (2011–2012), with an anomalously low difference of 1.01 percentage points in 2017–2018.

At the state level, EKU has consistently ranked middle to bottom with regard to retention rate of URM students who began seeking a bachelor's (4-year) or associate's (2-year) degree at public 4- or 2-year degree-granting institutions (see Table 3). Tables 3 and 4 indicate that at most schools and in most years, the non-URM retention rate was greater than the URM retention rate. Only a few of the schools have years in which the URM retention rate exceeded that of non-URM students; the University of Louisville had the most such years (3) during the time frame considered.

Table 1

Retention Rates From 1st to 2nd Year of Underrepresented Minority Students at Eastern Kentucky University

Academic term (fall to fall)	Students		Retention rate (%)
	Total	Retained	
2010–2011	265	172	64.91
2011–2012	170	99	58.24
2012–2013	183	111	60.66
2013–2014	209	127	60.77
2014–2015	238	156	65.55
2015–2016	248	159	64.11
2016–2017	242	152	62.81
2017–2018	257	185	71.98
2018–2019	200	131	65.50

Source: Adapted from *Diversity, Equity, and Inclusion Plan Matrix*, by Kentucky Council on Postsecondary Education, 2021 (http://cpe.ky.gov/data/diversity.html).

Note: Data are for first-time, full-time undergraduate students who began seeking a bachelor's (4-year) degree at Eastern Kentucky University and were designated as underrepresented minority students.

Table 2

Retention Rates From 1st to 2nd Year of Non-Underrepresented Minority Students at Eastern Kentucky University

Academic term (fall to fall)	Students		Retention rate (%)
	Total	Retained	
2010–2011	1,846	1,244	67.39
2011–2012	1,738	1,276	73.42
2012–2013	1,757	1,290	73.42
2013–2014	1,778	1,309	73.62
2014–2015	1,768	1,328	75.11
2015–2016	2,197	1,651	75.15
2016–2017	2,001	1,495	74.71
2017–2018	1,877	1,370	72.99
2018–2019	1,821	1,386	76.11

Source: Adapted from *Diversity, Equity, and Inclusion Plan Matrix*, by Kentucky Council on Postsecondary Education, 2021 (http://cpe.ky.gov/data/diversity.html).

Note: Data are for first-time, full-time undergraduate students who began seeking a bachelor's (4-year) degree at Eastern Kentucky University and were not designated as underrepresented minority students.

Table 3

Retention Rates From 1st to 2nd Year of Underrepresented Minority Students by Institution

Term	Retention rate (%)							
	Eastern Kentucky University	Kentucky State University	Morehead State University	Murray State University	Northern Kentucky University	University of Kentucky	University of Louisville	Western Kentucky University
2010–2011	64.91	55.03	73.26	63.06	59.21	77.32	80.69	65.02
2011–2012	58.24	51.36	64.58	65.64	59.12	76.95	79.07	67.33
2012–2013	60.66	49.06	65.71	66.84	59.51	77.55	78.84	58.62
2013–2014	60.77	45.05	69.74	61.22	67.03	76.26	79.49	62.55
2014–2015	65.55	58.41	62.50	60.61	63.67	76.11	78.70	59.12
2015–2016	64.11	60.31	67.77	69.15	69.46	77.16	78.04	58.29
2016–2017	62.81	74.56	63.16	75.00	72.43	79.91	81.71	57.81
2017–2018	71.98	56.80	78.00	73.60	63.05	77.53	77.90	57.06
2018–2019	65.50	67.03	68.52	70.42	69.08	78.48	75.41	59.55

Source: Adapted from *Diversity, Equity, and Inclusion Plan Matrix*, by Kentucky Council on Postsecondary Education, 2021 (http://cpe.ky.gov/data/diversity.html).

Note: Terms are academic terms, measured fall to fall. Data are for first-time, full-time undergraduate students who began seeking a bachelor's (4-year) or associate's (2-year) degree at a public 4- or 2-year degree-granting institution and identified as belonging to an underrepresented minority.

Table 4

Retention Rates From 1st to 2nd Year of Non-Underrepresented-Minority Students by Institution

Term	Retention rate (%)							
	Eastern Kentucky University	Kentucky State University	Morehead State University	Murray State University	Northern Kentucky University	University of Kentucky	University of Louisville	Western Kentucky University
2010–2011	67.39	54.35	75.43	73.36	68.59	81.30	77.87	74.72
2011–2012	73.42	51.69	70.27	75.32	72.78	83.95	80.43	76.39
2012–2013	73.42	63.33	69.50	73.74	68.67	83.28	78.24	73.92
2013–2014	73.62	53.52	69.68	74.01	69.74	83.25	81.31	75.26
2014–2015	75.11	66.67	65.95	73.52	69.99	84.01	79.55	74.94
2015–2016	75.15	55.81	70.96	74.96	72.32	82.67	80.04	75.30
2016–2017	74.71	51.06	72.97	77.58	72.50	84.06	80.36	72.38
2017–2018	72.99	52.38	73.29	79.92	69.55	86.05	81.03	74.66
2018–2019	76.11	58.97	73.64	80.47	72.59	86.25	81.58	75.48

Source: Adapted from *Diversity, Equity, and Inclusion Plan Matrix*, by Kentucky Council on Postsecondary Education, 2021 (http://cpe.ky.gov/data/diversity.html).

Note: Terms are academic terms, measured fall to fall. Data are for first-time, full-time undergraduate students who began seeking a bachelor's (4-year) or associate's (2-year) degree at a public 4- or 2-year degree-granting institution and identified as not belonging to an underrepresented minority.

Theoretical Framework

Tinto's (1975, 1993) interactionalist theory is one of the primary retention models used by researchers since its inception in 1975 (Demetriou & Schmitz-Sciborski, 2011; Kuh, 2008; Manyanga et al., 2017). The model incorporates preentry attributes and goals/commitments while emphasizing the critical role of students' academic integration (e.g., academic performance and faculty/staff interactions) and social integration (e.g., extracurricular activities and peer group activities). Essentially, the more a student is engaged and integrated academically and socially, the more likely they are to choose not to depart their university. Tinto (1999, 2000, 2004, 2007, 2012) has continued to focus on student departure and retention and has built upon his theoretical framework. The framework has guided a number of researchers focused on the same topics as those involved in this study (Banks & Dohy, 2019; Green & Wright, 2017; Han et al., 2018; Hurd et al., 2016; Kuh, 2008; Ovink & Veazey, 2011). Student involvement is an overlapping component of retention models, and Astin's (1984) theory of student involvement is a foundational model of college impact that also takes into consideration students' preentry attributes and collegiate experiences. In regard to retention, Astin's (1984, 1999) theory explains that a student is more likely to persist and graduate if they are more involved and engaged in cocurricular collegiate opportunities.

These theoretical frameworks were at the forefront of understanding the factors impacting persistence, retention, and degree attainment for URM students in this study. This theoretical lens incorporated both preentry attributes and characteristics as well as factors related to students' experiences at the institution. In regard to the continued goals/commitments of the model, I aimed to explore the relationships connecting the

aforementioned variables with the academic progress of students as measured by 1st- to 2nd-year retention and 1st-year grade point average (GPA).

Purpose of the Study

The purpose of this study was to examine the factors impacting the academic success of URM students at a predominantly White regional Kentucky university. The study included preentry attributes and college attributes for EKU URM students and students' academic progress. Preentry characteristics of students examined included race, gender, parental education level, first-generation designation, Pell Grant eligibility, ACT scores, and high school GPA. College characteristics of students examined included participation in university support programs and services, and the focus was on participants in the Freshman Academy. Academic progress was measured through the outcomes of the 1st-year retention and GPA. Further exploring the factors impacting the retention and academic achievement of URM students had the potential to provide a clearer picture of how to support the success of, and increase degree attainment rates for, designated student populations.

Research Questions

At a macrolevel, the aim of the study was to explore the relationships connecting preentry and college variables with academic success of URM students. The goal was to determine whether participation in support programs and services had statistically significant effects on student success. The study addressed the following primary research questions:

1. What is the impact of Freshman Academy participation on 1st-year GPAs of URM students, compared with the 1st-year GPAs of URM students not participating in Freshman Academy?
2. What is the impact of Freshman Academy participation on 1st-year retention rates of URM students, compared with the 1st-year retention rates of URM students not participating in Freshman Academy?

Significance of the Study

The results of this study could improve understanding of the predictors of academic success (e.g., GPA and retention), allow assessment of these predictors' usefulness in future predictive modeling, and allow assessment of whether participation in selected university support programs and services correlates with outcomes. This study had the potential to shed light on EKU URM students but also provide some generalizability to other Kentucky schools and higher education institutions in regard to predictive modeling and examples of support programs or services that impact student outcomes and success.

URM students, experiences of URM students at predominantly white institutions, and student success and degree attainment have attracted much discussion and research. However, little empirical research has emerged on URM students at regional postsecondary education institutions in Appalachia or Kentucky. Additional analysis of multiple variables had the potential to add to existing research in two ways. First, the combination of variables examined encompassed a variety of both preentry attributes and college participation attributes, with the aim of obtaining a clear picture of the relationships connecting support initiatives for URM students with their characteristics

and academic outcomes. Second, with the population studied, the approach used in the study had the potential to add to discussion and literature related to several topics, including URM students and predominantly White institutions, Kentucky postsecondary education institutions, Appalachian institutions, regional/comprehensive universities, the degree attainment gap between White students and URM students, and support programs geared toward URM students.

An interesting conundrum can appear when education funding is tied to both enrollment and performance of designated student populations. Reducing applicant selectivity may help to increase enrollment, but it can also produce a cohort of students with increased need for support services and assistance. Higher selectivity may yield a group of students who are—statistically speaking—more likely to succeed. Support programs and services are essential, which adds to the significance of this study for this particular institution and others in similar situations. Without the proper supports, an institution may set itself up for worsening retention and degree attainment outcomes.

The presence of performance-based funding models means enrollment and success of URM students directly impact the finances of colleges and universities. Because states have incorporated funding models grounded in degree attainment and graduation of students, studies such as this one can have significance. Higher education stakeholders at the state and national levels could possibly glean generalizable information from studies such as this one. Secondary education stakeholders may also have an interest in the results of this study because achievement and performance gaps between White students and URM students have also persisted in systems serving kindergarten through 12th grade.

Definition of Terms

This section defines the main terms used in the study.

1st-year student: For the purposes of this study, a 1st-year student is a first-time, full-time undergraduate student who begins seeking a bachelor's (4-year) degree at EKU.

Grade point average: The GPA of a 1st-year student is based on a scale with a maximum of 4.0. GPA encompasses both the fall and spring semester cumulative GPAs for a 1st-year student at EKU.

Retention: For the purposes of this study, retention consists of the fall-to-fall enrollment of a student from their 1st year to their 2nd year. In other words, retention includes 1st-year students who continue enrollment at EKU and remain enrolled in the subsequent fall semester.

Underrepresented minority: URM students are those who categorize themselves as (a) Hispanic or Latino, (b) American Indian or Alaska Native, (c) Black or African American, (d) Native Hawaiian or other Pacific Islander, or (e) belonging to two or more races (Kentucky CPE, 2016).

Summary

The first chapter of this study introduced the problem of continuing gaps in educational achievement, as measured by GPA and retention, between URM students and White students at the institutional, state, and national levels. The chapter provided background context for the phenomena studied, introduced the theoretical framework used to understand the context of the study, and clarified the purpose and scope of the study. Chapter 2 provides a review of existing literature relating to the concept of retention, theoretical frameworks and models relevant to retention and the approach of

the study, and existing practices regarding URM support programs and services at the institutional and national levels.

CHAPTER 2

LITERATURE REVIEW

The purpose of this quantitative study was to examine the factors impacting the retention and persistence of URM students at a predominantly White, regional Kentucky university. I explored the relationship connecting student attributes and college experience attributes for EKU URM students with the students' academic progress, as measured by their 1st-year retention rate and GPA. More specifically, the goal of the study was to determine whether participation in EKU's URM Freshman Academy support program has a statistically significant effect on student success. The literature review consists of three main sections and provides foundational, theoretical, and practical application perspectives.

This study rested on a theoretical framework encompassing both retention and student involvement based on the work of Tinto and Astin. The literature review explores Tinto's interactionalist theory and student departure models. The review addresses the evolution from 1975 to 1993 of Tinto's conceptual schema for dropout from college, the foundational cornerstone of this study, including critiques and considerations of the model. Astin's theory of student involvement receives attention to provide context for understanding the role of student participation in collegiate experiences and support programs. And the review explores critical race theory as a theoretical lens for understanding both this study and its implications for policy and practice.

The literature review next addresses retention and the impact of degree completion as foundational context. Situated within this foundational context of retention are more specific foci: first-generation college student retention, 1st-year retention, and performance-based funding. The First-Generation College Student Retention section defines and explores the characteristics of this population as it builds on the intersectionality focus. The Retention of 1st-Year College Students section explores the 1st-year experience and its critical importance in establishing a trajectory toward degree completion. as a measure of overall student retention. The discussion of performance-based funding shows the connection between institutional retention efforts and funding.

The literature review concludes with examination of existing support services, programs, and areas of focus used to aid URM students. The topics include TRIO programs, common themes found in services and initiatives, student organizations, residential learning communities, Black Male Initiative programs, and EKU programs. TRIO programs are a collection of federal grant initiatives at the postsecondary level that target URM, underserved, low-income, and first-generation populations in various ways. The review will explore the history and impact of TRIO programs before transitioning to an exploration of services and initiatives at the national and institutional levels used to support URM populations. The review addresses underlying general themes of support, community, and belonging because these are components of many targeted services and programs. Examination of student organizations and residential learning communities relates to their ability to provide benefits to URM students. Discussion of the history and characteristics of Black Male Initiative programs examines an example of a type of program that has changed and flourished to provide a model of best practice for many

institutions. Because this study focused on the impact of an EKU-targeted support program, the review concludes with a look at the programs, support services, and involvement opportunities for URM students at EKU.

Theoretical Framework

This study rested on a theoretical framework encompassing both retention and student involvement. Tinto's (1975, 1993) interactionalist theory and student departure models formed the foundational cornerstone of the methodological design and approach of the study. Student involvement is an overlapping component of these models. Specifically, Astin's theory of student involvement aided understanding of student participation in, and collegiate experiences of, the functioning of support programs and services in relation to student development and retention. Critical race theory acted as a theoretical lens for better understanding the educational experience of URM students given systemic racism and barriers to success.

Tinto's Interactionalist Theory

Tinto's (1975, 1993) interactionalist theory and modeling have provided foundations for retention literature and research for decades (Braxton et al., 2014; Demetriou & Schmitz-Sciborski, 2011; Manyanga et al., 2017). Tinto's (1975) original theory focuses on the idea of voluntary withdrawal from college and why students drop out from institutions. Tinto (1993) took his theory a bit further after continued research and added components not included in the original theory.

Tinto's 1975 Conceptual Schema for Dropout From College

Tinto (1975) argued that existing research on dropouts in higher education provided an "inadequate conceptualization of the dropout process" with a "lack of

attention given to those types of longitudinal models that would lead to an understanding of the processes of interaction" (p. 90). Developing a better understanding of the interaction of variables over time would allow a shift from mere descriptive analysis to a theoretical model that would provide a fuller picture of relationship between the variables that impact persistence. Tinto (1975) theorized about dropping out of a higher education institution as a process based on the theories of Durkheim (1961). Durkheim (1961, as cited in Tinto, 1975), describing his theory of suicide, stated that "suicide is more likely to occur when individuals are insufficiently integrated into the fabric of society" (p. 91). Tinto (1975) also used an economic lens to understand education and the "notion concerning the cost–benefit analysis of individual decisions regarding investment in alternative educational decisions" (p. 91). With these two lenses in mind, Tinto (1975) presented the conceptual schema for dropout from college (see Figure 1). Through this model, Tinto (1975) claimed that dropping out of college is a

> longitudinal process of interactions between the individual and the academic and social systems of the college during which a person's experiences in those systems (as measured by his normative and structural integration) continually modify his goal and institutional commitments in ways which lead to persistence and/or to varying forms of dropout. (p. 94)

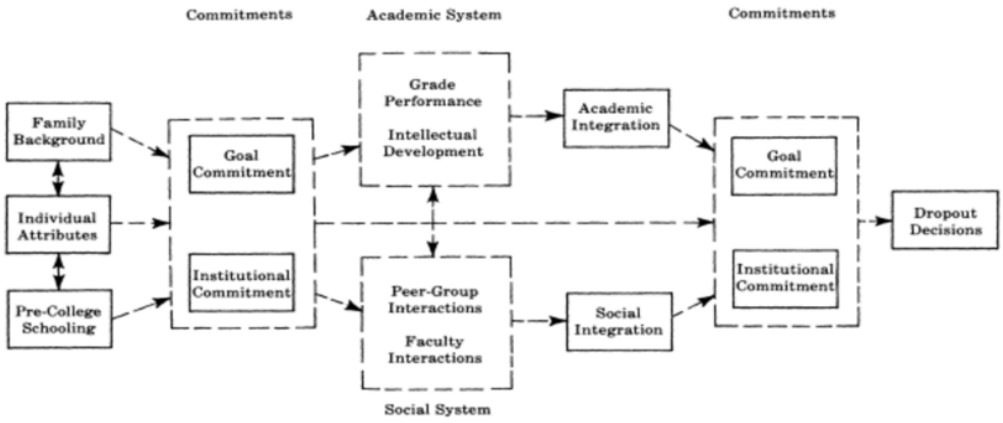

Figure 1. *Tinto's (1975) Conceptual Schema for Dropout From College*

A student comes to college with a variety of characteristics and attributes that impact their commitments to their school and their own personal goals. Family background can include attributes such as social status, socioeconomic status, family values and upbringing, and parental educational level. Individual attributes can include demographic characteristics—such as race, class, gender, and ability—and social and emotional characteristics. Precollege schooling attributes can include academic experiences, college preparation and readiness, GPA, standardized test scores, and academic achievements. Because these combined attributes all impact goal and institutional commitment, the schema considers academic and social systems. The academic system includes academic performance and intellectual development, and the social system includes items such as faculty and peer-group interactions. As a student becomes academically and socially integrated into an institution, the process impacts and reshapes their goal and institutional commitments. The degree to which a student is socially and academically integrated impacts their commitments and trajectory toward persistence. As Tinto (1975) claimed, "The higher the degree of integration of the individual into the college systems, the greater will be his commitment to the specific institution and to the goal of college completion" (p. 96).

Tinto's 1993 Conceptual Schema for Dropout From College

Tinto (1987) explained that dropping out, or "voluntary departure," "appears to be the result more of what goes on after entry into the institution than of what may have occurred beforehand" (p. 84). According to Tinto (1987), research showed "that the character of one's integrative experiences after entry are central to the process of voluntary withdrawal" (p. 84). After introduction of the conceptual schema for dropout

from college in 1975, further development resulted in Tinto's (1993) expanded model. Although the updated version includes the same components as the 1975 version (Figure 1), the 1993 version elaborates the academic and social systems and the role of external commitments at various stages (see Figure 2).

The updated schema, first introduced by Tinto (1987) and further supported by Tinto (1993), "argues that individual departure from institutions can be viewed as arising out of a longitudinal process of interactions between an individual with given attributes, skills, and dispositions (intentions and commitments) and other members of the academic and social systems of the institution" (Tinto, 1987, p. 113). The recognition and inclusion of both formal and informal components of the academic and social systems is important for improving understanding of the student experience and possible interactions that lead to departure.

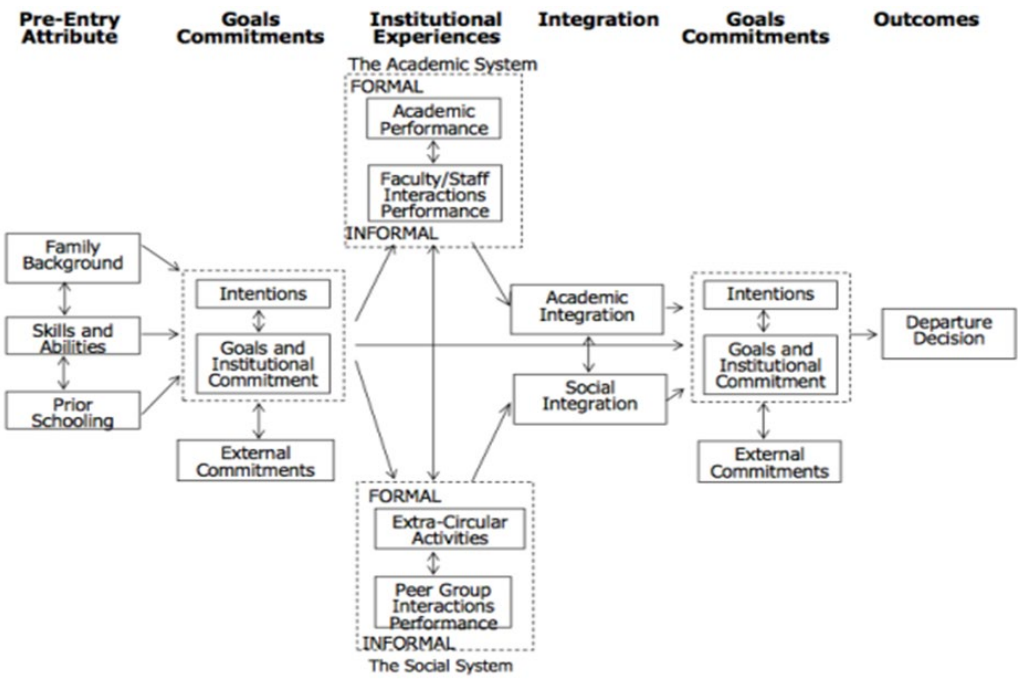

Figure 2. *Tinto's (1993) Conceptual Schema for Dropout From College*

Tinto (1999, 2000, 2004, 2007, 2012) has continued to focus on student departure and retention and built upon his theoretical framework, which supports the notion that the more a student is engaged and integrated academically and socially, the more likely they are to choose not to depart their university.

Model Critiques and Considerations

The original model derived from Tinto's (1975) interactionalist theory has formed a seminal foundation for subsequent work by Tinto and countless others seeking to understand the process of student departure from institutions. Braxton et al. (1997, as cited in Braxton et al., 2014), synthesized Tinto's (1975) interactionalist theory into 13 testable propositions they determined to have empirical support:

1. Student entry characteristics affect the level of initial commitment to the institution.
2. Student entry characteristics affect the level of initial commitment to the goal of graduation from college.
3. Student entry characteristics directly affect the student's likelihood of persistence in college.
4. Initial commitment to the goal of graduation from college affects the level of academic integration.
5. Initial commitment to the goal of graduation from college affects the level of social integration.
6. Initial commitment to the institution affects the level of social integration.
7. Initial commitment to the institution affects the level of academic integration.
8. The greater the degree of academic integration, the greater the level of subsequent commitment to the goal of graduation from college.
9. The greater degree of social integration, the greater the level of subsequent commitment to the institution.
10. The initial level of institutional commitment affects the subsequent level of institutional commitment.
11. The initial level of commitment to the goal of graduation from college affects the subsequent level of commitment to the goal of graduation.
12. The greater the level of subsequent commitment to the goal of graduation from college, the greater the likelihood of student persistence in college.

13. The greater the level of subsequent commitment to the institution, the greater the likelihood of student persistence in college. (Braxton et al., 2014, pp. 75–76)

Although Tinto's model has received wide study and empirical backing, it has also attracted critiques. Berger and Braxton (1998), for example, argued that only five of the testable propositions received support from a reasonable amount of empirical evidence and that the model lacked organizational/institutional characteristics and attributes. Braxton et al. (2014) argued that institution type and institutional attributes—such as cultural capital, ability to pay, proactive social adjustment, communal potential, institutional commitment to welfare of students, institutional integrity, family engagement, and psychosocial engagement—could be significant in understanding retention. Others have also concluded that student retention can be very campus specific and that one model struggles to capture all attributes or generalize (Berger et al., 2012; Braxton et al., 2014; Caison, 2007; Chapman & Pascarella, 1983). Moreover, subsequent models and theories that have reworked Tinto's models (Braxton & Lien, 2000; Braxton et al., 2014; Brunsden, 2000; Pascarella & Terenzini, 2005; Reason, 2009; Terenzini & Pascarella, 1978). Despite all this, Tinto's model has stood the test of time as a foundation for decades of student retention theoretical and modeling work.

Astin's Theory of Student Involvement

Astin's (1984) theory of student involvement is a foundational model of college impact widely used in student development theory work. Astin (1984) defined a student's student involvement as the "amount of physical and psychological energy that the student devotes to the academic experience" (p. 297). The theory explores the development of college students in relation to their cocurricular involvement and focuses on three

elements: inputs, environment, and outcomes. Inputs consist of student demographics, previous experiences, and attributes of students on entering college. Environment relates to students' time at college and the experiences, interactions, and relationships that are all part of that time. Outcomes are attributes and characteristics students leave college having developed. Astin (1999) proposed five basic postulates of his theory of student involvement:

> 1. Involvement refers to the investment of physical and psychological energy in various objects. The objects may be highly generalized (the student experience) or highly specific (preparing for a chemistry examination).
> 2. Regardless of its object, involvement occurs along a continuum; that is, different students manifest different degrees of involvement in a given object, and the same student manifests different degrees of involvement in different objects at different times.
> 3. Involvement has both quantitative and qualitative features. The extent of a student's involvement in academic work, for instance, can be measured quantitatively (how many hours the student spends studying) and qualitatively (whether the student reviews and comprehends reading assignments or simply stares at the textbook and daydreams).
> 4. The amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program.
> 5. The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement. (p. 519)

Astin (1984, 1999) found and theorized that the more students are involved and engaged while in college, the more likely they are to be retained and graduate. Generally speaking, this theory has been at the heart of many institutional support programs and services aimed at engaging students and connecting students to their campuses and communities through involvement.

Critical Race Theory

Introduction

Critical race theory first appeared as a theory and interpretation of U.S. laws at both the federal and state levels (Delgado & Stefancic, 2001). The purpose of the theory was to provide understanding of the impact of racism on the framing of the American legal system. The theory postulates that the law was structurally built to reward whiteness and would, as a result, disenfranchise Blackness. Queer theory, critical feminist theory, and Latino critical theory are extensions of the model and frame how the law has historically also disenfranchised minoritized populations of nonheterosexual, noncisgendered, nonmale, and non-White individuals (Nagoshi & Brzuzy, 2010; Rhode, 1990; Sullivan, 2003; Villalpando, 2004).

As critical race theory developed it found application outside the legal field in other systematic entities, such as education (Allen & Haniff, 1991; Ladson-Billings & Tate, 1995). Since the 1990s, scholars have used critical race theory to examine historic differences between minoritized populations and historically White, heterosexual, cisgendered, male populations in the educational system (Nagoshi & Brzuzy, 2010; Rhode, 1990; Sullivan, 2003; Villalpando, 2004). Critical race theory formed part of the theoretical framework of this study because of the nature of the student sample. Critical race theory and its main underlying assumption of intersectionality were relevant given the student demographics and statistical analysis performed (Sablan, 2018).

Intersectionality

Tinto's (1987) investigation of students in the early 1970s revealed that students "of different race, ability, and social status origins differed markedly in the rate at which

they left higher education within four years of entry without earning a college degree" (p. 26). Tinto (1987) acknowledged the uniqueness of each individual student and institution and the role that this uniqueness plays in understanding how an individual experiences higher education:

> But not all persons are identical, nor are all institutions alike in their structure and student bodies. Though it is obvious that all students must attend to the same general set of problems in seeking to persist until degree completion, not all enter with the same set of skills and dispositions, nor experience higher education in the same manner. Similarly, though all institutions face the same general set of issues in seeking to ensure persistence of their students, different types of institutions are constrained by somewhat different forces which determine the nature of institutional life. Thus, one can discern a number of significant differences between groups of individuals (identified here by race, social class, sex, and age) and between types of institutions (classified by level, size, and residential character) in both the patterning and roots of student departure. (p. 84)

Since the 1970s, Tinto and others have continued to report differences in retention and degree completion among students based on their individual attributes, such as gender, socioeconomic status, first-generation designation, and race or ethnicity. These trends have continued, and thus it is important to understand how these individual attributes interact with each other and compound to affect the student experience.

Intersectionality, as described by May (2012), can be helpful concept when looking at multiple variables and characteristics of populations because it "calls for analytic methods, modes of political action, and ways of thinking about persons, rights, and liberation informed by multiplicity" (p. 164). This idea of multiplicity places importance on using a lens that takes multiple variables into consideration. As May (2012) further explained, intersectionality is "both metaphorical and material, in that it seeks to capture something not adequately named about the nature of lived experience and about systems of oppressions (p. 164). To develop better and more complete understanding, intersections of race, socioeconomic status, and gender need to be viewed

not as independent silos but rather as a complex set of interactions and relationships that uniquely interlock. Because individuals may simultaneously belong to multiple disadvantaged and advantaged groups, it can be difficult to differentiate the disadvantages and advantages they experience according to each variable. It is important to examine these types of interactions and relationships because these variables (race, class, gender, sex, sexual orientation, etc.) all work simultaneously, not singularly, to influence lived experiences and opportunities.

Retention

Students belonging to underrepresented populations—such as first-generation, low-income, and minority students—face many barriers in their pursuit of higher education, including lack of academic preparation at the primary and secondary level, shortages of highly qualified teachers and academic resources, lack of honors and advanced placement courses at the secondary level, lack of mentorship and college counselors at the secondary level, and lack of parental knowledge of and support for higher education attainment. These underrepresented populations have been at a disadvantage in relation to their peers with regard to access, persistence, and degree completion. Moreover, although these students, statistically speaking, have been less likely to obtain degrees than their peers, college degrees can be invaluable to them, given that "a college education is considered the key to achieving economic success and social mobility in American society" (Engle & O'Brien, 2007, p. 25).

Because of the changing nature of available jobs in recent decades, the value of postsecondary education has led to an increase in emphasis on pursuing educational opportunities after high school. Federal financial aid opportunities have dramatically

increased, leading to increased opportunities for students from URM populations to obtain college degrees, whereas postsecondary education was once thought of as only for those wealthy enough to afford to pay to pursue such opportunities. Postsecondary education has direct links to employment, earnings, and life and career opportunity. The National Center for Education Statistics (2020) found that from 2000 to 2018, "for 25- to 34-year-olds who worked full time, year round," "higher education was associated with higher median earnings" (p. ii). For this age cohort, median annual earnings in 2018 were $34,900 for someone who completed high school, $54,700 for someone with a bachelor's degree, and $65,000 for someone with a master's degree or higher degree (National Center for Education Statistics, 2020, p. ii). Although the value of postsecondary education has implications for employment, earnings, and career opportunity, it also raises questions because students may borrow large sums of money to pay for college; if such a student does not complete their degree program, they are left with a mountain of debt and no degree to show for it.

The profound question of how to increase educational opportunity to promote equality without handicapping students with debt that takes years, if not decades, to repay is one that institutions and legislatures will have to answer in the years to come. This question is not new. Student retention and persistence has been a concern of higher education institutions for decades because students have been departing their institutions prior to completing their degrees. As stated earlier, although there has been some growth over time in degree completion rates, significant gaps have remained in retention and graduation rates between White students and URM students at the national level and in Kentucky (Education Trust, 2016; Flores et al., 2017; Green & Wright, 2017; Kentucky

CPE, 2019, 2021; National Center for Education Statistics, 2019, 2020). Retention impacts postsecondary institutions and it also impacts individual students in relation to career and job opportunities, financial earnings, and economic stability. The following sections address the institutional impact of retention vis-à-vis performance-based funding, the significance of 1st-year retention, and the role that first-generation status plays in understanding retention.

Retention of First-Generation College Students

Various definitions of a first-generation student have emerged: a student whose parents have no education beyond high school; a student whose parents did not attend 4-year institutions, even though they may have accumulated some credentials at schools (2 year, vocational, etc.) beyond high school; and a student whose parents attended 4-year institutions but did not complete bachelor's degrees (Choy, 2001). The U.S. Department of Education has commonly defined first-generation undergraduate students as those "whose parents had not participated in postsecondary education" (Cataldi et al., 2018, p. 2). First-generation students, even after accessing postsecondary education, still face obstacles in persisting and obtaining degrees. After controlling for various factors, Choy (2001) found that "among those who overcome the barriers to access and enroll in postsecondary education, students whose parents did not attend college remain at a disadvantage with respect to staying enrolled and obtaining a degree" (p. 4). Others have also made the same finding historically in regard to persistence and lower rates of degree completion (Cataldi et al., 2018; Engle & Tinto, 2008; Hamaideh & Hamdan-Mansour, 2014; Ishitani, 2006; Pascarella et al., 2004; Schuman, 2005).

First-generation students have tended to differ notably from other students in terms of demographic characteristics such as class, socioeconomic status, self-efficacy, and educational expectations. Choy (2001) pointed out that even taking variables such as these into consideration, and even when a student intends to earn a degree, "first-generation status appears to be a disadvantage throughout postsecondary educations that is independent of other background and enrollment factors" (p. 26). Even so, demographic characteristics of first-generation college students are still important and can be helpful in improving understanding of these subpopulations of students, their collegiate experiences, and their needs.

Race, class, gender, and other demographic variables are not independent. There is intersectionality between such variables because they are all interrelated and operate in conjunction with other attributes simultaneously. Consideration of intersectionality leads to the conclusion that first-generation student populations contain overrepresentations of low-income and minority students (Choy, 2000). First-generation students have been more likely to come from low-income backgrounds than from other backgrounds (Cataldi et al., 2018; Chen & Carroll, 2005; Choy, 2001; Kojaku & Nunez, 1998; Warburton et al., 2001). Racial and ethnic minority populations are similarly overrepresented among first-generation student populations (Cataldi et al., 2018; Choy, 2001).

Socioeconomic status and class are variables that could aid understanding of the first-generation student population. Along with obvious financial constraints relative to their non-first-generation counterparts, first-generation students face unique persistence experiences in relation to class boundaries, managing multiple identities, fitting in within various peer groups, and financial and class-related pressures (Choy, 2000; DiMaria,

2006; Lehmann, 2009; Orbe, 2004, 2008; Thayer, 2000). In relation to socioeconomic status and class, first-generation college students may also enter the collegiate realm with differing amounts of cultural capital, which can greatly impact their experience and likelihood of success if they do not receive the proper support. The educational level of a first-generation student's parents is related to such cultural capital, and this comes into play not only outside the classroom but also inside the classroom (Collier & Morgan, 2008; Cushman, 2007; Dumais & Ward, 2010). First-generation college students also show differences in relation to self-efficacy relative to their non-first-generation counterparts (Penrose, 2002; Ramos-Sánchez & Nichols, 2007; Wang & Castañeda-Sound, 2008). Self-efficacy differences provide yet another great route to understanding the uniqueness of first-generation college students—specifically in relation to their resilience, ability to adjust and transition to the collegiate realm, emotional well-being and sense of self, and academic experiences in relation to persistence.

Race and ethnicity are other variables that can aid understanding of first-generation college students' experiences. Although many authors have treated racial and ethnic background as a binary classification system—majority versus minority, White versus non-White, and native versus nonnative—understanding the experiences of first-generation college students means gaining a better understanding of the subpopulations of these binary categories and looking at differences between and among these groups. Race and ethnicity can impact students' experiences in a variety of ways, including through college choice, barriers, involvement on campus, academic experiences, social experiences, and outcomes (Fischer, 2007; Hurtado et al., 1997; Mayhew, 2016; Pascarella & Terenzini, 2005; Saunders & Serna, 2004; Stuber, 2011). Racial and ethnic

differences can also vary in relation to the experiences of first-generation college students based on the types of campus students attend (Fiebig et al., 2010; Mayhew, 2016; Pascarella & Terenzini, 2005). As mentioned above, consideration of intersectionality leads to the conclusion that characteristics such as race and ethnicity are best understood when addressed in conjunction with the overlapping characteristics and influences of other demographic characteristics.

Retention of 1st-Year College Students

Retention of 1st-year students has been an area of substantial research since the 1970s (Boyer, 1987; Upcraft & Gardner, 1989). Researchers were consistently showing that the highest dropout rates occurred in the 1st year of a student's collegiate journey. To battle this attrition and work toward increasing degree completion, it was critical to have an understanding of what happens during a student's 1st year that can lead to their departure. Leading into the 1980s, a movement began nationwide as institutions began implementing support services and programming to enhance the 1st year of the college experience (Barefoot, 2000; Greenfield et al., 2013; Koch & Gardner, 2006). Koch and Gardner (2006) summarized this shift toward a comprehensive "first-year experience"—with an array of programs, services, and experiences, both curricular and cocurricular—as a "purposeful set of initiatives designed and implemented to strengthen the quality of student learning during and satisfaction with the first year of college" (p. 2).

Greenfield et al. (2013) analyzed 1st-year-experience best practices and research and synthesized their conclusions into 12 interventions found to positively contribute to 1st-year success and retention: high-impact pedagogies, summer bridge programs, new student orientation, advising approaches and strategies, 1st-year seminars, learning

communities, residential learning programs, developmental education, early alert warning systems, probation initiatives, peer leadership, and 2nd-year transitions (pp. xxxiv–xxv). EKU has been using some of these interventions and best practices (explored in the Support Programs and Areas of Focus section), especially within the Freshman Academy program. Overall, given the complexity of retention, it is important to remember that the 1st year of college has remained the most critical for retention of a student and for setting a foundation for an institution aiming to increase eventual degree completion.

Performance-Based Funding

Leaders of institutions care about retention numbers both in terms of ensuring their students succeed in obtaining degrees and in terms of the financial health of the institutions, because student retention has a direct impact on an institution's budget. State-appropriated funding for higher education has decreased drastically across the country over the last few decades (Burke, 2002; Mitchell et al., 2014; Ortagus et al., 2020). States across the nation have been implementing performance-based funding models, which typically use a series of metrics to determine levels of funding institutions can earn (McLendon & Hearn, 2013; Ortagus et al., 2020). Many states have also included metrics tied to diversity, equity, and inclusion indicators and factors, including the enrollment, retention, and degree completion of URM and low-income students. Kentucky is one such state and has adopted a state-level diversity policy that incorporates a series of diversity-related metrics into its performance-based funding model. The performance-based funding model in Kentucky has meant that enrollment and success of URM students have begun directly impacting the finances of colleges and universities.

Some researchers and analysts have reported unintended adverse consequences of performance-based funding for underrepresented, underprepared, and low-income students (Cielinski & Pham, 2017; Ortagus et al., 2020). In regard to institution type, Garcia (2018) and Kahlenberg et al. (2018) found that "comprehensive universities and community colleges, which enroll disproportionately large shares of historically underrepresented students, are heavily reliant on state funds, yet receive less funding per student when compared to flagship and more-selective colleges" (Ortagus et al., 2020, p. 541). Moreover, Hillman and Corral (2018) and Jones et al. (2017) concluded that performance-based funding models "have been shown to adversely affect minority-serving institutions and other colleges with limited resources, creating the possibility that performance-based funding systems may actually exacerbate educational inequality unless an additional investment is made in improving capacity" (Ortagus et al., 2020, p. 541). Being a regional comprehensive university, and an institution operating with a smaller budget and pool of resources than Kentucky's flagship metropolitan research university, EKU may have encountered adverse unintended consequences resulting from policy implementation. This is important for understanding the context of the program under review, EKU's Freshman Academy.

Support Programs and Areas of Focus

Tinto's interactionalist theory and models of student departure stress the importance of experience and support in multiple areas of academic, social, and personal life. The intersectionality of a student's attributes and their various academic and social experiences at their particular institution can impact whether or not the student remains at their institution and completes a degree. Braxton et al. (2014) similarly explained that

student retention is “difficult to predict and directly control” and that “the development of policies and practices to improve student retention requires a complexity of factors to influence this tricky phenomenon indirectly” (p. 211). In an effort to address student retention, many institutions have implemented strategies, resources, and programming that target URM, underserved, low-income, and first-generation students in various ways. These include TRIO programs, scholarship programs for targeted populations, financial aid (low income or income and needs based), peer mentoring, faculty and staff mentoring, engagement opportunities, specialty events and activities, specialized academic advising and coaching, learning communities, and living learning or residential learning communities (Banks & Dohy, 2019; Green & Wright, 2017; Gummadam et al., 2016; Han et al., 2018; Hurd et al., 2016; Mayhew, 2016; Ovink & Veazey, 2011; Pascarella & Terenzini, 2005; Tinto, 1999, 2000, 2004, 2007; Vaccaro & Cambra-Kelsay, 2018).

The Retention section discussed the broader macrolevel population under consideration, including the significance of retention and first-generation and 1st-year students nationwide. This section includes an overview of supports and initiatives relevant to addressing the needs of underrepresented and underserved students. This includes exploration of TRIO programs, services including common support themes, student organizations, residential learning communities, and Black Male Initiative programs. The section concludes with a review of existing support programs at EKU.

TRIO Programs

In the 1960s, the federal government began looking to expand participation in and access to higher education. In 1964, in “the midst of President Lyndon B. Johnson’s War

on Poverty, Congress established Upward Bound as the first federal intervention program" (McDonough & Fann, 2007, p. 73). Upward Bound, targeted at high school students, is a program designed to prepare this population for participation in higher education through various workshops, activities, and mentoring/relationship-building experiences as well as a summer academic program. Talent Search and Special Services for Disadvantaged Students (later known as Student Support Services) were new programs introduced in addition to Upward Bound as part of the Higher Education Act of 1965. Broadening of higher education access became a priority and "the legislation that enabled this new opportunity was Public Law 90-575, the Higher Education Amendments of 1968 (HEA)"; these three programs (Upward Bound, Talent Search, and Student Support Services) "came to be known as the 'TRIO' programs, which have been supplemented by" additional initiatives (Thomas et al., 1998, p. 389). The TRIO programs were the foundational programs highlighting the federal government's intervention and outreach aimed at preparation for, pursuit of, and persistence in postsecondary education.

The constituents benefiting from these programs have been low-income and first-generation high school students, and "although designed to serve these two often overlapping populations, TRIO programs make economically disadvantaged students their first priority" (McDonough & Fann, 2007, p. 73). These programs "provide a continuum of college access services targeting students from sixth grade through post baccalaureate study, including specialized educational services for low-income adults" (Coles, 1998, p. 432). TRIO programs have a student-focused approach and involve working directly with students in a highly interactive environment. Although TRIO

programs are a federal effort, they work at the local level through settings that serve students through direct interaction. Furthermore, since the creation of the initial three programs, five additional programs have been added to the TRIO family: Educational Opportunity Centers in 1972 to "help adults select a postsecondary education program and obtain financial aid"; Veterans Upward Bound in 1976 to serve veterans throughout their higher education experiences; Ronald E. McNair Post Baccalaureate Achievement in 1986 to "foster doctoral degree attainment by students from underrepresented segments of society"; Upward Bound Math and Science in 1990 to "address the need for specific instruction in the fields of mathematics and science"; and the Child Care Access Means Parents in School program in 1999 to "assist institutions in providing campus-based child care services for low-income student parents" (U.S. Department of Education, 2006).

TRIO and other federal outreach programs have continued to receive federal government funding and support. Burd (1999) and DeLoughry (1991) examined the pushes made to support and invest in low-income students. McMillan (1996) and Yachnin (2001) identified the continued relevance of TRIO programs through political investment via legislative pushes. The reauthorization of the Higher education Act in 1980 "was particularly important, politically and philosophically, for the adoption of two key concepts regarding eligibility for participation in TRIO programs": First-generation student status, designating students "as the first in their families to pursue higher education," allowed for focus on the "origin and impact of nonfinancial barriers to access and success in postsecondary education"; and previous performance of a student allowed a focus on TRIO programs not as "demonstration" programs but rather as "an integral

part of student aid" (McElroy & Armesto, 1998, pp. 373–374). This new stance proved to be a great political move because it "empowered TRIO advocates to build a comprehensive coalition in Congress, not just of elected officials whose constituents were poor people but of those whose constituents had been denied opportunities for or otherwise deterred from postsecondary education" (McElroy & Armesto, 1998, p. 374).

A number of researchers examining the individual TRIO programs and initiatives have identified measures of success across the board (Blake, 1998; Zook, 1995). Gullatt and Jan (2003) found positive impacts for underrepresented college-bound students. McLure and Child (1998) reported positive impacts of program participation for diverse students who were college bound, and leaders of historically Black colleges and universities pushed for the expansion of such programs (Staff, 1997). Seftor et al. (2009) identified postsecondary outcomes for secondary participants, and McCoy et al. (2008) identified continued benefits for participants at the postbaccalaureate level. TRIO programs have helped first-generation, low-income, and minority students since their inception. As Balz and Esten (1998) highlighted in connection with reasons for TRIO program success, "whereas student aid helps these students overcome many of the financial barriers to higher education, TRIO programs help them to overcome the social and cultural barriers to higher education" (p. 334). These student-centered, directly focused, and highly interactive programs have become key components of success.

Services and Initiatives

The following subsections examine some of the common themes of services and initiatives, at EKU and nationally, that target URM students and have benefited this unique intersectional group of students. These themes also appear in some of the primary

interventions for 1st-year and first-generation college students, which researchers have shown to benefit student participants.

Support, Community, and Belonging

Peer and faculty connections, achievable through mentoring, have many benefits for students, including better engagement, institutional connection, and academic gains (Carini et al., 2006; Cruce et al., 2006; Flowers, 2004; Mayhew, 2016; Pascarella & Terenzini, 2005; Reason et al., 2006). These connections help to support a student and increase their sense of belonging and community.

In regard to sense of belonging and URM students, Gummadam et al. (2016) aimed to see whether ethnic identity and a sense of school belonging were linked to psychological adjustment of ethnic minority college students. Although other researchers had focused on school belonging and on ethnic identity, Gummadam et al. looked at both variables together. Theirs was one of the first studies to treat these variables together, and the researchers found that school belonging was linked strongly to several measures of psychological adjustment, whereas ethnic identity was less strongly linked. For those who did not feel a sense of belonging as strongly, their ethnic identity development was closely tied to their idea of self-worth. It may seem logical that a student who feels more like they belong would be more likely to be psychologically adjusted and in turn more likely to succeed. However, creating a sense of belonging is not necessarily an easy task, because the way to create this type of feeling depends on the individual. Also, at institutions where campus climate does not provide students with a sense of belonging, student ethnic identity development may be even more critical to student success.

Green and Wright (2017) explored the college readiness of first-generation URM students. Although most first-generation college students face challenges their non-first-generation counterparts do not, those who also identify as URM students experience an even greater readiness gap as they enter higher education. Green and Wright determined that to address these gaps and improve graduation rates, support programs must focus not only on college readiness but also on sense of belonging, identity development management, and development of social capital. They claimed that it is essential to extend the lens beyond academic preparedness and consider the social and emotional needs and supports of students. I believe an intersectional lens is crucial to exploring not only first-generation status and belonging in URM groups but also other identity characteristics—such as gender, class, and socioeconomic status—to truly understand how these multiple characteristics impact students. Green and Wright expressed a need for cultural consciousness and culturally responsive practices.

Student Organizations

Colleges and universities are home to many student organizations and clubs with a variety of focus areas, including academic and departmental organizations, social organizations, Greek fraternities/sororities, honor organizations, service-based organizations, religious organizations, culturally based organizations, and special interest organizations. Some student organizations may also focus on specific subpopulations of students, and many institutions have organizations that allow URM students to connect with their peers. Examples of these include organizations for international students, Black students, Latinx students, Native American students, and other ethnic and racially diverse student populations. Castellanos (2016) found benefits for Latina students through their

involvement with Latina student organizations, and Luedke (2019) found benefits for Latinx students through their participation in Latinx student organizations. Guiffrida (2003) similarly found that Black student organizations provided social integration benefits for Black students. Brooms et al. (2017) found benefits of leadership in college for Latino and Black male students. Grier-Reed and Wilson (2016) and Kiyama et al. (2015) ascertained that student organizations and social networks aimed at URM students can be critical for creating a supportive community, fostering a sense of belonging in students, helping to make cultural and racial connections, and aiding social integration for participants at higher education institutions.

Fraternities and sororities have historically provided academic and social support systems for members, identity development support, peer and alumni mentorship, increased opportunities for leadership roles and development, connections to other student organizations, and additional avenues for involvement (Sedlacek, 1987; Tripp, 1997). In particular, historically Black Greek organizations and culturally based Greek-letter organizations have fostered positive benefits for URM fraternity and sorority members, which can contribute to retention and persistence at the collegiate level. Delgado-Guerrero et al. (2014) and Delgado-Guerrero and Gloria (2013) found culture-specific sororities provided retention and college success benefits for non-White women. Kimbrough (1995) and Kimbrough and Hutcheson (1998) found that membership in historically Black Greek organizations positively impacted Black students' personal development, leadership development, and collegiate experiences.

Residential Learning Communities

A residential learning community, implemented at EKU as a living learning community (LLC), is a group of students who live together in a communal space. Such communities are traditionally located in residence halls, clustered by floor, pod, or entire hall, and each group shares a common interest, affiliation to a group, or enrollment in a major or academic program. Residential learning communities have benefits for participants, including improvements in retention and persistence, academic gains, and increased engagement and institutional involvement (Hall & O'Neal, 2016; Han et al., 2018; Inkelas et al., 2006; Shapiro & Levine, 1999). At the time of the study, EKU had 16 LLC options for students to choose from, including major- and academic-based communities, communities affiliated with student support programs (e.g. Freshman Academy and NOVA), and communities based around common interests. EKU (n.d.-e) shared that participation in LLCs can lead to higher retention, high GPAs, and a better connection with LLC counterparts (peers, faculty, and staff) and that participation gives "students the opportunity to explore the region, participate in shared coursework and start the path towards academic success at EKU."

Residential learning communities can also benefit URM students. Han et al. (2018) explored the perceived benefits of students participating in an LLC for racial and ethnic minority students at a Midwestern, public, 4-year, and predominantly White institution. Their goal was to contribute to the research on interventions aimed at mitigating the psychosocial stressors (e.g. negative stereotypes, prejudice, discrimination, microaggressions, and cultural differences) that impact the success of minority students at the collegiate level. Han et al. conducted a qualitative study using focus groups with 41

students who part of the LLC. The study included participants identifying as Black, Latinx, Asian American, and Native American. Three themes emerged as students reported experiencing marginalization, tokenism, and microaggressions. Participation in the LLC was beneficial in several ways: connecting students socially with other minority students, providing social peer support as students faced stressors that pushed them toward personal growth, providing a sense of validation for the stressors students faced in relation to their minority status and their cultural heritage, and perceived ease of access to campus resources through involvement in the LLC (Han et al., 2018, pp. 113–114).

Black Male Initiative Programs

Black Male Initiative programs are support services "geared toward supporting Black male students', and often other males of color, retention and successful matriculation through college"; they "can be powerful and nurturing learning environments that provide academic and social support, access to critical resources on campus, enhance psychosocial and personal development, increase Black male peer-bonding, and support students' career goals" (Brooms, 2018, p. 60). Black Male Initiative programs have become part of the best practice at many colleges and have grown and shifted since the 1990s (Cuyjet, 2006). Some programs are specific to their institutions, and others have established statewide and nationwide reach, such as the African-American Male Initiative Program and the Student African American Brotherhood.

The University System of Georgia (n.d.-b) established the African-American Male Initiative in 2001 to address "gaps in postsecondary attainment between African-American men and peer groups of African-American women and other student populations," and the program has grown from a study to an initiative serving middle

school, high school, and college students at multiple institutions. The iteration in place at the time of writing provided "customized programming that aligns with the AAMI Integrated Program Model that prepares students for careers and life post-graduation" and includes "four key components: academic skills enrichment, student support services, adult & peer mentoring, and leadership development" (University System of Georgia, n.d.-a, p.). The Student African American Brotherhood (sometimes called "SAAB," "SAAB/Brother2Brother," "Brother 2 Brother," or "Brother to Brother") originally began as a Black Male Initiative institution-specific program, but it has grown to include chapters encompassing Black students, Latino students, and other non-White students. At the time of writing, over 200 institutions had collegiate chapters, and 39 U.S. states had postsecondary, high school, or middle school representation (Student African American Brotherhood, n.d.). The aim of the program was to increase graduation rates "by creating a positive peer community based on a spirit of caring" and supporting members "to excel academically, socially, culturally, spiritually and in the community" (Student African American Brotherhood, n.d.).

The programs and services explored in this section provide examples of initiatives found at the national, state, and institutional levels that help to improve retention and persistence of URM students. EKU has used these same initiatives and models as tools to support student success and retention, which is the subject of the next section.

EKU Initiatives

Overview of Existing Initiatives

EKU has implemented a number of programs, support services, and involvement opportunities over the years aimed at assisting students in need from URM populations.

In regard to student organizations, a variety of groups have formed a part of the student experience, including the National Pan-Hellenic Council and individual Divine 9 chapters, Multicultural Greek Council and individual chapters, African Students Association, African/African-American Club, Black Student Union, Black Christian Students in Action, Latino Student Association, and International Student Association. Established or longstanding programs include the TRIO programs of NOVA and the McNair scholars program, the Rodney Gross scholars program, and Freshman Academy.

The EKU NOVA program is a federal TRIO Student Support Service grant program with a mission to "increase the retention and graduation rates of first-generation and limited-income college students" (EKU, n.d.-g,). Participants in this program must be first generation, low income, or both. These students receive support in the form of peer mentorship, common learning opportunities through designated courses (e.g., orientation course and service-learning course), staff support, supplemental advising, an LLC opportunity, and a variety of programs and events (EKU, n.d.-g).

The EKU McNair scholars program is another federal TRIO program, aimed at first-generation students from low-income or URM backgrounds, that provides staff and faculty interactions "to foster sound scholarly skills while offering holistic encouragement and support" on a student's journey to earn an advanced doctoral degree (EKU, n.d.-f,). The program provides support through academic coaching, faculty mentorship, graduate and career development, opportunities for scholarships and future graduate assistantships, and a supported connection to university resources (EKU, n.d.-a).

The EKU Rodney Gross scholars program is a targeted scholarship program serving URM populations:

> Eastern Kentucky University recognizes the important role of diversity in fulfilling its mission. Diversity is fundamental to critical thinking and thus enhances what we learn, how we interact with others, and how we participate as citizens in a global community. We are committed to recruiting and retaining students from all segments of society, including African-American, American Indian, Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, Hispanic, or Latino. (EKU, n.d.-b,)

The program selects participants based on a variety factors, including GPA, test scores, involvement, academic achievement, and an essay. Although this program has changed over the years, beyond the financial scholarship it has included staff support, programming and activities, academic support, supplemental advising, and physical spaces for social gathering and studying.

Freshman Academy

Although EKU offered multiple programs at the time of the study serving or targeting URM students, Freshman Academy was the focus of this study:

> The Freshman Academy is an interactive learning experience that promotes the retention of all students, with particular focus on minority students. It is designed to provide first year students with the information, encouragement and direction they need in order to navigate college life and reach their academic, personal, and professional goals at Eastern Kentucky University. The Academy connects first-year students with their fellow classmates, and introduces them to EKU faculty, staff and student leaders who will provide on-going support throughout their college career at EKU and beyond. (EKU, n.d.-c,)

EKU implemented Freshman Academy in the fall of 2014 as a targeted intervention for URM students. Students self-select for participation in the program and have the opportunity to pursue targeted scholarships for books and tuition (EKU, n.d.-d). After the program's success in its inaugural year—which included benefits in academic performance, retention, and connection to the university—the program extended beyond the 1st-year and allowed participants to continue receiving benefits and opportunities as part of the Upperclass Academy for Diverse Students (EKU, n.d.-d).

The program is centered on the holistic experience of a student and provides individualized support. The Freshman Academy director works with participants to determine their financial, academic, and programming needs and uses this information to determine how to best support the participants and make sure their particular needs are addressed. The program also includes supplemental advising, connections to campus resources and activities, targeted programming, opportunities to connect with peers, social opportunities, a leadership series of keynote speakers, academic support and interventions, an LLC (introduced in 2020), and opportunities for mentorship with faculty, staff, and peers.

Conclusion and Contributions

Although some TRIO programs specifically serve URM students, many serve broader groups, such as first-generation or low-income students. To support URM students and address their needs, postsecondary institutions have developed and formed homegrown programs and services. Such a support program or service is sometimes a singular effort housed in one particular department or unit. However, some initiatives extend to multiple departments and involve collaboration through routes such as enrollment management, multicultural services, student engagement and development, student life and campus activities, and a variety of student affairs and diversity, equity, and inclusion units. In addition to university structural systems, people can play a key role in supporting students. URM students have acknowledged their families, peers, university staff members, and faculty as beneficial resources at various points in their navigation of collegiate life (Bauman et al., 2019; Harper, 2008).

Syed et al. (2011) explained that "conceptualizing social support as an evolving constellation of systems required understanding how support is a dynamic process" (p. 453). The needs of students can shift and change throughout their collegiate experiences, and what might be helpful for a student at some points may not be as helpful at other points. Not every student is impacted by the same support systems in the same ways. It is therefore important to explore and understand the myriad of initiatives that support and serve URM students.

URM students, experiences of URMs at predominantly White institutions, and data relating to student success and degree attainment have attracted much discussion and research interest. However, little empirical research has emerged regarding URM students at regional postsecondary education institutions in Appalachia or Kentucky. This study's analysis of multiple variables had the potential to add to existing research in two ways. First, the combination of variables examined encompassed a variety of both preentry attributes and college participation attributes, with the aim of obtaining a clear picture of the relationship connecting support initiatives for URM students with their characteristics and academic outcomes. Second, with the population studied, the approach used in the study had the potential to add to discussion and literature related to several topics, including URM students and predominantly White institutions, Kentucky postsecondary education institutions, Appalachian institutions, regional/comprehensive universities, the degree attainment gap between White students and URM students, and support programs geared toward URM students. Moreover, there was the potential of finding institution-specific characteristics that could add value to the existing body of knowledge.

CHAPTER 3

METHODOLOGY

Purpose Statement and Research Questions

Orcher (2017) explained that a person conducts research "in order to test a research hypothesis, achieve a purpose, or answer a question" (p. 87). Although the theoretical frameworks and previous research explored in the literature review in Chapter 2 helped situate this study, I did not use them to predict the study's outcome. Rather than making a prediction and starting with a hypothesis, I aimed to "explore a particular topic" and address "research purposes" (Orcher, 2017, p. 90). The purpose of this study was to examine the factors impacting the retention and persistence of URM students at a predominantly White, regional Kentucky university.

Through this study, I explored the relationship connecting preentry attributes and college attributes of EKU URM students with the students' academic progress. The goal was to determine whether participation in EKU's Freshman Academy, a support program targeted toward URM students, has a statistically significant effect on student success. The study addressed the following primary research questions:

1. What is the impact of Freshman Academy participation on 1st-year GPAs of URM students, compared with the 1st-year GPAs of URM students not participating in Freshman Academy?

2. What is the impact of Freshman Academy participation on 1st-year retention rates of URM students, compared with the 1st-year retention rates of URM students not participating in Freshman Academy?

Research Design

This quantitative study was nonexperimental, used archival data, and provided an opportunity to compare means of, and examine differences between, two groups. Orcher (2017) described the primary type of nonexperimental research "for exploring causality" as "*causal comparative research* (also known as ex post facto research)," in which "existing groups are *compared* to identify a causal *sequence* in their histories" (p. 97). Orcher (2017) proposed that a casual comparative method is ideal if the following conditions can be met:

> (1) The goal is to investigate a cause-and-effect relationship, (2) treatments cannot be given (for instance, it would be unethical to assign some students with disabilities to be taught by untrained teachers for the purposes of an experiment), and (3) two similar groups that differ in some outcome (such as dropping-out behavior) can be identified and questioned. (p. 98)

Population

On a national large-scale level, the population of interest for this study consisted of 1st-year students, specifically URM students enrolled in postsecondary education level and belonging to racial and ethnic minority groups. On a state level, the population of interest consisted of 1st-year URM students. The Kentucky CPE (2016) defined this population as students who have self-identified as Hispanic or Latino, American Indian or Alaska Native, Black or African American, Native Hawaiian or other Pacific Islander, or belonging to two or more races. When the Kentucky CPE implemented the *Kentucky Public Postsecondary Education Policy for Diversity, Equity and Inclusion* in 2016, one

of the three primary foci was provision of increased opportunity to URM students. In relation to opportunity, increasing enrollment of URM students is a key first step. Table 5 draws on data for public postsecondary institutions obtained from the Kentucky CPE interactive dashboard and provides an overview of URM undergraduate enrollment at public 4-year degree-granting institutions in the state from 2014 to 2020 (Kentucky CPE, 2021). Table 5 also displays the URM population percentage in the geographic region for each institution and the goal for the 2020–2021 academic year. The percentage of URM students increased at every institution between the 2014–2015 academic year and the 2019–2020 year, with the exception of Kentucky State University. For five of the eight institutions, the percentages in 2019–2020 exceeded the 2020–2021 goals, indicating that the state enrollment goals were within reach (see Table 5).

Sample

The sample population was 1st-year URM students at a predominantly White, regional Kentucky university. Specifically, I looked at EKU and the 1st-year cohorts of students with a fall semester start. For the purposes of this study, 1st-year students were first-time, full-time undergraduate students who began seeking a bachelor's (4-year) degree at EKU. The sample included URM students from the fall cohorts for 2014 through 2020. This sample was divided into URM students who participated in Freshman Academy and those who did not.

Table 5

Underrepresented Minority Undergraduate Enrollment by Institution

Category	%							
	Eastern Kentucky University	Kentucky State University	Morehead State University	Murray State University	Northern Kentucky University	University of Kentucky	University of Louisville	Western Kentucky University
Enrollment								
2014–2015	10.74	58.32	6.73	10.78	11.57	14.75	19.03	14.89
2015–2016	10.85	57.99	6.87	11.17	12.34	15.34	19.44	14.94
2016–2017	11.08	51.91	7.68	10.93	12.60	16.09	20.33	15.18
2017–2018	11.58	53.61	6.87	10.61	12.89	16.57	21.73	15.50
2018–2019	11.90	52.76	7.76	10.82	13.00	16.47	23.01	15.50
2019–2020	12.56	56.97	7.99	11.38	13.38	16.53	23.47	15.93
2020–2021 [a]	12.00	60.00	7.60	11.30	14.00	17.70	23.00	15.80
Population	5.84	13.48	3.98	15.01	8.55	17.84	25.55	11.54

Source: Adapted from *Diversity, Equity, and Inclusion Plan Matrix*, by Kentucky Council on Postsecondary Education, 2021 (http://cpe.ky.gov/data/diversity.html). Copyright 2021 by Kentucky Council of Postsecondary Education. Adapted with permission.

Note: Academic years are measured fall to fall. For each academic year, the table gives the percentage of students who identified as belonging to underrepresented minority groups at each institution. The table also gives the enrollment goal for the 2020–2021 academic year and the percentage of the population belonging to underrepresented minority groups in the geographic region for each institution.
[a] Target.

Data Collection

Preexisting archival data were used, and access was requested through EKU's Office of Institutional Research. The Division of Student Success was contacted as well to verify participation in support programs unavailable through Banner, the university's existing data source system. The Division of Student Success maintained additional records through a variety of current and former software programs and databases (e.g., Slate, Student Success Collaborative, The Loop) that could be used to gather needed information.

Data Analysis

Flores et al. (2017) argued that to lessen the completion gaps between White students and those identifying as Hispanic and Black, it is essential to focus on more than just postsecondary institutions and how they can battle the gaps. Inclusion of the kindergarten–12th-grade sector, both in analysis and in implementation of solutions, is needed to address the gaps. A combination of individual/demographic, academic, high school, and college variables were examined. The focus was on exploring variables and characteristics outside race. Flores et al. found that although postsecondary characteristics accounted for about 35% of the variance in college degree completion rates for Hispanic and Black students, compared with White students, precollege characteristics accounted for more than 61% of the variance. Although their argument and conclusion may seem logical, the conclusion emphasizes the need to look at a number of variables when exploring how to develop and implement solutions to battle completion gaps. The concept of intersectionality—looking holistically at the overlapping impacts of multiple characteristics—is important here because it reinforces that examining multiple

characteristics leads to better understanding than focusing on a single demographic attribute. Based on this lens and approach, a robust analysis and understanding of impacts should involve multiple variables, including characteristics and attributes from both before and after college entry. This idea was the foundational understanding guiding the analysis in this study.

Statistical Tests

The statistical analysis for this study relied on multivariable linear regression and multivariate linear regression for the first research question. Linear regression was used because of the multitude of variables and the nature of the variables (Montgomery et al., 2021). Because of the nature of the categorical and continuous independent variables and the nature of the continuous dependent variable, multivariable and multivariate linear regression were used to create a picture of the relationship connecting preentry attributes, collegiate attributes, and Freshman Academy with the outcomes of 1st-year GPA for URM students.

The second research question required multinomial logistic regression because of the use of categorical and continuous independent variables and a categorical dependent variable. The reason that multinomial logistic regression was used instead of multivariate logistic regression was that the multitude of variables would not have allowed the model to yield a significant result (Field, 2009). The same covariates were examined in the analyses for the first and second research questions.

Critical race theory has historically found use in qualitative analyses because of the perceived underlying context of lived racial experiences that most assume can be articulated only in a qualitative way (Delgado & Stefancic, 2001; Ladson-Billings &

Tate, 1995). However, other researchers have identified ways critical race theory can guide quantitative analyses (Sablan, 2018).

Independent and Dependent Variables

Dependent variables "are those that depend on the independent variables; they are the outcomes or results of the influence of the independent variables" (Creswell & Creswell, 2018, p. 51). In this study I aimed to explore the impact of Freshman Academy participation on academic success, and I measured academic success via the outcomes of 1st-year retention and 1st-year GPA for the fall cohorts from 2014 to 2019. For the purposes of this study, participation in Freshman Academy thus served as the independent variable, and the dependent variables were 1st-year GPA and retention.:

- The 1st-year GPA was based on a scale with a 4.0 maximum and corresponded to the 1st-year fall and spring semester cumulative GPAs at EKU.
- The 1st year retention, for the purposes of this study, corresponded to the fall-to-fall enrollment of a student from their 1st year to their 2nd year. In other words, retention includes 1st-year students who continue enrollment at EKU and remain enrolled in the subsequent fall semester.

Covariates

Tinto's (1975, 1993) interactionalist theory and retention modeling can be used as a framework for categorizing the covariates and understanding which part of the college experience the covariates correspond to. For the purposes of this study, covariates were categorized as preentry or collegiate (Table 6).

Table 6

Covariates by Type

Covariate type	Covariates
Preentry	Race/ethnicity
	Residency
	Gender
	Pell eligible
	High school grade point average
	ACT score
	First-generation student status
	Mother's education
	Father's education
Collegiate	Athletic participation
	Rodney Gross Scholar program participation
	NOVA program participation
	University housing
	Living learning community participation

Preentry Covariates

Preentry covariates are attributes and characteristics that a student brings with them when starting at an institution. The subsections that follow define the preentry covariates used in this study.

Race/Ethnicity. URM students were students who categorized themselves as (a) Hispanic or Latino, (b) American Indian or Alaska Native, (c) Black or African American, (d) Native Hawaiian or other Pacific Islander, or (e) being of two or more races (Kentucky CPE, 2016).

Residency Status. Residency status indicated whether EKU categorized a student as international, in state, or out of state.

Gender. Students self-selected gender designations upon application to the university.

Pell Eligibility. A student would be eligible for a Pell Grant based on their Free Application for Federal Student Aid (FAFSA) and the financial package offered by EKU, because the Kentucky CPE determined low-income status based on what was paid.

First-Generation Status. A student's first-generation status indicated whether the student had parents who did not graduate college (as designated on their FAFSA).

Parental Education Level. A student's parental education level was the highest level of parental education obtained, based on the student's FAFSA.

High School GPA. A student's high school GPA was reported to EKU when the student matriculated at the university.

ACT Composite Score. A student's ACT composite score was derived from the average of the four subcategory scores for English, math, reading, and science reasoning.

Collegiate Covariates

Collegiate covariates correspond to interventions, experiences, and supports encountered by a student. According to Tinto's models, these covariates correspond to institutional experiences, both formal and informal, that are part of the academic and social systems. Moreover, they can impact academic and social integration. The subsections that follow define the collegiate covariates used in this study.

Rodney Gross Scholar. Rodney Gross scholar status indicated whether a student was part of the Rodney Gross scholars program at EKU for the fall term they started at the university.

NOVA Program Participation. NOVA program participation indicated whether a student was part of the NOVA program at EKU for the fall term they started at the university.

Student Athlete. A student was considered a student athlete if registered as an official EKU student athlete for the fall term they started at the university.

EKU Housing Status. EKU housing status indicated whether a student lived on campus (residential) or not (commuter).

LLC Participation. LLC participation indicated whether a student was part of an LLC for the fall term they started at EKU.

Research Assumptions

In regard to research assumptions, there was an underlying assumption that support programs and services, such as Freshman Academy, are important and relevant to students' collegiate experiences. An additional underlying assumption was that the performance and success of URM students from a regional comprehensive institution is important and relevant to higher education in Kentucky. For this archival study based on existing data, the information received was a complete data set that was accurate and valid. The self-reported data within the set, provided to the university by students or student representatives, included accurate information (e.g., admission applications and FAFSA data). It was assumed that the criteria for including individuals in the sample were appropriate for the study. Because of the nature of the study and the removal of student identifiers, I was able to be independent of what I studied and analyze the topic objectively.

Research Ethics and Vulnerability Concerns

According to Jackson (2012), in the research process "the researcher is ultimately responsible for the welfare of the subjects" and "protecting the participants from harm" (p. 39). In regard to research ethics and vulnerability concerns, the data were pulled from

an existing data source, and there was no identifying information within the data set. Given the methodology and approach, concern for human subjects could not be further lessened. I also did not directly interact with the students; nor did I have information that would reveal their identity. The study was exempt category because it had less than minimal risk, and the data were from individuals who were not identifiable based on the information requested and received. I completed an application to EKU's institutional review board requesting exemption, and I completed all steps in accordance with the review board's requirements.

CHAPTER 4

RESULTS

Purpose and Overview

The purpose of this study was to examine the factors impacting the retention and persistence of URM students at a predominantly White, regional Kentucky university. More specifically, I explored the relationship connecting preentry attributes and college attributes of EKU URM students with the students' academic progress. I sought to determine whether participation in EKU's Freshman Academy, a targeted URM support program, has a statistically significant effect on student success, as measured by 1st-year GPA and retention. Several covariates were used in the analyses, which took into consideration the possible significance of both preentry and collegiate characteristics based on students' institutional experiences. Preentry covariates included race/ethnicity, gender, residency, Pell Grant eligibility, first-generation status, parental education level, high school GPA, and ACT composite score. Collegiate covariates included Rodney Gross scholars participation, NOVA program participation, student athlete status, EKU housing status, and LLC participation. The study was guided by following primary research questions:

1. What is the impact of Freshman Academy participation on 1st-year GPAs of URM students, compared with the 1st-year GPAs of URM students not participating in Freshman Academy?

2. What is the impact of Freshman Academy participation on 1st-year retention rates of URM students, compared with the 1st-year retention rates of URM students not participating in Freshman Academy?

This chapter reports whether Freshman Academy participation impacts URM students' 1st-year GPAs and retention. The 1st-year students studied were first-time, full-time undergraduate students who began seeking a bachelor's (4-year) degree at EKU. The sample included URM students from the fall cohorts from 2014 through 2020 (N = 3,064), and I compared Freshman Academy participants (n = 506) with nonparticipants (n = 2,558). The first section of the chapter explores descriptive statistics and includes frequency distribution cross-tabulations for categorical variables and means and standard deviations for continuous variables. The second section of the chapter reviews the inferential statistics and explores Freshman Academy program participation with linear regression to analyze 1st-year GPA and with logistic regression to analyze 1st-year retention. The last section of the chapter summarizes the statistical analysis.

Descriptive Statistics

Frequency Distributions

This study included 3,064 1st-year URM students from the fall term cohorts in the years 2014, 2015, 2016, 2017, 2018, 2019, and 2020. Both categorical and continuous variables were used. The categorical variables included year, race, gender, residency, Pell Grant eligibility, first-generation status, parental education levels (father and mother), student athlete status, Rodney Gross scholars participation, NOVA program participation, student athlete status, EKU housing status, LLC participation, and 1st-year retention. The

tables in this section explore the frequencies for the categorical variables, comparing Freshman Academy participants and nonparticipants through cross-tabulations.

The cross-tabulation in Table 7 show that of the 3,064 URM students from fall 2014–2020 term cohorts, 83.49% (2,558) were nonparticipants in Freshman Academy, and 16.51% (506) participated in Freshman Academy. Of Freshman Academy participants, the cross-tabulation shows that in 2014 there were 48 students in the fall cohort (9.49%), in 2015 there were 49 (9.69%), in 2016 there were 96 (18.97%), in 2017 there were 74 (14.62%), in 2018 there were 69 (13.64%), in 2019 there were 126 (24.90%), and in 2020 there were 44 (8.7%).

The cross-tabulation in Table 8 shows the race of the URM students from the fall 2014–2020 cohorts. Of all the URM students, 40 (1.31%) identified as American Indian or Alaskan Native, 134 (4.37%) identified as Asian, 1222 (39.88%) identified as Black, 598 (19.52%) identified as Hispanic or Latino, 15 (0.49%) identified as Native Hawaiian or other Pacific Islander, 114 (3.72%) identified as nonresident aliens, 228 (7.44%) had unknown race or ethnicity, and 713 (23.27%) identified as being of two or more races. When looking specifically at Freshman Academy participants, compared with the overall URM percentages, there were higher percentages of students identifying as Black and Hispanic or Latino. The Freshman Academy participants (n = 506) consisted of one American Indian or Alaskan Native student (0.20%), 18 Asian students (3.56%), 302 Black students (59.68%), 108 Hispanic or Latino students (21.34%), one Native Hawaiian or other Pacific Islander student (0.20%), no nonresident alien students, seven students of unknown race or ethnicity (1.38%), and 69 students identifying with two or more races (13.64%).

Table 7

Participation in Freshman Academy by Academic Term Cross-Tabulation

Term	Freshman Academy		Total
	No	Yes	
Fall 2014			
n	459	48	507
% of total	14.98	1.57	16.55
% within term	90.53	9.47	
% within Freshman Academy	17.94	9.49	
Fall 2015			
n	377	49	426
% of total	12.30	1.60	13.90
% within term	88.50	11.50	
% within Freshman Academy	14.74	9.68	
Fall 2016			
n	307	96	403
% of total	10.02	3.13	13.15
% within term	76.18	23.82	
% within Freshman Academy	12.00	18.97	
Fall 2017			
n	341	74	415
% of total	11.13	2.42	13.54
% within term	82.17	17.83	
% within Freshman Academy	13.33	14.62	
Fall 2018			
n	301	69	370
% of total	9.82	2.25	12.08
% within term	81.35	18.65	
% within Freshman Academy	11.77	13.64	
Fall 2019			
n	303	126	429
% of total	9.89	4.11	14.00
% within term	70.63	29.37	
% within Freshman Academy	11.85	24.90	
Fall 2020			
n	470	44	514
% of total	15.34	1.44	16.78
% within term	91.44	8.56	
% within Freshman Academy	18.37	8.70	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

Table 8

Participation in Freshman Academy by Race Cross-Tabulation

Race	Freshman Academy		Total
	No	Yes	
American Indian/Native Alaskan			
n	39	1	40
% of total	1.27	0.03	1.31
% within race	97.50	2.50	
% within Freshman Academy	1.52	0.20	
Asian			
n	116	18	134
% of total	3.79	0.59	4.37
% within race	86.57	13.43	
% within Freshman Academy	4.53	3.56	
Black or African American			
n	920	302	1,222
% of total	30.03	9.86	39.88
% within race	75.29	24.71	
% within Freshman Academy	35.97	59.68	
Hispanic or Latino			
n	490	108	598
% of total	15.99	3.52	19.52
% within race	81.94	18.06	
% within Freshman Academy	19.16	21.34	
Native Hawaiian or Pacific Islander			
n	14	1	15
% of total	0.46	0.03	0.49
% within race	93.33	6.67	
% within Freshman Academy	0.55	0.20	
Nonresident alien			
n	114	0	114
% of total	3.72	0.00	3.72
% within race	100.00	0.00	
% within Freshman Academy	4.46	0.00	
Race unknown			
n	221	7	228
% of total	7.21	0.23	7.44
% within race	96.93	3.07	
% within Freshman Academy	8.64	1.38	
Two or more races			
n	644	69	713
% of total	21.02	2.25	23.27
% within race	90.32	9.68	
% within Freshman Academy	25.18	13.64	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

The cross-tabulation in Table 9 shows the gender breakdown of the of the URM students from the fall 2014–2020 cohorts. Looking at the 3,064 URM students, 1,676 (54.7%) identified as female, and 1,388 (45.3%) identified as male. Those who did not participate in Freshman Academy had a similar gender breakdown, with 51.41% (1,315) identifying as female and 48.59% (1,243) identifying as male. Freshman Academy participants showed a higher concentration of female students compared with the overall percentages, with 71.34% (361) identifying as female and 28.66% (145) identifying as male.

The cross-tabulation in Table 10 shows the residency breakdown of the URM students from the fall 2014–2020 cohorts. Residency status consists of three categories designating students as international, in-state residents, or out-of-state residents. Among the URM students (N = 3,064), 114 (4.46%) were international students, 2,479 (80.91%) were in-state students, and 471 (15.37%) were out-of-state students. None of the Freshman Academy participants were international students, and there was a higher concentration of in-state students among the Freshman Academy students compared with the overall percentages, with 89.33% (452) identifying as in-state residents and 10.67% (54) identifying as out-of-state residents.

The cross-tabulation in Table 11 shows the Pell Grant eligibility of the URM students from the fall 2014–2020 cohorts. Eligibility status for this federal student aid was determined by information collected via the FAFSA, which led to assignment to each student of an estimated family contribution number. The table consists of three categories designating students as Pell Grant eligible, Pell Grant ineligible, or lacking an estimated family contribution number.

Table 9

Participation in Freshman Academy by Gender Cross-Tabulation

Gender	Freshman Academy		Total
	No	Yes	
Female			
n	1,315	361	1,676
% of total	42.92	11.78	54.70
% within gender	78.46	21.54	
% within Freshman Academy	51.41	71.34	
Male			
n	1,243	145	1,388
% of total	40.57	4.73	45.30
% within gender	89.55	10.45	
% within Freshman Academy	48.59	28.66	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

Table 10

Participation in Freshman Academy by Residency Cross-Tabulation

Residency	Freshman Academy		Total
	No	Yes	
In state			
n	2,027	452	2,479
% of total	66.16	14.75	80.91
% within residency	81.77	18.23	
% within Freshman Academy	79.24	89.33	
International			
n	114	0	114
% of total	3.72	0.00	3.72
% within residency	100.00	0.00	
% within Freshman Academy	4.46	0.00	
Out of state			
n	417	54	471
% of total	13.61	1.76	15.37
% within residency	88.54	11.46	
% within Freshman Academy	16.30	10.67	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

Table 11

Participation in Freshman Academy by Pell Grant Eligibility Cross-Tabulation

Pell Grant eligible	Freshman Academy		Total
	No	Yes	
No			
n	620	108	728
% of total	20.23	3.52	23.76
% within Pell eligibility	85.16	14.84	
% within Freshman Academy	24.24	21.34	
Unknown (no estimated family contribution number)			
n	297	20	317
% of total	9.69	0.65	10.35
% within Pell eligibility	93.69	6.31	
% within Freshman Academy	11.61	3.95	
Yes			
n	1,641	378	2,019
% of total	53.56	12.34	65.89
% within Pell eligibility	81.28	18.72	
% within Freshman Academy	64.15	74.70	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

A student without an estimated family contribution number had an unknown eligibility status. Among the URM students (N = 3,064), 2,019 (65.89%) were Pell Grant eligible, 728 (23.76%) were ineligible, and 317 (10.35%) had unknown eligibility. Freshman Academy participants had a higher percentage of Pell Grant eligible students compared with the overall percentages, with 74.70% (378) Pell Grant eligible, 21.34% (108) ineligible, and 3.95% (20) of unknown eligibility.

The cross-tabulation in Table 12 shows the first-generation status of the of the URM students from the fall 2014–2020 cohorts. Among the URM students, 1,412 (46.08%) were first-generation students, 1,394 (45.50%) were not first-generation students, and 258 (8.42%) had unknown status. Freshman Academy participants consisted of 254 (50.20%) first-generation students, 245 (48.42%) students who were not first generation, and seven (1.38%) students of unknown status.

The cross-tabulations in Tables 13 and 14 relate to parental education level—specifically, the highest level of education completed by each student's father and mother. Table 13 relates to the education level of the student's father. There were missing data for 304 of the URM students from the fall 2014–2020 cohorts. Of the remaining 2,760 students, 170 (6.16%) had fathers with an unknown education level, 192 (6.96%) had fathers with a middle school or junior high school education level, 1,106 (40.07%) had fathers with a high school education level, and 1,292 (46.81%) had fathers with an education level of college or beyond.

Table 12

Participation in Freshman Academy by First-Generation Status Cross-Tabulation

First generation	Freshman Academy		Total
	No	Yes	
No			
n	1,149	245	1,394
% of total	37.50	8.00	45.50
% within first generation	82.42	17.58	
% within Freshman Academy	44.92	48.42	
Unknown			
n	251	7	258
% of total	8.19	0.23	8.42
% within first generation	97.29	2.71	
% within Freshman Academy	9.81	1.38	
Yes			
n	1,158	254	1,412
% of total	37.79	8.29	46.08
% within first generation	82.01	17.99	
% within Freshman Academy	45.27	50.20	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

Table 13

Participation in Freshman Academy by Father's Education Level Cross-Tabulation

Father's education	Freshman Academy		Total
	No	Yes	
College or beyond			
n	1,056	236	1,292
% of total	38.26	8.55	46.81
% within father's education	81.73	18.27	
% within Freshman Academy	46.54	48.07	
High school			
n	921	185	1,106
% of total	33.37	6.70	40.07
% within father's education	83.27	16.73	
% within Freshman Academy	40.59	37.68	
Middle school/junior high			
n	156	36	192
% of total	5.65	1.30	6.96
% within father's education	81.25	18.75	
% within Freshman Academy	6.88	7.33	
Other/unknown			
n	136	34	170
% of total	4.93	1.23	6.16
% within father's education	80.00	20.00	
% within Freshman Academy	5.99	6.92	
Total			
n	2,269	491	2,760
%	82.21	17.79	100.00

Note: Data were missing in 304 instances.

Table 14

Participation in Freshman Academy by Mother's Education Level Cross-Tabulation

Mother's education	Freshman Academy		Total
	No	Yes	
College or beyond			
n	693	139	832
% of total	27.01	5.42	32.42
% within mother's education	83.29	16.71	
% within Freshman Academy	32.72	31.03	
High school			
n	932	187	1,119
% of total	36.32	7.29	43.61
% within mother's education	83.29	16.71	
% within Freshman Academy	44.00	41.74	
Middle school/junior high			
n	173	38	211
% of total	6.74	1.48	8.22
% within mother's education	81.99	18.01	
% within Freshman Academy	8.17	8.48	
Other/unknown			
n	320	84	404
% of total	12.47	3.27	15.74
% within mother's education	79.21	20.79	
% within Freshman Academy	15.11	18.75	
Total			
n	2,118	448	2,566
%	82.54	17.46	100.00

Note: Data were missing in 498 instances.

Among Freshman Academy participants there were 34 students with fathers of unknown education level (6.92%), 36 students with fathers with a middle school or junior high school education level (7.33%), 185 students with fathers with a high school education level (37.68%), and 236 students with fathers with an education level of college or beyond (48.07%).

The cross-tabulation in Table 14 relates to the highest level of education completed by each student's mother. There were missing data for 498 of the URM students from the fall 2014–2020 cohorts. Of the remaining 2,566 students, 404 (15.74%) had mothers with an unknown education level, 211 (8.22%) had mothers with a middle school or junior high school education level, 1,119 (43.61%) had mothers with a high school education level, and 832 (32.42%) had mothers with an education level of college or beyond. Among Freshman Academy participants, 84 students had mothers of unknown education level (18.75%), 38 students had mothers with a middle school or junior high school education level (8.48%), 187 students had mothers with a high school education level (41.74%), and 139 students had mothers with an education level of college or beyond (31.03%).

The cross-tabulation in Table 15 shows the student athlete status of the URM students from the fall 2014–2020 cohorts. Looking at the 3,064 URM students, 380 (12.4%) identified as student athletes for the university, and 2,684 (87.6%) identified as nonathletes. Those who did not participate in Freshman Academy had a similar breakdown, with 13.68% (350) student athletes and 86.32% (2,208) nonathletes. For Freshman Academy participants the percentage of student athletes was smaller than for

those who did not participate in Freshman Academy and the overall URM student population, with 5.93% (30) student athletes and 94.07% (476) nonathletes.

The cross-tabulation in Table 16 shows the Rodney Gross scholar status of the URM students from the fall 2014–2020 cohorts. Looking at the 3,064 URM students, 256 (8.36%) were Rodney Gross scholars, and 2,808 (91.64%) were not. Those who did not participate in Freshman Academy had a smaller proportion of Rodney Gross scholars, with 4.42% (113) in the program and 95.58% (2,445) not in the program. Freshman Academy participants had a higher percentage of Rodney Gross scholars compared with those who did not participate in Freshman Academy and the overall URM student population, with 28.26% (142) being Rodney Gross scholars and 71.74% (363) not being Rodney Gross scholars.

The cross-tabulation in Table 17 relates to the NOVA program participation of the URM students from the fall 2014–2020 cohorts. Looking at the 3,064 URM students, 96 (3.13%) were NOVA program participants, and 2,968 (96.87%) were not. Those who did not participate in Freshman Academy had a smaller proportion of NOVA program participants, with 2.70% (69) in the program and 97.30% (2,489) not in the program. Freshman Academy participants had a higher percentage of NOVA program participants compared with those who did not participate in Freshman Academy and the overall URM student population, with 5.34% (27) students in the NOVA program and 94.66% (479) not in the program.

Table 15

Participation in Freshman Academy by Student Athlete Status Cross-Tabulation

Student athlete	Freshman Academy		Total
	No	Yes	
No			
n	2,208	476	2,684
% of total	72.06	15.54	87.60
% within student athlete	82.27	17.73	
% within Freshman Academy	86.32	94.07	
Yes			
n	350	30	380
% of total	11.42	0.98	12.40
% within student athlete	92.11	7.89	
% within Freshman Academy	13.68	5.93	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

Table 16

Participation in Freshman Academy by Rodney Gross Scholar Participation Cross-Tabulation

Rodney Gross scholar	Freshman Academy		Total
	No	Yes	
No			
n	2,445	363	2,808
% of total	79.80	11.85	91.64
% within Rodney Gross scholar	87.07	12.93	
% within Freshman Academy	95.58	71.74	
Yes			
n	113	143	256
% of total	3.69	4.67	8.36
% within Rodney Gross scholar	44.14	55.86	
% within Freshman Academy	4.42	28.26	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

Table 17

Participation in Freshman Academy by NOVA Program Participation Cross-Tabulation

NOVA program participant	Freshman Academy		Total
	No	Yes	
No			
n	2,489	479	2,968
% of total	81.23	15.63	96.87
% within NOVA program	83.86	16.14	
% within Freshman Academy	97.30	94.66	
Yes			
n	69	27	96
% of total	2.25	0.88	3.13
% within NOVA program	71.88	28.13	
% within Freshman Academy	2.70	5.34	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

The cross-tabulation in Table 18 relates to whether URM students from the fall 2014–2020 cohorts lived in on-campus university housing in their 1st year. Looking at the 3,064 URM students, 2,484 (81.07%) lived on campus, and 580 (18.93%) did not live on campus. Percentages were similar for those who did not participate in Freshman Academy, with 78.58% (2,010) in university housing and 21.42% (548) living off campus. Freshman Academy participants had a higher percentage of students living on campus compared with those who did not participate in Freshman Academy and the overall URM student population, with 93.68% (474) living in university housing on campus and 6.32% (32) living off campus.

Continuing to explore on-campus university housing, the cross-tabulation in Table 19 relates to LLCs and whether URM students from the fall 2014–2020 cohorts lived on a designated floor as part of an LLC during their 1st year. LLC information was not available for 472 of the 3,064 URM students. Among the remaining 2,592 students, 521 (20.10%) were in LLCs, and 2,071 (79.90%) were not. Those who did not participate in Freshman Academy had similar percentages of participation in LLCs, with 19.15% (408) participating and 80.85% (1,722) not participating. Freshman Academy participants had a higher percentage of students living in LLCs compared with those who did not participate in Freshman Academy and the overall URM student population, with 24.46% (113) participating in LLCs and 75.54% (349) not in LLCs.

Table 18

Participation in Freshman Academy by Housing Cross-Tabulation

Housing	Freshman Academy		Total
	No	Yes	
No			
n	548	32	580
% of total	17.89	1.04	18.93
% within housing	94.48	5.52	
% within Freshman Academy	21.42	6.32	
Yes			
n	2,010	474	2,484
% of total	65.60	15.47	81.07
% within housing	80.92	19.08	
% within Freshman Academy	78.58	93.68	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

Table 19

Participation in Freshman Academy by Living Learning Community (LLC) Participation Cross-Tabulation

LLC	Freshman Academy		Total
	No	Yes	
No			
n	1,722	349	2,071
% of total	66.44	13.46	79.90
% within LLC	83.15	16.85	
% within Freshman Academy	80.85	75.54	
Yes			
n	408	113	521
% of total	15.74	4.36	20.10
% within LLC	78.31	21.69	
% within Freshman Academy	19.15	24.46	
Total			
n	2,130	462	2,592
%	82.18	17.82	100.00

Note: Data were missing in 472 instances.

The cross-tabulation in Table 20 displays the retention rates of fall 2014–2020 cohorts of URM students and reveals the numbers of students retained after their 1st year of college (those who returned in the fall semester after their beginning fall semester). The 3,064 URM students had a 1st-year retention rate of 61.85% (1,895). Those who did not participate in Freshman Academy had a similar 1st-year retention rate of 59.50%. However, Freshman Academy participants showed a higher 1st-year retention rate, with 73.72% of program participants returning.

Means

This subsection of the Descriptive Statistics section explores the means and standard deviations of the continuous variables: ACT composite score, high school GPA, cumulative GPA from the fall semester (first enrolled semester), and cumulative GPA from the spring semester. The spring cumulative GPA was considered the 1st-year GPA for the purposes of this study because it combined grade information from the first and second semesters for each student.

Table 21 displays ACT composite scores for URM students, allowing comparison of Freshman Academy participants and nonparticipants. The mean ACT composite score of Freshman Academy participants (M = 19.8595, SD = 3.79024) was lower than the mean ACT composite score of nonparticipants (M = 20.1040, SD = 4.01547).

Table 20

Participation in Freshman Academy by 1st-Year Retention Cross-Tabulation

Retained	Freshman Academy		Total
	No	Yes	
No			
n	1,036	133	1,169
% of total	33.81	4.34	38.15
% within retention	88.62	11.38	
% within Freshman Academy	40.50	26.28	
Yes			
n	1,522	373	1,895
% of total	49.67	12.17	61.85
% within retention	80.32	19.68	
% within Freshman Academy	59.50	73.72	
Total			
n	2,558	506	3,064
%	83.49	16.51	100.00

Table 21

ACT Composite Score

Freshman Academy	*n* observed	*n*	*M*	*SD*
No	2,558	2,278	20.1040386	4.0154698
Yes	506	491	19.8594705	3.7902408

Table 22 displays high school GPA for URM students and allows comparison of Freshman Academy participants and nonparticipants. The mean high school GPA of Freshman Academy participants (M = 3.1339, SD = 0.54161) was higher than the mean high school GPA of nonparticipants (M = 3.0571, SD = 0.5434).

Table 23 displays fall cumulative GPA for URM students' first semester of college and allows comparison of Freshman Academy participants and nonparticipants. The mean fall semester cumulative GPA of Freshman Academy participants (M = 2.8060, SD = 0.96850) was higher than the mean fall semester cumulative GPA of nonparticipants (M = 2.5103, SD = 1.17109).

The spring cumulative GPA for URM students was the culmination of the first two semesters of college and served as the 1st-year GPA for the purposes of this study. Table 24 allows comparison of Freshman Academy participants and nonparticipants in relation to spring cumulative GPA. The mean spring semester (1st-year) cumulative GPA for Freshman Academy participants (M = 2.6675, SD = 0.99870) was higher than the mean spring semester (1st-year) cumulative GPA for nonparticipants (M = 2.4003, SD = 1.16054).

Table 22

High School Grade Point Average

Freshman Academy	*n* observed	*n*	*M*	*SD*
No	2,558	2,516	3.0571260	0.5434167
Yes	506	506	3.1339130	0.5416097

Table 23

Fall Cumulative Grade Point Average

Freshman Academy	*n* observed	*n*	*M*	*SD*
No	2,558	2,499	2.5102836	1.1710888
Yes	506	504	2.8060936	0.9684967

Table 24

Spring Cumulative Grade Point Average

Freshman Academy	*n* observed	*n*	*M*	*SD*
No	2,558	2,510	2.4002747	1.1605420
Yes	506	505	2.6675322	0.9987083

Inferential Statistics

Linear Regression

Linear regression was used to answer the first research question. This section describes a model with all covariates of the effect of Freshman Academy participation on GPA outcome for URM students. Table 25 summarizes the model and indicates that the overall model was significant at the .0001 level. The analysis of variance output shows $F(26, 2047) = 44.37$ ($p < .0001$).

The adjusted R^2 provides insight into how well the model can generalize (Field, 2009). Table 26 indicates adjusted $R^2 = .363393$. This means that although the model is highly significant, it is moderately correlated. In addition, in Table 25, the *F*-value of 44.37 is much larger than the critical *F*-value of 1.774, indicating a highly significant result for the model.

Table 25

Model Summary for Underrepresented Minority Grade Point Average Outcome

Source	*df*	*SS*	*MS*	*F*	*p*
Model	26	948.982937	36.499344	44.37	<.0001
Error	2,021	1,662.469616	0.822598		
Corrected total	2,047	2,611.452552			

Table 26

Model Statistics for Underrepresented Minority Grade Point Average Outcome

Statistic	Value
R^2	.363393
Coefficient	37.99709
Root *MSE*	0.906972
1st-year grade point average mean	2.386950

Table 27 captures the relationship connecting Freshman Academy participation and additional independent confounding variables with the dependent variable of URM GPA. What is most interesting about the results in this table is the relationship between Freshman Academy participation and high school GPA, indicating a highly significant effect on GPA outcome. Standardized testing and Freshman Academy participation also predict the outcome, as do gender, residency, Pell eligibility, father's education level, NOVA program participation, and LLC participation. Also interesting are the areas that are not significant. Despite existing literature on the impact of mother's education level on student success, this did not play a role in GPA outcome.

Table 27

Freshman Academy Participation and Covariate Relationship for Underrepresented Minority Grade Point Average (GPA) Outcome

Source	*df*	Type I *SS*	*MS*	*F*	*p*
Freshman Academy	1	27.6366610	27.6366610	0.852	<.0001
High school GPA	1	828.9320111	828.9320111	0.414	<.0001
ACT score	1	10.6173684	10.6173684	0.024	.0003
Race	7	12.5560101	1.7937157	0.997	.0332
Gender	1	3.9028266	3.9028266	0.804	.0295
Residency	1	31.8601689	31.8601689	0.857	<.0001
Pell Grant eligibility	2	9.3178317	4.6589158	0.308	.0035
First generation	1	0.1396650	0.1396650	0.014	.6803
Father's education	3	10.2995504	3.4331835	0.740	.0059
Mother's education	3	2.4317750	0.8105917	0.385	.3986
Student athlete	1	1.2352702	1.2352702	0.665	.2206
Rodney Gross scholar	1	2.4183794	2.4183794	0.824	.0866
NOVA program	1	4.1017571	4.1017571	0.703	.0257
Housing	1	0.1022994	0.1022994	0.425	.7244
Living learning community	1	3.4313625	3.4313625	0.666	.0412

Despite existing literature on student involvement, being a student athlete did not play a role in GPA outcome. Although much literature exists showing that students who live on campus have higher GPAs than those who do not, this did not hold true for URM students. Although the Rodney Gross scholar program required students to participate in supplementary support programs and attend out-of-class events, this enrichment program did not foster higher GPA among URM students. These results leave the institution with an opportunity to consider how its various support structures for URM students work together to support academic success, which Chapter 5 discusses further.

Table 28 captures the relationship between each individual variable and the URM GPA outcome. This table importantly leads to the realization that there are always a multiplicity of different factors that impact a student's academic success at the collegiate level. As indicated in Table 28, some of the most important factors besides Freshman Academy participation were prior academic success in high school and standardized testing. Other preentry attributes of importance to the GPA outcome were race, gender, residency, Pell Grant eligibility, first-generation status, and father's education. Among collegiate programing and interventions, Freshman Academy, the NOVA program, and LLCs were significantly connected with GPA outcomes for students.

Logistic Regression

Multinominal logistic regression was used to answer the second research question because of the existence of multiple categorical variables, including the categorical dependent variable of retention (retained vs. not retained). This section presents a model with all covariates of the effect of Freshman Academy participation on the 1st-year retention outcome for URM students.

Table 28

Individual Covariate Relationships With Underrepresented Minority Grade Point Average (GPA) Outcome

Source	*df*	Type III *SS*	*MS*	*F*	*p*
Freshman Academy	1	10.3761777	10.3761777	12.61	.0004
High school GPA	1	372.8781439	372.8781439	453.29	<.0001
ACT score	1	9.0926235	9.0926235	11.05	.0009
Race	6	13.8438948	2.3073158	2.80	.0101
Gender	1	6.6233159	6.6233159	8.05	.0046
Residency	1	15.8843160	15.8843160	19.31	<.0001
Pell Grant eligibility	2	6.9031899	3.4515949	4.20	.0152
First generation	1	6.8422835	6.8422835	8.32	.0040
Father's education	3	10.8716314	3.6238771	4.41	.0043
Mother's education	3	2.1007268	0.7002423	0.85	.4658
Student athlete	1	2.0839747	2.0839747	2.53	.1116
Rodney Gross scholar	1	1.9255565	1.9255565	2.34	.1262
NOVA program	1	3.5271852	3.5271852	4.29	.0385
Housing	1	0.0014052	0.0014052	0.00	.9670
Living learning community	1	3.4313625	3.4313625	4.17	.0412

An overall analysis of the intercept of the model indicates that among the individual variables measured there were lots of connections to student retention. Thus, the significance of the model ($p < .0001$) and large value of B (−6.4957, $SE = 0.5428$) indicate a valid model fit.

For the statistical analysis to be run, all variables were coded into binomial categorical designations. Analysis was run individually for the dependent variable and each of the covariates because of the multitude of covariates. Combining covariate and dependent variable pairs would have created an unwieldy model that would not have been statistically valid. Table 29 displays the results of the multinominal logistic regression. The table indicates those variables which had a significant effect on retention with a series of asterisks denoting the level of the significance. Freshman Academy was highly significant with respect to retaining students for their 2nd year of college, $\chi^2(1) = 13.49$, $n = 2{,}070$, $p < .001$. As Tinto (2012) said, and as indicated by Table 29, a multitude of variables related both to student choice and student demographics correlate with retention. The most significant factor, as indicated in the model for students at this university, was race. This result is consistent with the findings of other researchers (Balz & Esten, 1998; Banks & Dohy, 2019; McDonough & Fann, 2007; Orbe, 2008; Pascarella & Terenzini, 2005). Freshman Academy participants were ultimately retained at a rate of 46%–79% ($OR = 0.601$, 95% confidence interval [0.457, 0.788]) based on the analysis. The Freshman Academy thus helps to intervene in factors that negatively impact retention in EKU's 1st-year population.

Table 29

Underrepresented Minority Retention Model by Variable

Effect	*B*	*SE B*	Wald 95% CI *LL*	Wald 95% CI *UL*	χ^2
Intercept	−6.50***	0.54			
Freshman Academy [a]	−0.2440***	0.07	0.457	0.788	13.49
High school GPA	1.045***	0.12	2.266	3.570	81.31
ACT score	0.06***	0.02	1.028	1.098	12.91
American Indian/Alaskan Native	2.68***	0.46	0.022	0.116	33.52
Asian	3.62***	0.35	0.072	0.234	106.09
Black	2.98***	0.23	0.053	0.089	161.75
Hispanic/Latino	3.22***	0.24	0.064	0.118	178.59
Native Hawaiian/Pacific Islander	2.81***	0.67	0.016	0.205	17.42
Nonresident alien	−20.9621***	1.50	<0.001	<0.001	193.22
Gender [b]	0.033	0.05	0.871	1.308	0.40
Residency [c]	0.005	0.09	0.703	1.450	0.0026
Pell eligible [a]	0.25	0.16	0.785	1.292	2.33
Pell eligible [d]	−0.486	0.29	0.207	1.129	2.85
First generation [a]	−0.24*	0.09	0.430	0.897	6.45
Father's education [e]	0.3975**	0.14	1.327	3.703	8.36
Father's education [f]	−0.0376	0.10	0.923	2.231	0.14
Father's education [g]	0.0387	0.16	0.887	2.702	0.06
Mother's education [e]	0.1861	0.11	0.917	1.877	2.67
Mother's education [f]	0.00158	0.09	0.811	1.468	0.0003
Mother's education [g]	−0.1022	0.15	0.634	1.525	0.47
Student athlete [a]	−0.3190**	0.10	0.352	0.792	9.54
Rodney Gross scholar [a]	−0.2300*	0.11	0.407	0.978	4.24
NOVA program [a]	−0.1297	0.14	0.447	1.333	0.87
Housing [a]	−0.106	0.07	0.616	1.062	2.32
Living learning community [a]	−0.1969**	0.06	0.525	0.867	9.43

Note: CI = confidence interval; *LL* = lower limit; *UL* = upper limit; GPA = grade point average.
[a] No versus yes. [b] Female versus male. [c] In state versus out of state. [d] No estimated family contribution number versus yes. [e] College and beyond. [f] High school. [g] Middle school/junior high.
*$p < .05$. **$p < .01$. ***$p < .001$.

Summary of Analysis

The analysis of academic outcomes for URM students indicates a complex interaction of factors that impact 1st-year students' academic success and retention. This is consistent with existing literature (Astin, 1984, 1999; Braxton et al., 2014; Pascarella & Terenzini, 2005; Sedlacek, 1987; Tinto, 1975, 2012). Linear regression analysis revealed a significant, moderate connection between the 1st-year GPA outcome for URM students and Freshman Academy participation. Membership in the NOVA program and participation in LLCs—both EKU targeted interventions—were also significantly connected with the GPA outcome. Although several preentry attributes were significantly connected to GPA, what was most confounding was the lack of a connection between mother's education and GPA.

The results of logistic regression analysis revealed a connection between 1st-year retention of URM students and Freshman Academy participation. As for the first research question, various preentry attributes and student participation in various programs and interventions had significant connections with 1st-year student retention. What was most interesting was that NOVA program participation was connected with the GPA outcome but not the retention outcome, and Rodney Gross scholar participation was connected with retention but not GPA. Chapter 5 delves deeper into the results of the analysis and explores each research question further along with implications and recommendations for practice and the study's limitations.

CHAPTER 5

CONCLUSION

The purpose of this study was to examine the factors impacting the retention and persistence of URM students at a predominantly White, regional Kentucky university. I sought to determine whether participation in EKU's Freshman Academy had a statistically significant relationship with the academic outcomes of 1st-year GPA and 1st-year retention for URM students. In addition to examining the academic outcomes, I included a variety of covariates in the analysis. Preentry characteristics and attributes were considered to gain a deeper understanding of the population; these included race and ethnicity, gender, residency, Pell Grant eligibility, first-generation status, mother's education level, father's education level, high school GPA, and ACT composite score. Collegiate covariates considered were campus interventions, support services, and program participation, including participation in the Rodney Gross scholars program, the NOVA TRIO support program, National Collegiate Athletic Association athletics, EKU housing, and LLCs.

Although undergraduate student populations have grown increasingly diverse, and 4-year institution undergraduate degree completion rates have increased, URM students have continued to exhibit gaps in retention and graduation at the state and national levels relative to their White counterparts (Education Trust, 2016; Flores et al., 2017; Green & Wright, 2017; Kentucky CPE, 2019, 2021; National Center for Education Statistics, 2019, 2020). States and institutions have implemented a variety of policies and practices

to address the continuing gaps in educational outcomes. Kentucky is one of several states that have used performance-based funding to address this concern. Kentucky's model includes a focus on diversity, equity, and inclusion and contains within it goals for academic outcomes for URM students (Kentucky CPE, 2016, 2021).

Tinto's (1975, 1993) interactionalist theory and models (the 1975 and 1993 conceptual schemata for dropout from college) have been foundational for college student success and retention research for decades (Banks & Dohy, 2019; Demetriou & Schmitz-Sciborski, 2011; Green & Wright, 2017; Gummadam et al., 2016; Han et al., 2018; Hurd et al., 2016; Manyanga et al., 2017; Mayhew, 2016; Ovink & Veazey, 2011; Pascarella & Terenzini, 2005; Vaccaro & Cambra-Kelsay, 2018). This theory's models take into consideration both preentry characteristics and attributes of students and collegiate academic and social experiences and integration. Astin's (1984, 1999) theory of student involvement also models college impact by taking into consideration preentry attributes and collegiate experiences. As with Tinto's theory, Astin's theory has passed the test of time for decades as a seminal theoretical framework underlying college student involvement and retention research (Brooms et al., 2017; Castellanos, 2016; Delgado-Guerrero & Gloria, 2013; Delgado-Guerrero et al., 2014; Grier-Reed & Wilson, 2016; Guiffrida, 2003; Kimbrough, 1995; Kimbrough & Hutcheson, 1998; Kiyama et al., 2015; Luedke, 2019; Pascarella & Terenzini, 2005; Sedlacek, 1987; Tripp, 1997). These theories and models served as the conceptual framework and model for this study.

The study answered two research questions:

1. What is the impact of Freshman Academy participation on 1st-year GPAs of URM students, compared with the 1st-year GPAs of URM students not participating in Freshman Academy?
2. What is the impact of Freshman Academy participation on 1st-year retention rates of URM students, compared with the 1st-year retention rates of URM students not participating in Freshman Academy?

In this study, 1st-year students were first-time, full-time undergraduate students who began seeking a bachelor's (4 year) degree at EKU. The quantitative study relied on preexisting archival data provided by EKU's Office of Institutional Research. The rationale for covariate selection was based on the theoretical frameworks of Tinto (1975, 1993) and Astin (1984). Covariates selected included preentry attributes of URMs and collegiate covariates. The underlying rationale for the study also derived from existing research and the idea that URM students at the collegiate level do not thrive in the same way as white students, with regard to academic outcomes, at predominantly white institutions because of institutional racism (Garcia, 2018; Green & Wright, 2017; Ladson-Billings & Tate, 1995; McDonough & Fann, 2007).

The sample included URM students from the fall cohorts from 2014 through 2020 (N = 3,064). Descriptive and inferential statistical analyses were conducted to compare Freshman Academy participants (n = 506) and nonparticipants (n = 2,558). For Research Question 1, the effect of Freshman Academy participation on the GPAs of URM students was analyzed through linear regression. For Research Question 2, the impact of Freshman Academy participation on the retention rates of URM students was analyzed through

multinomial logistic regression because of the inclusion of multiple categorical variables, including a categorical dependent variable, retention (retained vs. not retained).

Summary of Findings

Research Question 1 related to the relationship between Freshman Academy participation and GPA outcomes for URM students. Linear regression analysis revealed a significant, moderate connection between 1st-year GPA outcomes for URM students and Freshman Academy participation. The analysis revealed significant correlation between GPA and participation of URM students in Freshman Academy, when measured as a covariate with several preentry attributes and collegiate covariates. The significant preentry attributes identified included high school GPA, ACT score, gender, residency, Pell Grant eligibility, and father's education. Surprisingly, the only significant collegiate covariates, measured alongside Freshman Academy participation, were NOVA program membership and LLC participation. An analysis of the variables considered independently yielded a multitude of significant results. Specifically, the only characteristics that did not yield significant connections to GPA were mother's education level, athletic participation, Rodney Gross scholar program participation, and housing.

For Research Question 2, multinomial logistic regression was used to understand the connection between each of the covariates (including the treatment variable, Freshman Academy participation) and student retention. Several preentry attributes and collegiate covariates were significantly correlated with 1st-year retention. These included high school GPA, ACT score, race, residency, first-generation status, father's education level, athletics participation, Rodney Gross scholar program participation, and LLC participation. Because of the complexity of the model (there was an overabundance of

covariates in the analysis), each covariate was assessed separately to determine its relationship with 1st-year student retention.

An impactful examination of the analysis for each research question revealed a web of complexity in relation to the issues of student retention and academic progress (i.e., 1st-year GPA). The next section provides an analysis of the results in the context of the theoretical framework.

Analysis of the Findings

The goal of Freshman Academy has been to overcome barriers to success caused by institutional racism, and Freshman Academy participation was significantly correlated with URM students' academic success (as measured by 1st-year GPA and 1st-year student retention). For most other university interventions for URM students, participation was correlated with at most one of these measures of academic success. Freshman Academy and LLCs were the only collegiate interventions significantly correlated with URM students' academic success as measured by both 1st-year GPA and 1st-year retention. Living on campus in university housing was not significantly correlated with academic success. This finding goes against findings routinely reported in existing literature that indicate living on campus has a positive impact on a student's GPA and retention relative to not living on campus (Pascarella & Terenzini, 2005). A possible reason for the nonsignificant result could be the difference between living within LLC structures and living outside those structures. For example, LLCs provide structured social interactions and engagement requirements in addition to linked courses. This allows students to be more deeply engaged within their residential living spaces and develop deeper

connections than they would develop living on floors without cocurricular requirements and academic course ties (Kuh, 2008).

Looking deeper at the covariates measured with or alongside Freshman Academy participation, several preentry attributes that showed no significant correlation with academic success were surprising and contrary to findings reported in existing literature. Mother's education most squarely fits into this category (Hamaideh & Hamdan-Mansour, 2014). However, father's education was significantly correlated with academic success. Given the existing literature, this was a surprising finding. Many researchers have focused generally on parental education or more specifically on maternal education as impactful on student success. But this new finding indicates a correlation only between father's education level and student academic outcomes.

Pell Grant eligibility was also correlated with 1st-year GPA, but it was not correlated with 1st-year retention. This indicates that race, which was significantly correlated with both outcomes, is a more impactful factor than socioeconomic status in relation to academic success. This directly ties into the theoretical framework, which was predicated on the belief that predominantly White institutions institutionally hinder URM students' success (Ladson-Billings & Tate, 1995).

Implications for Policy and Practice

The findings analyzed in the previous section suggest some potential developments in both policy and practice at EKU and within the state of Kentucky. At present, neither Freshman Academy nor many other university interventions and support programs at EKU and other state institutions are mandated for students. If Freshman Academy and other support programs show connections to academic success, institutions

should explore the possibility of mandating such interventions. This move would receive support not only from this study but also from existing research (Astin, 1984, 1999; Kuh, 2008; Tinto, 2012). Understanding the relationship between preentry attributes and collegiate academic outcomes will help policy makers strategize targeted support interventions. This can aid with maximizing the benefit of limited financial resources.

At present, the state's performance-based finding model ties academic outcome metrics to institutional funding. Although components and metrics of the diversity plan within the funding model are the same across institutions, institutions have a great deal of autonomy with respect to what their actual support programs and services look like. It is important to consider differences in attributes across the student population, but if specific programs and interventions yield success, policy makers should consider the impact of mandating those specific programs across the state.

University housing is an area that administrators should consider when making policy and practice decisions. This study revealed no significant connection between academic outcomes of students and whether students lived in university housing or off campus. This finding is in conflict with existing literature, which indicates that student housing in and of itself is significantly tied to student success (Pascarella & Terenzini, 2005). This finding also warrants a further investigation of the curricular outcomes of EKU housing with regard to modeling of residential life curriculum and practices related to 1st-year URM students. This study supports the case for further examining LLC participation in conjunction with Freshman Academy participation at EKU and exploring implications of mandated participation as part of a comprehensive wraparound approach to supporting students. Other institutions should consider LLC components for their

intervention programs as well. Increasing opportunities to collectively enhance the academic and social experiences of students, and increasing their involvement and engagement, receives support from this current study and its underlying theoretical frameworks (Astin, 1984, 1999; Kuh, 2008; Tinto, 1975, 1993, 2012). The academic and social experiences that make up the collegiate experience should not be looked at as independent silos, and administrators should proactively search for ways to bridge these experiences together.

EKU prides itself on being considered the school of opportunity within Kentucky, and its service region includes many potential first-generation students. The findings of this study suggest that EKU should pay particular attention to its first-generation students and 1st-year success. Although EKU at present has all the traditional components of a successful best practice 1st-year experience model, these components are dispersed among a multitude of departments and divisions. The university would benefit from further examination of every component and intervention to ensure coordination of effort to maximize resources and intended impact on academic outcomes, especially for first-generation students. Although the NOVA program targets first-generation, low-income students, the findings of this study suggest it has had mixed success in terms of the two measured academic outcomes. The same is true of the Rodney Gross scholars program, although its primary focus is not first-generation students. As recommended above, the institution would benefit from examination of intervention programs (e.g., the NOVA program, the Rodney Gross scholars program, and Freshman Academy) that support underserved students (e.g., URM students, low-income students, and first-generation

students) to ensure discovery and utilization of the most successful programmatic components in a concerted manner.

Although critical race theory has been a hot topic in legislative debate and a highly polarizing political issue both nationally and in the state of Kentucky over the last several years, it would be helpful for EKU to adopt a critical lens for all 1st-year programming because of the unique intersectional population of the university (e.g., students eligible for Pell Grants, first-generation students, and URM students). Adopting this model would cause the university to pay specific attention to how university policy and programming either supports the success of underrepresented populations or creates barriers to that success. Moreover, using critical race theory, administrators and policy makers at the institutional and state levels could work toward greater equity by removing barriers to student success and ultimately dismantling layers of institutional racism exhibited in policies, practices, and lived student experiences.

Limitations

This study was limited in several ways. First, the sample of the study included students from only one institution. It is necessary to take into consideration the student population of the university—predominantly White with larger than average subpopulations of first-generation students and students eligible for Pell Grants. Although the study can provide insight into the impact of support programs targeted toward URM students on EKU students, the results may not generalize to all higher education institutions.

Second, the scope of the study was further limited by the specific target population of 1st-year students. Although the results allowed comparison of academic

outcomes between Freshman Academy participants and nonparticipants, and revealed higher GPAs and 1st-year retention rates among participants, the analysis does not support conclusions regarding whether these trends remained the same for the two groups through degree completion.

Third, the design of the statistical analysis proved to be a limitation because of the large number of covariates examined. A study examining fewer covariates could be beneficial by providing a deeper analysis of specific preentry and collegiate attributes.

Fourth, the data examined included only preexisting data. Attributes and characteristics explored were limited to those for which information was readily available through university archival data.

Recommendations for Future Research

The study revealed multiple opportunities for future research. First, using such a large number of covariates may not have been the best approach. Because of the large number of covariates used, the inferential analyses produced difficult intercept models and pairwise comparisons. In future, similarly modeled studies would benefit from the use of fewer variables and covariates in the statistical analyses.

Second, future researchers could tweak the time frame of the data used and the number of academic outcomes analyzed. Only one snapshot of each student's collegiate experience, their 1st year, was used in the analysis. A longitudinal analysis over multiple years for multiple cohorts would allow determination of whether trends are similar over the course of the collegiate experience and how retention, student success, and degree attainment relate to the designated URM populations and program participants. Examining multiple academic outcomes (e.g., semester–semester and yearly retention

rates, credit completion, and degree attainment) and preentry characteristics (e.g., parental education level, FAFSA data, high school GPA, test scores, and high school characteristics) of URM students could allow for an understanding of the cohorts and of the possible impact of support programs and services across a student's entire time at the university.

Third, future researchers could delve deeper into comparing the university's intervention programs. Cohorts could also be divided based on more than one support program or service to identify differences in outcomes between programs. Assessment of the impact of multiple support programs could identify differences in outcomes based on the number of services used.

Fourth, further differentiation by fall cohort of Freshman Academy participants could reveal deeper information about the program's specific components and delivery, which may have varied from year to year. Were there other things happening at the institutional level that influenced the impact of the program differently each year? Future researchers could specifically assess differences based on enrollment year and determine other factors that impacted the student experience. Were there any cohort differences in academic outcomes related to staff changes, mentoring changes, variation in cocurricular programming, differences introduced by the COVID-19 pandemic (such as to academic instruction delivery methods), cocurricular program offerings, mental health impacts, financial implications, and other factors?

Fifth, a future study could involve examination of URM students across multiple institutions who participate in interventions and support programs similar to Freshman Academy. This could include drawing a sample from similar regional institutions with

comparable enrollment trends and student characteristics. Or it could include drawing on diverse student populations and a variety of institutions to gauge whether similar relationships exist between program participation and academic outcomes.

Sixth, future research that is qualitative in nature could provide the capacity to delve deeper into the specific components of the intervention program that were most impactful and beneficial in terms of positively contributing to the academic outcomes of participants. This would involve understanding the lived experiences of the students and exploring the relationships between student attributes and program components. Do the design of the program, cohort peers, mentors, program and university staff members, or other factors specific to a given academic year alter the impact of participation? As mentioned above, there may be other things happening at the institutional level that influence the impact of the program. Further examination of differences between yearly cohorts could occur via qualitative analysis to identify other factors impacting the student and program experience.

Conclusion

In this study, I examined the connections between Freshman Academy participation and academic success for URM students. The study effectively demonstrated that Freshman Academy participation was significantly correlated with the success of 1st-year URM students, as measured by GPA and retention. An unintended consequence of the study was identification of findings contrary to those reported in existing literature (Astin, 1999; Kuh, 2008; Pascarella & Terenzini, 2005; Tinto, 2012). The study both justifies the need for interventions for 1st-year URM students to help them overcome barriers to success rooted in educational and systemic racism and highlights the

need for examination of support programs and targeted interventions at the institutional level; this could be impactful beyond the specific target cohorts of URM students and could have positive impacts across the entire 1st-year student population. The findings of the study also support further examination of financial support of higher education in Kentucky and the adjoining policies surrounding postsecondary education in the commonwealth.

The study also supports the notion that existing research based on predominantly White student samples is not always generalizable to all student populations. This warrants further investigation, specifically of the 1st-year experience of historically underrepresented populations on university campuses. It is unknown whether historical theories of student success are applicable to all underrepresented student populations. This study serves as a justification of the need for further examination of the 1st-year experiences of EKU students because of the university's unique historically underserved and underrepresented student population.

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