Western Kentucky University
TopSCHOLAR®

Dissertations | Graduate School

Fall 2021

Exploratory Study of Factors that Predict Underrepresented Minority Student Persistence in an Intervention Program

Cres'Sena S. Thomas
Western Kentucky University, Cressena.thomas@wku.edu

Follow this and additional works at: https://digitalcommons.wku.edu/diss

 Part of the Higher Education Commons, and the Multicultural Psychology Commons

Recommended Citation

Thomas, Cres'Sena S., "Exploratory Study of Factors that Predict Underrepresented Minority Student Persistence in an Intervention Program" (2021). *Dissertations.* Paper 208.
https://digitalcommons.wku.edu/diss/208

This Dissertation is brought to you for free and open access by TopSCHOLAR®. It has been accepted for inclusion in Dissertations by an authorized administrator of TopSCHOLAR®. For more information, please contact topscholar@wku.edu.

EXPLORATORY STUDY OF FACTORS THAT PREDICT UNDERREPRESENTED MINORITY STUDENT PERSISTENCE IN AN INTERVENTION PROGRAM

A Dissertation
Presented to
The Faculty in School of Leadership and Professional Studies
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

By
Cres'Sena S. Thomas

December 2021

EXPLORATORY STUDY OF FACTORS THAT PREDICT UNDERREPRESENTED MINORITY STUDENT PERSISTENCE IN AN INTERVENTION PROGRAM

Date Recommended October 5, 2021

Monica Galloway Burke Digitally signed by Monica Galloway Burke Date: 2021.10.14 14:53:08 -05'00'

Dr. Monica Burke

Aaron W. Hughey Digitally signed by Aaron W. Hughey Date: 2021.10.14 16:33:44 -05'00'

Dr. Aaron Hughey

Lester A. C. Archer Digitally signed by Lester A. C. Archer Date: 2021.10.14 17:00:00 -05'00'

Dr. Lester Archer

Associate Provost for Research & Graduate Education

I dedicate this to my parents, husband, children, siblings, and nephews. They inspire me more than they will ever know, and I am forever grateful and blessed to have them in my life.

I dedicate this to my grandparents whom all played a special role in my life, always supporting and pushing me to reach my potential. I know they are in heaven just as proud as they would have been here on earth.

ACKNOWLEDGMENTS

I want to thank my committee members for their support and dedication throughout this process. A special thanks to Dr. Monica Burke, my committee chair, for her guidance, patience, and feedback. Thank you, Dr. Lester Archer, and Dr. Aaron Hughey for serving on my committee. I've always wrestled with the idea of going back to school and was motivated to by Dr. Martha Sales. She recognizes the potential in others and always speaks life into them. She is truly the champion of champions. I would like to acknowledge my teachers from Belmont to Hopkinsville Middle and High school. They truly do not make teachers like you all anymore. I was blessed to have wonderful teachers in my life who always shared how bright my future was going to be. They allowed me to be me at whatever age I was, which meant a lot. You all inspired me to go into education and your work was not in vain.

To my friends and extended family: Mr. and Mrs. Thomas, Bertha, Dr. Martha Sales, Kentra, and Terina thank you for your support and always being a phone call away. My dissertation sisters, Aleda and Imari, we are done! Our conversations will be different now. A special thanks to my cohort members, Johnna Smith and Zach Ward. They sent lifebuoy's to pull me back to shore many times when I wanted to float away. The last of the "three amigos" is out! I could not be prouder of us, we did it!

To all my students who I came across along the way and whom I will continue to cross paths with. As I encourage you, you unknowingly encourage me. Each day you all are a constant reminder for me to exemplify what I preach, greatness is within us!

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION 1

Statement of the Problem 2

Purpose of the Study 3

Research Questions 5

Hypotheses 6

General Methodology 6

Significance of the Study 8

Assumptions 9

Delimitations 10

Limitations 10

Definitions 10

Summary 12

CHAPTER II: REVIEW OF THE LITERATURE 13

The Importance of Student Retention 14

Black Student Persistence 15

Factors Affecting Student Retention 16

Academic and Social Integration 17

Institutional and Degree Commitment 19

Financial Strain 19

Academic Conscientiousness 20

Support Service Satisfaction 21

Theoretical/Conceptual Framework 22
Vincent Tinto 23
John Bean and Shevawn B. Eaton 26
Summary 27
CHAPTER III: METHODOLOGY 29
Research Questions 29
Hypotheses 30
Research Design 30
Participants 31
Instrument 32
Procedures 34
Data Management and Analysis 34
Ethical Considerations 35
Limitations 35
Summary 36
CHAPTER IV: RESULTS 37
Descriptive Statistics 37
Sample Demographic Results 38
Findings for Research Question 1 44
Findings for Research Question 2 47
Findings for Research Question 3 49
Summary 52
CHAPTER V: DISCUSSION 54
Overview of the Study 54

Review of Findings 55

Implications 59

Recommendations and Future Research 63

REFERENCES 67

APPENDIX A 84

APPENDIX B 85

APPENDIX C 96

APPENDIX D 97

LIST OF FIGURES

Figure 1. Tinto's Conceptual Schema for Dropout from College 24

Figure 2. Tinto's 2015 Model of Student Motivation and Persistence 25

Figure 3. Bean and Eaton's Model of Retention..... 26

Figure 4. Cumulative GPA by Retention Difference..... 41

Figure 5. Program Experience by Gender and by Retention 50

LIST OF TABLES

Table 1. Conceptual Framework of Current Study 7

Table 2. Gender, GPA, and Factor Demographics for Entire Sample 39

Table 3. Retention by Race and Ethnicity 40

Table 4. Pairwise Correlations of CPQ Factors 42

Table 5. Mean and Standard Deviation of Student Retainment by CPQ Factors 43

Table 6. Results of Comparing the Null and Full Models 46

Table 7. Regression Coefficients 48

Table 8. Retention by Gender and Live and Learn Components 50

Table 9. Retention by Live and Learn Components 52

EXPLORATORY STUDY OF FACTORS THAT PREDICT UNDERREPRESENTED MINORITY STUDENT PERSISTENCE IN AN INTERVENTION PROGRAM

Cres'Sena S. Thomas December 2021 97 Pages

Directed by: Dr. Monica Burke, Dr. Aaron Hughey, and Dr. Lester Archer

School of Leadership and Professional Studies Western Kentucky University

This study explores factors that predict persistence for underrepresented minority students participating in an intervention program that branches off into a Living Learning Community. This research is significant due to the growing change of student demographics across college campuses and the need for institutions to understand how they can assist in student persistence. The study was conducted as a quantitative study and responses from study participants were analyzed using SPSS. The findings concluded that cumulative GPA was the only significant factor in predicting persistence for this student population. There are some noteworthy mentions from the study regarding the Living Learning Community.

CHAPTER I: INTRODUCTION

The retention of minority students attending predominately White institutions (PWIs) has been a persistent issue in higher education. According to the National Center for Education Statistics (NCES), college graduation rates for Black and Hispanic students have always trailed White and Asian students (NCES, 2020). Among Black, Hispanic, White, and Asian students, the six-year, first-time, full-time undergraduate graduation rate was highest for Asian students (74%), followed by White students (64%), Hispanic (54%), and Black students (40%) (NCES, 2019). Research has noted minority students withdraw at a higher rate than their White counterparts, especially first-year students (Brock, 2010; Nora et al., 2005; Glenn, 2001; Green, 2007; Hu & St. John, 2001; Knapp et al., 2010; Lee, 1991; Opp, 2002; Pascarella & Terenzini, 1980).

Unfortunately, most minority students who identify as first-generation also identify as coming from a low socioeconomic background (Blackwell & Pinder, 2014). According to some researchers, racial minority students experience many obstacles that make it challenging to be successful at PWIs, such as alienation and chilly campus climates (Nelson-Laird et al., 2007; Pascarella & Terenzini, 1980; Rankin & Reason, 2005); tense relationships with White faculty (Guiffrida, 2005; Hurtado & Carter, 1997), which hinders their ability to foster cross-cultural mentoring relationships (Guiffrida, 2005); racism, discrimination, and often culturally exclusive curricula; and a lack of adequate support services (Person & Christenson, 1996).

While institutional concerns play a vital role in minority student success, external variables play a significant part as well. Tinto (1993) suggests a healthy balance between the academic and social realms at an institution allows students to receive support from

multiple avenues providing an essential source of cultural sustenance, aiding in the student's transition to college (Gonzalez, 2002). Financial support is another barrier that causes stress for minority students. LendEDU administered a survey in 2017 and found 55% of students struggled to pay for college, and 51% dropped out due to financial concerns. Minority students face other barriers such as being first-generation (Engle, 2007), lack of academic preparation (Reid & Moore, 2008), and campus climate (Shahid et al., 2018).

The laborious barriers encountered by minority students can make the journey to a college degree a grueling process. When studying minority student persistence, it can be compared to the peeling of an onion. One can peel away a layer and another layer, observing the further they go, there are more layers to be explored. Although an abundance of research has been conducted on student persistence, each generation of students raises a different set of concerns. Student persistence remains an area that is continually evolving and requiring continuous exploration.

Statement of the Problem

The minority student college enrollment gap has decreased over the last few years becoming closer to the White students' enrollment rate (Wellman, 2017). However, one rate that has consistently continued to lag for minority students is the graduation rate compared to Asian and White students in the United States. According to a 2017 U.S. Department of Education report, less than 40% of Black students graduate from college within six years. The implementation of intervention programs has been one initiative adopted at many institutions to increase minority students' intent to persist and earn a degree.

The lack of minority student persistence and degree attainment can be attributed to many factors, some within or outside students' control. Some factors that play a vital role in minority students' persistence are financial (Tichavakunda, 2017), sense of belonging (Walton & Cohen, 2007), first in the family to attend school (Adams & McBrayer, 2020), and lack of social and academic integration (Morley, 2003). These factors, which is not an exhaustive list, contribute to minority student attrition, which is generally defined as the departure or delay in completion of program requirements to obtain a degree. Various intervention programs have been established to combat student attrition, such as advising, academic help, First-Year Experience, Social Integration, and General Orientation programs (Pan et al., 2008). This research explores factors associated with minority first-year student persistence and how students perceive an institution can support minority student persistence, specifically via an intervention program.

Purpose of the Study

The purpose of the study is to examine predictors of first- to second-year retention of students participating in an intervention program. In 1982, *The Commonwealth of Kentucky Higher Education Desegregation Plan* was developed by the Council on Higher Education (CHE). The plan was created in response to the Commonwealth of Kentucky's' violation of Title VI of the Civil Rights Act of 1964 that was revealed by the U.S. Department of Education Office for Civil Rights (OCR). According to the U.S. Department of Labor, Title VI of the Civil Rights Act prohibits discrimination in receiving Federal funds or Federal assistance based on race, color, or national origin. The Desegregation Plan also aimed to increase African American students' enrollment and success throughout Kentucky for 25 years.

Kentucky has been released from the U.S. Department of Education Office for Civil Rights (OCR) Desegregation Plan since 2008. In the hope of improving diversity efforts and initiatives throughout the state, the Kentucky Council on Postsecondary Education (KCPE) took responsibility for this initiative. KCPE mandated each institution across the state to create a diversity plan that addresses four areas: (1) student body diversity, (2) closing of achievement gaps, (3) workforce diversity, and (4) campus climate (KCPE, 2016). The Intercultural Student Engagement Center Academy (ISEC Academy) Initiative at Western Kentucky University was established as part of the mandated diversity plan in the fall of 2017.

The retention of minority students has been a persistent issue in higher education. African American, Hispanic, and Native American students graduation rates have continuously trailed White and Asian students (Swail et al., 2003). Retaining minority students who identify as first-generation and/or low-income has created a different set of challenges when assisting students to degree completion. The ISEC Academy was created to bridge the gap by serving as a retention intervention program for underrepresented minority students.

The ISEC Academy is a four-year program designed to promote success for minority students. The ISEC Academy's purposes are to (1) increase the retention and graduation rates of eligible students; and (2) foster an institutional climate supportive of the success of minority, low-income, and first-generation college students. ISEC aims to meet its purposes by assisting first-year students who identify as minority and first-generation students, Pell-eligible with their transition, persistence, and graduation from college.

In particular, the present study examines six components—academic integration, social integration, support services satisfaction, degree commitment, institutional commitment, and academic conscientiousness—that have been found to predict persistence in minority college students. These six factors are measured using the College Persistence Questionnaire (CPQ) (Davidson et al., 2009), as informed by Tinto's (1993) student integration model.

This instrument was designed to aid colleges in identifying students at risk of dropping out and determining the variables/factors that best predict undergraduate student persistence. By implementing this instrument in this study, valuable feedback can be provided on behalf of the participants to improve the program and increase minority student retention and graduation rates.

Research Questions

Intervention programs can have a significant impact on minority students who are pursuing a college degree. Intervention programs can increase student persistence, retention, and graduation rates (Sneyers & De Witte, 2018). Some of these programs aim to identify student barriers, provide resources, develop the student holistically, and provide support (Sneyers & De Witte, 2018). Higher education professionals must understand the factors that assist in the success of minority students. To that end, this study asks: What college persistence factors are associated with predicting first-year minority student persistence to the second year of college for those participating in an intervention program?

The following specific research questions guide this study:

1: Can the likelihood of minority student persistence be reliably predicted

using academic integration, social integration, academic conscientiousness, academic efficacy, as well as cumulative GPA of minority participants in an intervention program?

2: If so, what factors from academic integration, social integration, academic conscientiousness, academic efficacy, as well as cumulative FGPA, are significant when predicting minority student persistence?

3: How do components of the Living Learning Community (Live Only, Learn Only, Live and Learn, and Not Live and Learn) relate to minority student persistence of an intervention program?

Hypotheses

1. H_0: - 2 log L (full model) = -2 log L (null model)

   Ha: - 2 log L (full model) ≠ -2 log L (null model)

2. H_0: β_1 (Academic Integration) = β_2 (Social Integration) = β_3 (Academic Conscientiousness) = β_4 (Academic Efficacy) = β_5 (Cumulative GPA) = 0.

   H_a: β_1 (Academic Integration) ≠ β_2 (Social Integration) ≠ β_3 (Academic Conscientiousness) ≠ β_4 (Academic Efficacy) ≠ β_5 (Cumulative GPA) ≠ 0.

3. H_0: There is no association between the components of the Living and Learning Community and minority student persistence.

   H_a: There is an association between the components of the Living and Learning Community and minority student persistence.

General Methodology

This study explores factors associated with college student success and persistence of students who participated in an intervention program. A quantitative methodology is utilized, and a correlational design was selected. This method was

selected due to the nature of the quantitative method in generalizing, predicting, and explaining the degree of association among two or more variables (Creswell, 2012).

The CPQ is used in the study to evaluate students' perceptions concerning college persistence. The CPQ factors are used to evaluate the reason freshmen returned for their sophomore year, along with what caused their attrition. Demographic questions assess whether other variables are predictors of student persistence or attrition. The conceptual framework of the research is presented in Table 1.

Table 1

Conceptual Framework of Current Study

Independent Variables		**Dependent Variables**
Demographics →	**CPQ Factors** →	**Retention**
Gender	Academic Integration	Intent to remain in college and persist to graduation
Financial Support	Financial Strain	
First-Generation	Institutional Commitment	
High School Location	Degree Commitment	
	Academic Motivation	
	Social Integration	
	Collegiate Stress	
	Scholastic Conscientiousness	
	Academic Efficacy	

Note. This figure demonstrates the conceptualizing variable factors associated with persistence and attrition of minority students participating in this study.

Significance of the Study

Every year, minority students enroll in postsecondary institutions across the US with plans to further their education and earn a bachelor's degree. On a positive note, the number of minority students enrolling in college is continuing to increase, narrowing the gap of their counterparts; nevertheless, challenges in retention are present. According to NCES, as of 2017, 40% of Black students and 54% of Hispanic students had completed college within six years. However, although minority students are entering higher education at an increased rate, they still face many challenges that can negatively impact their ability to persist to graduation. Determining the reason minority students leave school and what can be done to retain them are challenging issues for many higher education institutions.

Vincent Tinto's Model of Institutional Departure (1993) accredits attrition to pre-entry attributes, goals and commitments, institutional experiences, and personal goals. When these four attributes are viewed through a more defined lens, Tinto is referring to family background, goals, academic integration (inclusive of faculty and staff interaction), social integration, and external commitments. While these attributes may pose a bigger risk to all students' success and retention, the purpose of this study is to examine which factors impact minority students the most, if at all, due to participation in an intervention program.

Academic integration is a pertinent part of minority student persistence (Severiens & Wolff, 2008). A study conducted by Schwitzer et al. (1999) concluded minority students find it difficult to form relationships with faculty, specifically those who do not look like them, as the faculty-student interaction would be limited if no commonalities

exist among the two. Common themes among the responses in the study were that students lacked classroom support, academic advising, or career guidance due to having mixed feelings about approaching faculty. Therefore, as Tinto asserted, academic integration, including interactions with faculty, impact their decision to persist. In addition, Myers (2004) concluded when instructors demonstrate good character and show they care, students are more likely to communicate and engage.

It is important that institutions of higher education create an environment that connects minority students to the institution inside and outside the classroom. Minority students feeling disconnected from the campus community can impact persistence, making the decision easy for them to leave the institution, which can cause student attrition to increase. Student attrition and the lack of degree attainment are recurring topics in literature concerning sense of belonging for minority students (Booker, 2016; Museus et al., 2017). The implementation of minority student intervention programs is one avenue to address student persistence and degree attainment.

Assumptions

Two assumptions are included for this study:

1. The CPQ is a valid and appropriate instrument to assess an individual's likelihood to persist in a postsecondary institution. The instrument has been used at several universities to accurately project persistence (Davidson et al., 2009).
2. The students answer the CPQ honestly and accurately when completing the survey.

Delimitations

The population sample analyzed for this study is a sample of minority students who participated in an intervention program. The intervention program is for black and brown students who are first-generation; Pell eligible; and have some need with their transition, persistence, and graduation from college. Many minority students chose not to participate in the intervention program. For simplicity of research design, the researcher chose to explore only minority students who participated in the intervention program.

Limitations

For this study, the following limitations are identified:

1. This study utilizes a web survey as well as a paper survey. Web-based surveys limit participation to individuals with a valid email address and computer access.
2. The interpretation of the survey items may differ for each respondent.
3. The study is limited to a small sample of minority students in an intervention program. Because of the small sample size to a specific program, these findings could not be generalized to all minority students.

Definitions

The following terms, conceptually and operationally defined, pertain to this study and provide context.

1. *College Persistence Questionnaire (CPQ)*: The CPQ incorporates reliable factors with associated themes within the retention literature to assess students' likelihood of returning to their academic institution (Davidson et al., 2009).

2. *Underrepresented Minority*: A group whose percentage of the population is lower than their percentage of the population in the country, according to the PennState College of Agricultural Sciences.
3. *Persistence*: A student's ability to complete the prescribed coursework successfully toward the attainment of a degree, specifically re-enrollment at the same institution (Cabrera et al., 1993).
4. *Retention:* From an organization's perspective, "the ability of an institution to retain a student" (Berger & Lyon, 2005, p. 7) until degree completion.
5. *Academic Integration*: Student integration in the academic realm influenced by variables such as class discussions, quality of instruction, and feelings of intellectual growth (Davidson et al., 2009).
6. *Institutional Commitment:* Students' intentions to re-enroll and earn a degree from that institution and their confidence in selecting the right institution (Davidson et al., 2009).
7. *Degree Commitment:* Students' intentions to finish the degree, including estimates of the possibility or certainty that a degree will be achieved, and their self-appraised commitment to earning the degree (Davidson et al., 2009).
8. *Social Integration:* A student's sense of belonging, shared values, and similarity to others in the college environment (Davidson et al., 2009).
9. *Support Services Satisfaction:* The variables that address students' attitudes toward the school based upon how well the institution meets both their out-of-classroom and school-related needs (Davidson et al., 2009).
10. *Academic Conscientiousness:* A student's view of their academic

environment, exploring the connection between perceptual viewpoints and important indicators of educational attainment and persistence (Davidson et al., 2009).

Summary

This quantitative study is guided by three research questions designed to investigate whether a relationship exists between the CPQ factors and minority student persistence for those participating in an intervention program at higher education institutions. This research also investigates the factors that most influence the persistence of minority participants in an intervention program.

This research study comprises five chapters. A review of the literature related to persistence and minority students in higher education is discussed in Chapter II. Chapter III describes the methodology, research design, and procedures used in this investigation. In Chapter IV, the results of the data, analysis, and findings are presented. Recommendations for future research and conclusions of the study are presented in Chapter V.

CHAPTER II: REVIEW OF THE LITERATURE

Student retention remains a relevant topic in postsecondary education. Improving student success through increased retention rates is imperative for students and postsecondary institutional success. At the institutional level, retaining students allows for flexibility to reinvest in student success programming in hopes of a higher return on students persisting to graduation (Sousa, 2015). For students, particularly minority students, various environmental issues can affect retention both positively and negatively. Considering the US is becoming more diverse, access to and graduation from postsecondary institutions is imperative to create a more equitable and democratic society (Duranczyk et al., 2004). This research aims to understand variables that can help minority college students persist to their second year of college and possibly graduation. This knowledge will allow universities to be intentional in supporting and creating programs to foster retention. The purpose of this study is to explore factors that minority students participating in an intervention program perceive as relevant for their persistence to their second year of college.

This chapter presents research related to student retention's importance, specifically minority student persistence to the second year. Relevant definitions, theories, and literature on predicting student persistence are included. This chapter also provides an overview of what student retention entails in general, minority student retention, various types of intervention programs, and a brief description of the intervention program used in this study. This literature review is not meant to be exhaustive since the information presented is intended to support and inform the proposed study. The review concludes with the chapter summary.

The Importance of Student Retention

The study of retention has been a growing and vital issue within higher education research for over three decades (Bragg, 1976; Braxton & Hirschy, 2005; Flores & Della Piana, 2000; Tinto, 1987). Students are continually evolving, and the need to retain students remains a challenge that postsecondary institutions across the US are trying to address. Student attrition is difficult for universities and disturbing for students who take out loans with no degree to show for their effort in the end. NCES reported 38.8% of the 2012 cohort graduated with a bachelor's degree from a public institution within four years. For various reasons related to the student and the institution, administrators must understand why students choose to leave college.

Retention is vital to a university because it is often presented as measures of the institution's worth, quality, and focus (Reason, 2009). Retention data serve as a marketing tool to recruit future students to enroll. The matriculation of students year-to-year assists in reestablishing funds to the institution without the need to annually raise tuition and fees. Historically, state taxes funded public institutions using enrollment numbers as the primary source of measurement (Li, 2018). However, a shift to performance funding has been a topic over the last decade. Performance funding places a heavy emphasis on distributing funds based on students graduating first and state objectives second, not merely on student enrollment.

Retention not only impacts higher education institutions, but also the economy. According to Hunt et al. (2006), for the nation to remain competitive it is important to have a college-educated workforce. Research conducted by Baum et al. (2013) purported as the level of education increases, the earned income for those who complete a

bachelor's degree increases as well. The benefits of a college-educated population are also noted in a variety of issues: health, unemployment, poverty, incarceration rates, school readiness of children, and civic engagements such as voting (Carnevale & Rose, 2011).

Black Student Persistence

Previous to enrollment into PWIs, Black students relied on Historically Black Colleges and Universities (HBCUs) to receive a higher education. From 1865 to the early 1900s, over one thousand Black students received baccalaureate degrees while attending HBCUs (Humphries, 1995). By 1938, 97% of Black students were attending HBCUs (Pifer, 1973). Decades later after the 1954 U.S. Supreme court decision in *Brown v Board of Education*, Black students could enroll in PWIs (Harvey et al., 2004). The enrollment of Black students in a PWI was a groundbreaking opportunity for Black students, and the number of these individuals enrolled in PWIs increased gradually, reaching over 50% by 1970 (Harvey et al., 2004). While major gains have been made for Black students in higher education, there remains a 24% degree attainment gap between Black and White students (NCES, 2017).

In a study conducted by Nichols and Evans-Bell (2017) comparing graduation rates of Black students who attended HBCUs with Black students who attended PWIs, it was found HBCUs graduate Black students at a higher rate than PWIs, 38% versus 32%. When conducting the study, the researchers inferred that in order to perform a proper comparison, the profile of the institution along with the student plays a significant part. When looking at HBCUs and PWIs, the overall goal is matriculating students to graduation. The Postsecondary National Policy Institute (PNPI) reported in 2020 that

29% of Black students between the ages of 25 to 29 had attained a bachelor's degree or higher. While the percentage appears to be low, it is still a significant increase.

Although the graduation rate is slowly increasing, a disparity continues between the graduation rates among Black students and their counterparts and a need to understand what contributes to Black student persistence. An abundance of research has been conducted on Black student attrition. Synthesizing the collegial experience of Black students attending PWIs can be challenging due to the many barriers faced by this student population. Some studies are centered on the environment, while others have an emphasis on individual student characteristics. We understand what persistence is; it is equally important to understand the factors that contribute to student persistence, especially for Black students. The following section provides an overview of the research that has been conducted and the various environmental components that assist in retaining students.

Factors Affecting Student Retention

Scholarly literature has demonstrated racial and ethnic minority students at PWIs, especially Black students, have not fared well in terms of retention (Fries-Britt & Turner, 2001; Gloria et al., 1999; Grier-Reed et al., 2016; Guiffirda & Douthit, 2010; Oseguera et al., 2019). A challenge in retention is to identify the variables that have a detrimental effect on persistence decisions for students, particularly Black students who attend PWIs. Davidson et al. (2009) reviewed literature on retention within higher education and identified the following six themes: academic integration, social integration, supportive services satisfaction, institutional and degree commitment, and academic conscientiousness. After reviewing the literature, Davidson et al. created the College Persistence Questionnaire (CPQ) consisting of their findings.

Academic and Social Integration

When viewed as one unit, social and academic integration refers to how each student adapts to the university climate, within or outside the classroom (Davidson et al., 2009). Often, environmental factors have been recognized as critical in the retention of Black students (Gardner, 2005; Hall, 2017; Hurtado et al., 1999). Tinto's model on student attrition (1975, 1987, 1993, 1997, 1998) suggests students who aspire to persist to graduation should participate in campus activities both within and outside the immediate learning environment. According to Tinto (1993), "when the cultures of academic and social systems are supportive of each other, then the two systems may work in consonance to reinforce the integration in both the academic and social systems of the institution" (p. 119).

In a study conducted by Guiffrida (2003), Black students found success in using student organizations to socially integrate at PWIs. Students valued the membership in groups that aided in "establishing out-of-class connections with faculty, provided them opportunities to give back to other Black students, and allowed them to feel comfortable by being around others perceived as like them" (Guiffrida, 2003, p. 308). Most of the participants in the study chose to attend a PWI so they could diversify themselves through their social and academic interaction with students of different races and cultures. The study confirmed social integration is not only pertinent for Black students, but also pertinent for their interactions with individuals outside their race.

Baker (2013) conducted a study that explored the type of integration that is most beneficial for the academic success of Black and Latino college students. The study compared whether peer or faculty support was more valuable for African American and

Latino students. The findings of the study supported Tinto's (1993) theory of departure that faculty play a vital role in providing a supportive environment for Black students. Academic and social integration are defined separately; however, they work together in order to maximize student success for Black students. Social integration is equally important for Black students, but faculty support is crucial in Black student retention.

Over the years research has continued to support that academic integration in the form of student-faculty interaction plays a significant role in student success for all students (Astin, 1991; Chickering & Gamson, 1987; Chickering & Reisser, 1993; Cole, 2008; Pascarella & Terenzini, 1991). For minority students, the stakes of significance are higher and can have a negative impact. Guiffrida's (2006) study of African American students at a PWI found these students often viewed White faculty as unapproachable and culturally insensitive in three ways: stereotyped comments from White faculty, insensitivity to African American culture, and generalization of students' opinions as representative of all African Americans. However, African American students who encountered Black faculty shared their experience and interaction were the opposite. They expressed that Black faculty were more likely to be inclusive when creating their curricula and more likely to generalize about Black students by race. Student-faculty interaction is vital in student success; Giuffrida's (2006) study subliminally revealed the critical nature of minority faculty representation in minority students' classroom experience.

Academic integration is not restricted to a classroom. Residential life and learning communities have evolved as another resource that aids in academic integration, which has been successful for Black students. Hotchkiss et al. (2006) found Black students who

participated in living-learning communities had significantly greater feelings of attachment to their school. The research also found living-learning communities provided opportunities for academic integration that were more impactful for minority students than for their counterparts.

Institutional and Degree Commitment

Financial support impacts both degree and institutional commitment often resulting in college student attrition. The cost of a college education has increased dramatically across a significant amount of public U.S. universities over the past decade, generating concerns about affordability and access (Mitchel et al., 2018). Understanding the financial hardship experienced by those who attend four-year colleges is vital in helping students achieve academic success. Studies observing persistence and financial strain have been conducted and confirm a positive correlation between financial strain and institutional commitment. Ishitani and DesJardins (2002) found students who were recipients of financial aid generally had lower dropout rates than non-aided students of similar financial backgrounds.

Financial Strain

Davidson et al. (2009) included financial strain as a contributing variable for degree and institutional commitment on the CPQ because of its impact on the persistence of college students. In a National Survey conducted by Jeff Grabmeler at The Ohio State University, 70% of college students reported feeling stressed about their finances (2015). Students who struggle financially tend to report high levels of worry about living with their current means, difficulty of covering college costs, and feelings of inadequacy regarding other students' financial situations (Davidson et al., 2009). While there has

been minimal research on the impacts of financial stress, economists have demonstrated the significant role money plays in students' choice of college and outcomes.

In a quantitative study conducted by Fosnacht and Dong (2013), information was gathered on how financial stress influenced student engagement within the first year. The study consisted of all first-year students under the age of 23. The study concluded students who evidenced financial stress reported experiencing a more challenging academic curriculum and a less supportive campus environment than their peers, which caused them to question their level of commitment to the institution.

One study conducted by Robb (2017) explored the way in which financial stress impacted a student's subjective well-being. Financial stress, self-efficacy, subjective financial knowledge, academic factors, self-reported health and hardship, financial aspects, and other demographics were the explored variables. Of the seven variables explored, financial stress, financial self-efficacy, feeling restricted financially, and self-reported health and hardship had a significant impact on the subjective well-being of a student. Robb's study also suggested financial stress was related to the hours of enrollment. The study also indicated the financial burdens made degree completion difficult.

Academic Conscientiousness

Davidson et al. (2009) defined conscientiousness as a measure of student motivation in completing required class assignments and coursework, including the degree to which they are involved in, attending, and engaged in class. A student's performance as well as attitude toward their academics plays a vital role in student success at the institution. Studies supporting academic conscientiousness have established

a relationship between the personality trait of conscientiousness and academic achievement (Barrick & Mount, 1991; Conrad & Patry, 2012; Wagerman & Funder, 2007). Conrad and Patry (2012) administered four questionnaires as part of a class pertaining to the Big Five Personality Trait: motivation and self-regulated learning, students' tendencies to engage in academic self-handicapping, approaches to learning, and obtained final grades. The study results indicated higher grades were obtained from students who were considered highly conscientious. The study also identified other variables that impacted academic conscientiousness, such as academic self-efficacy and test anxiety. Students' views of their ability to do the work determined their overall academic conscientiousness and success in the classroom.

Metofe et al. (2014) conducted a study that focused on academic performance among African American students. The study measured five factors of academic conscientiousness (self-esteem, self-efficacy, intrinsic motivation, extrinsic motivation, and conscientiousness). The researchers found conscientiousness was not a significant predictor of academic performance for Black students. When further dissecting the factors within conscientiousness, they discovered factors that were positively related to academic performance in the literature were no longer related.

Support Service Satisfaction

Support service satisfaction is defined as the attitude of students on how well the institution has met their out-of-classroom as well as classroom needs (Davidson et al., 2009). Needs refer to student policy; rules; fairness in policy; communication; student voice; and satisfaction referring to meal plan, living accommodations, and so on. Depending on the institution, a major part of support service satisfaction for Black

students involves how the institution meets their specific needs in a predominately White environment.

Roberts and Styron (2009) conducted a study to investigate student perceptions of services, interactions, and experiences. The variables measured in the instrument included academic advising, social connectedness, involvement and engagement, faculty and staff approachability, business procedures, learning experiences, and student support services. The findings were opposite of the existing literature on support service satisfaction when referring to campus involvement and engagement. Literature has supported one way for students to become acclimated and to persist is through social integration in the aspect of campus involvement (Tinto, 1993). The findings revealed becoming too involved on campus impacted students' academic efforts. Another finding of the study indicated students with lower perceptions of social connectedness and faculty/staff approachability were less likely to persist. Administrators becoming cognizant of student satisfaction has become more important due to student attrition. Having awareness of the support students need can aid in overcoming barriers to reach their academic and career goals.

Theoretical/Conceptual Framework

Theoretical frameworks can serve as blueprints on improving student success and implementing strategies to further student success. Various research studies have used Tinto. While these frameworks are not exclusive for students of color, some of the components, if not most, are prevalent in the reason Black students choose to persist at a PWI.

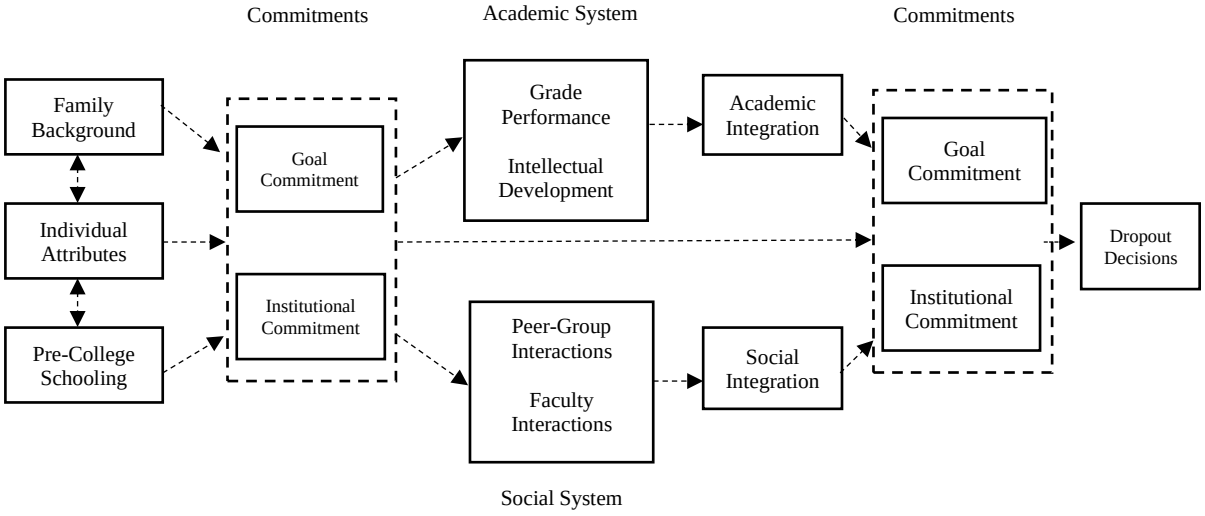
Vincent Tinto

Tinto's (1975) student integration model was developed in 1973 in collaboration with his research assistant Cullen as a theory of student departure (Figure 1). The model suggests the process of dropout can be observed through the interactions between academic, social, individual goal, and institutional commitment. Those four components are not the only critical components in student persistence. Tinto and Cullen suggested precollege experiences and family background also have both a direct and indirect impact on student performance. Collectively, academic, social, individual goal, institutional commitment, precollege experiences, and family background have been suggested as important predictors and reflections of the student's experiences, disappointments, and satisfactions in the institution's environment.

Tinto created the longitudinal model of student departure (1993), which was a continuation from his student integration model (1975). The longitudinal model of student departure takes into consideration external commitments that could impact student attrition. Tinto stated the smallest of events, whether internal or external, can be a deciding factor if a student chooses to persist (2019). Students also can persist with certain components being important factors more than others. For example, a student can persist and not be socially integrated into campus. Tinto also pointed out students can persist to graduation at institutions in which they did not first enroll (2019).

Figure 1

Tinto's Model of Student Integration



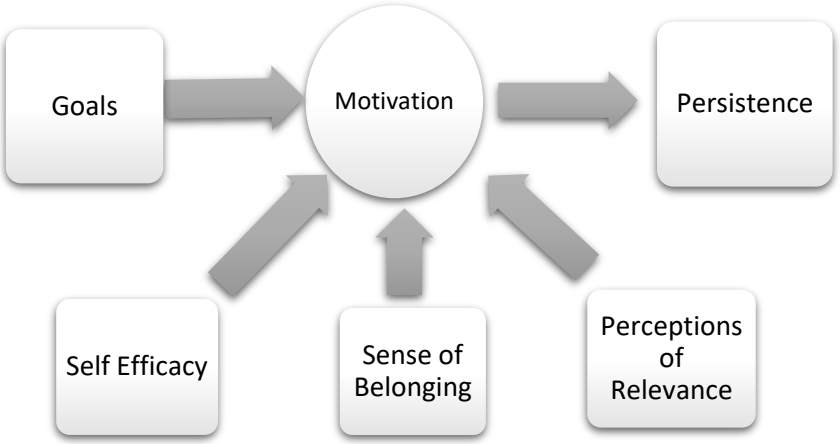
Tinto (2017) recently built upon the work of Allen (1999) and Bean and Eaton (2000) proposing a conceptual model of student motivation and institutional persistence. Tinto shifted the focus of the conceptual model more to student persistence and less to retention. According to Tinto, "students, do not seek to be retained. They seek to persist" (p. 254). Tinto's model argues the impact of student college experiences on motivation can lead to positive interaction among student goals, self-efficacy, sense of belonging, and perception of curriculum (Figure 2).

Tinto’s student integration model (1975) has had many modifications as time has evolved. Researchers have explored ways to better assist students with adding and removing variables of Tinto’s study while also combining Tinto’s study with others. For example, Bean (1982) synthesized Spady’s (1970) social integration process model and Tinto’s (1975) goal commitment model to suggest new variables that affect student

attrition. Tinto's model (1975) continued to evolve as researchers integrated their own theories.

Figure 2

Tinto's 2015 Model of Student Motivation and Persistence



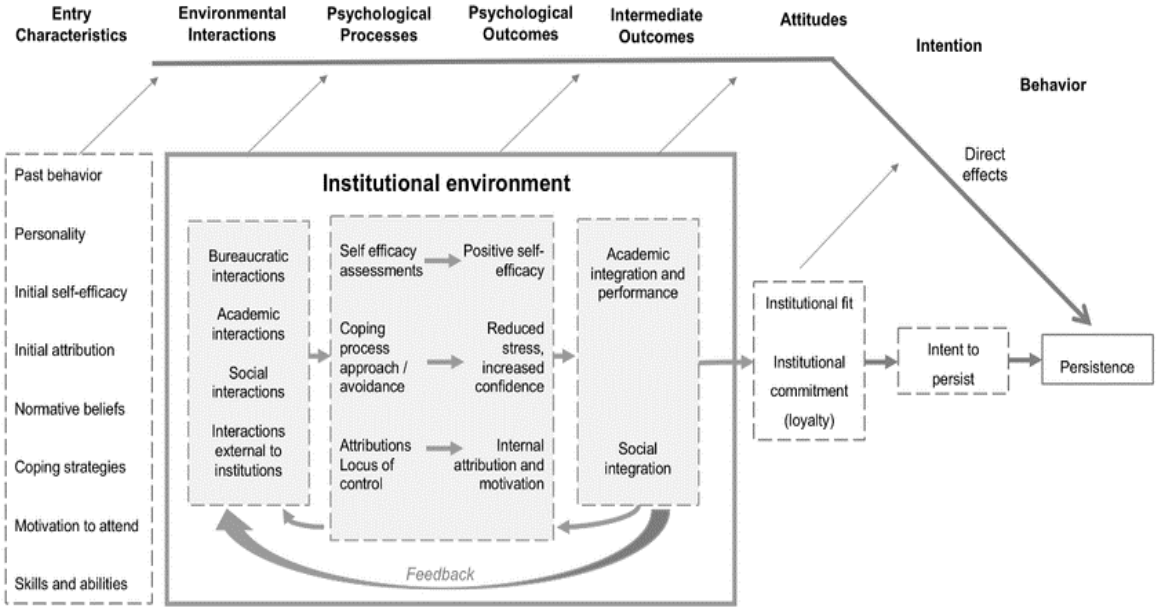
Weber and Xu (2016) conducted a study using Tinto's (1993) model of student departure, with revisions made by Braxton and Hirschy (2005), to examine the applicability of the integration model to students of various racial backgrounds. The revisions by Braxton and colleagues to Tinto's model highlighted social integration as the pivotal factor in retention while still including others. One factor that played a role in student departure no matter the racial background was the ability to pay for college. The study also revealed a difference in the factors that influenced the retention of Black and White students. Overall, the study did not reveal a significant difference in a student's intent to drop out. While Tinto's model (1993) was not solely relevant for the student population being researched, it provided a foundation for continued research. This study indicates the way in which theories and models in higher education will forever evolve to serve students.

John Bean and Shevawn B. Eaton

Bean and Eaton (2000) developed a psychological model of college retention that highlighted the entry characteristics students bring into the university environment. Bean and Eaton suggested the entry characteristics–past behavior, personality, initial self-efficacy, initial attributions, normative beliefs, coping strategies, motivation to attend and skills and abilities–impact environmental interactions and, in turn, impact the psychological processes of the student (Figure 3). Essentially, positive psychological outcomes assist in overall increased student engagement with the intent to persist.

Figure 3

Bean and Eaton's Model of Retention



Note. Adapted from "A psychological model of college student retention. Reworking the student departure puzzle." By J.P. Bean and S.B. Eaton, 2000, *Journal of College Student Retention, 3(1),* 48–61.

A study conducted by Johnson et al. (2014) examined the extent to which the Bean and Eaton (2000, 2001) theory explained the persistence decisions of Black students in comparison to White students. Stress associated to the academic environment had an indirect negative impact on Black student persistence. This form of stress also had a negative direct effect on Black students' commitment to the institution, which indirectly impacted their intent to return after years one and two of college.

The study by Bean and Eaton (2001) also revealed campus experiences such as encounters with racism had a snowball effect on student success. An increase of academic environmental stress diminished students' feelings about the campus environment, affecting institutional commitment and the student's decision to persist. Due to the difference in student demographics, the researchers also explored an added entry characteristic to the study: financial need. The added variable confirmed having a financial need negatively affected Black students' interactions with their counterparts, suggesting real/perceived socioeconomic barriers in their interactions. The study demonstrated how campus environment, e.g., racial climate experiences, can contribute to psychological dimensions of Black student experience in college during their first year, which affects their decision to persist to their second year.

Summary

Student attrition for any higher education institution can be detrimental to its success. Considering the most recent pandemic, students are still pursuing college and finding it difficult to persist with the new virtual learning platform. The decision for students to remain in college is determined by the obstacles they encounter. Obstacles have been linked to financial strain, support services, institutional degree commitment,

academic conscientiousness, and academic and social integration. As the dynamics of Black students continue to evolve, colleges and universities should continue to explore and find ways to aid in Black student persistence.

This chapter presented studies that examined student persistence. Also presented were studies of factors that contributed to student persistence and theories of student persistence. Some pointed to the importance of student persistence and the need to explore factors that promote student retention. Chapter III reviews the methods used to address the research questions. Rationalization for a quantitative correlational research design is provided. A discussion on the research design, sample population, data collection, instrumentation, validity and reliability, feasibility and appropriateness, and data analysis is also included in chapter III.

CHAPTER III: METHODOLOGY

This study was designed to explore factors associated with student persistence of underrepresented minority students who participated in an intervention program. Understanding factors that help minority students decide to remain in college allows universities to be intentional when creating retention-based programs to increase minority student graduation rates.

Research Questions

Creswell (2012) stated quantitative research questions "ask specific, narrow questions to obtain measurable and observable data on variables" (p. 14) and "descriptive, relationship, and comparison questions are popular forms in quantitative research" (p. 124). This quantitative discriminant study's central research question was: What factors predict minority students' persistence in an intervention program?

The following specific research questions guided this study:

1. Can the likelihood of minority student persistence be reliably predicted using Academic Integration, Social Integration, Academic Conscientiousness, Academic Efficacy as well as Cumulative GPA of minority participants in an intervention program?
2. If so, what factors from Academic Integration, Social Integration, Academic Conscientiousness, Academic Efficacy as well as Cumulative GPA are significant when predicting minority student persistence?
3. How do components of the Living Learning Community (Live Only, Learn Only, Live and Learn, and Not Live and Learn) relate to minority student persistence of an intervention program?

Hypotheses

1. H_0: - 2 log L (full model) = -2 log L (null model)

   Ha: - 2 log L (full model) ≠ -2 log L (null model)

2. H_0: β_1 (Academic Integration) = β_2 (Social Integration) = β_3 (Academic Conscientiousness) = β_4 (Academic Efficacy) = β_5 (Cumulative GPA) = 0.

   H_a: β_1 (Academic Integration) ≠ β_2 (Social Integration) ≠ β_3 (Academic Conscientiousness) ≠ β_4 (Academic Efficacy) ≠ β_5 (Cumulative GPA) ≠ 0.

3. H_0: There is no association between the components of the Living and Learning Community and minority student persistence.

   H_a: There is an association between the components of the Living and Learning Community and minority student persistence.

Research Design

A valid quantitative and qualitative study requires a strong research design. A survey design using a quantitative method was used for this study, as it described a problem, collected numeric data, compared groups, and took an objective, unbiased approach (Creswell, 2012). The CPQ-V2 was delivered to the participants in a web-based format, which involves instruments used for collecting data available on the computer (Creswell, 2012). There are many advantages in using internet surveys: "the potential access to larger populations, low cost associated with data collection, the potential for high-speed returns, and the ability to gather extensive data quickly" (Fowler, 2014, p. 73). Disadvantages of internet surveys “include the need for a comprehensive listing of email address, the inability to identify respondents, and the sample selection limitation, i.e., sample is limited to individuals with internet access” (Fowler, 2014, p. 73).

Participants

The participants selected for the study were first-year minority students in a retention intervention program located in the southern part of Kentucky. Participants also had completed one and half semesters of college.

A convenience sample came from 133 students over two academic years from the population of interest. There were 85 responses, 53 from the fall of 2018 cohort and 32 from the 2019 cohort. This represented a 63.9% return rate. The sample selection consisted of underrepresented minority students (Black, Hispanic/Latino, Asian, Native American, and Multiracial) who participated in an intervention program. The participants met the following specifications for the study: (a) first-generation; (b) Pell-eligible; and (c) have some need with their transition, persistence, and graduation from college. The intervention program was located at a four-year public institution in the western region of Kentucky. The researcher contacted each of the program participants via email, and students volunteered to complete the survey.

As Creswell (2012) noted, "In convenience sampling the researcher selects participant because they are willing and available to be studied" (p. 145). Convenience sampling also was the best option for the researcher, as the participants involved in the intervention program were the focus of the study. The disadvantage to convenience sampling is that the sample is not representative of the entire population; however, “the sample can provide useful information for answering questions and hypotheses" (Creswell, 2012, p. 146).

Instrument

A survey design uses questionnaires or structured interviews to collect data from a sample with the purpose of generalizing the results to a population (Fowler, 2014). Survey design assists in providing "a quantitative or numeric description of trend, attitudes, or opinions of a population by studying a sample of that population" (Creswell, 2012, p. 376). The survey instrument is widely known as a tool with which to gather information and allows for perceived behaviors to be measured against one or more variables. An evaluation of previously used and validated surveys was conducted.

When probing for constructs to measure the variables to be studied, the CPQ was chosen for the current study. William B. Davidson, Hall P. Beck, and Meg Milligan created the most recent version being used for this study, the *College Persistence Questionnaire-V-2 (CPQ-V2)*. The CPQ-V2 consists of 36 items from the original CPQ plus an additional 47 test items (see Appendix B). The instrument is an 83-item scale that measures nine of the facets of college student persistence: (1) academic integration, (2) social integration, (3) degree commitment, (4) institutional commitment, (5) academic motivation, (6) financial stress, (7) collegiate stress, (8) scholastic conscientiousness, and (9) academic efficacy (Davidson et al., 2009).

The instrument’s retention subscales were used to determine the extent to which the CPQ predicted whether freshmen would return for their sophomore year. The response format was a five-point Likert scale, with a sixth option of “not applicable.” The Likert scale response ranged from very likely to very unlikely and then converted to "favorability" scores based on the response (5 = very unfavorable, 4 = somewhat unfavorable, 3 = neutral, 2 = somewhat favorable, 1 = very unfavorable), something

positive or negative. Permission was granted to use and modify the CPQ for research purposes.

The researcher used 45 of the 83 test items on the CPQ-V2 scale, along with eight demographic questions (see Appendix B), to assess persistence and the top three reasons for remaining in or leaving college. The specific scales on the CPQ-V2 were labeled Academic Integration, Social Integration, Student Support Services, Degree Commitment, Institutional Commitment, and Academic Conscientiousness.

Eight demographic questions were utilized to ascertain a profile of the participants: (1) age, (2) gender, (3) college classification, (4) parental background, (5) family support, (6) high school attended, (7) financing college, and (8) major. The response formats for the demographic questions were multiple-choice and open-response. Descriptive statistics were calculated to summarize data; correlational analyses were conducted to conclude whether relationships existed among study variables**.**

Response Variable

The response variable was identified as any student who was retained from Fall to Spring semester during first year in college. The measurement level was measured as dichotomous (retained = 1, not retained = 0). This is measured as categorical."

Explanatory Variables

The researcher identified four predictors for inclusion (Academic Integration, Social Integration, Academic Conscientiousness, and Academic Efficacy). These variables were based on Likert scales and identified from the CPQ-V2 questionnaire. These are measured as quantitative.

Procedures

The CPQ-V2 was delivered to the participants in a web-based format. For survey administration, the study utilized Qualtrics, online survey software used for private academic survey distribution and data collection. Qualtrics software is designed to increase feasibility for the participants and to aid researchers in gaining access to the population and collecting the responses. Research participants obtained the survey through email, which contained an introduction to the topic, purpose, and target population. The survey included the informed consent document, eligibility requirements, and study participation information, i.e., voluntary and anonymous. The subjects were given seven days to complete the survey. A notice was sent after one week requesting the participants complete the survey. Response data were downloaded from Qualtrics and imported into the SPSS software application. Once reviewed in SPSS, data cleaning occurred to properly run reports. For each question, the mean was imputed for unanswered questions. Mean substitution substitutes the mean for all answers in place of missing data. This approach is not often used, and it suffers from strong biased estimation of covariance and variance (Switzer et al., 1999).

Data Management and Analysis

Responses were collected through Qualtrics XM and exported into a Microsoft Excel spreadsheet. These data points were entered into the Statistical Package for the Social Sciences (SPSS) program and analyzed using descriptive statistics in order to determine frequency of response, means, and standard deviation for each variable. Binary logistic regression was used to explore the relationship between a host of independent variables on the dichotomous outcome variable of first-year retention (Miles & Shevlin,

2001). In literature, it is common to measure retention or persistence rates in higher education on a dichotomous scale and evaluate the associated impacts of a variety of independent variables (Cabrera, 1994). Pearson correlations were conducted to determine whether relationships existed among study variables. Independent samples *t*-tests were used to determine whether a significant difference existed among persistence factors between categories of students who returned and non-returners. A significance level of 0.05 was determined as appropriate for all tests.

Ethical Considerations

Risk was not anticipated in the current study. The online tool, in particular the voluntary, anonymous, and confidential nature of the study, was used to diminish any potential harm associated with participation, which was not required. At any time, respondents were given the option to stop and abandon the survey. The current study complied with Western Kentucky University's Institutional Review Board requirements. Data and analyses of results were stored in a secured filing system.

Limitations

For the purpose of this study, the following limitations are identified:

1. This study utilized a web-survey as well as a paper survey. Web-based surveys limit participation to individuals with a valid address and computer access.
2. The interpretation of the survey items may differ for each respondent. The study was limited to a small sample of minority students in an intervention program. Because of the small sample size to a specific program, the results of these findings cannot be generalized to all minority students.

Summary

This study utilized a quantitative correlational design to investigate the factors associated with retention and the intent to persist at the institution. This methodology approach was selected to identify whether a relationship existed among the study variables. The study was guided by three research questions, as outlined previously. The population included first-year minority students who participated in an intervention program. Convenience sampling was used for the selection of minority student participants.

Chapter IV describes the results of the current study and the data analysis of the results. Detailed procedural information for collecting and analyzing data are included. Related information in the form of tables and narratives are provided. Chapter V includes a summary of the study, implications, conclusions, and recommendations. Appendices consist of communication, instruments, and necessary information used for the study.

CHAPTER IV: RESULTS

The purpose of this study was to examine factors that predict first- to second-year persistence of underrepresented minorities in an intervention program. The literature reviewed suggested academic integration, social integration, degree commitment, institutional commitment, support services satisfaction, financial strain, and academic conscientiousness are linked to student persistence. The CPQ-V2 and demographic questionnaire were administered to 133 underrepresented students in an intervention program. The participants in the intervention program were students of color (Black, Hispanic/Latino, Asian, Native American, Multiracial) and/or who were first-generation; Pell eligible; and had some need with their transition, persistence, and intent to graduate. The survey instrument can be found in Appendix B.

In this chapter, the results of the study are presented. First, descriptive statistics are shared, after which the results for each Research Question are provided.

Descriptive Statistics

Survey demographic data were used to provide a profile of study participant characteristics. Descriptive data were ascertained of participants' persistence factors and living involvement within the intervention program. Demographic data included the following:

- Age
- Gender
- Race/ethnicity
- Classification of college level

Sample Demographic Results

A sample (N = 86; males = 27, females = 59) of undergraduate students responded to the survey. Of the total participants, most were Black and female. Table 2 reports demographic data of the study by gender, GPA, and variables of interest. Table 3 represents the demographic variable by retention classification, gender, and ethnicity. Of the 86 participating students, 59 were female and 27 were male. A total of 83 identified as African American, and three identified as Hispanic. Of the 64 students who were retained, 44 were African American and female, 17 were African American and male, and three were Hispanic and female.

Table 2

Gender, GPA, and Factor Demographics for Entire Sample (*N* = 86)

	M	*SD*	Minimum	Maximum
Gender	1.69	.47	1	2
Cumulative GPA	2.33	.93	.10	4.00
Academic Integration	39.35	3.49	32	50
Financial Strain	20.05	2.30	15	25
Institutional Commitment	25.67	2.52	20	30
Degree Commitment	22.96	1.79	17	25
Academic Motivation	11.86	1.28	9	15
Social Integration	25.31	2.60	19	30
Collegial Stress	7.71	1.03	6	10
Academic Conscientiousness	12.21	1.72	8	15
Academic Efficacy	12.06	1.46	7	15

Table 3

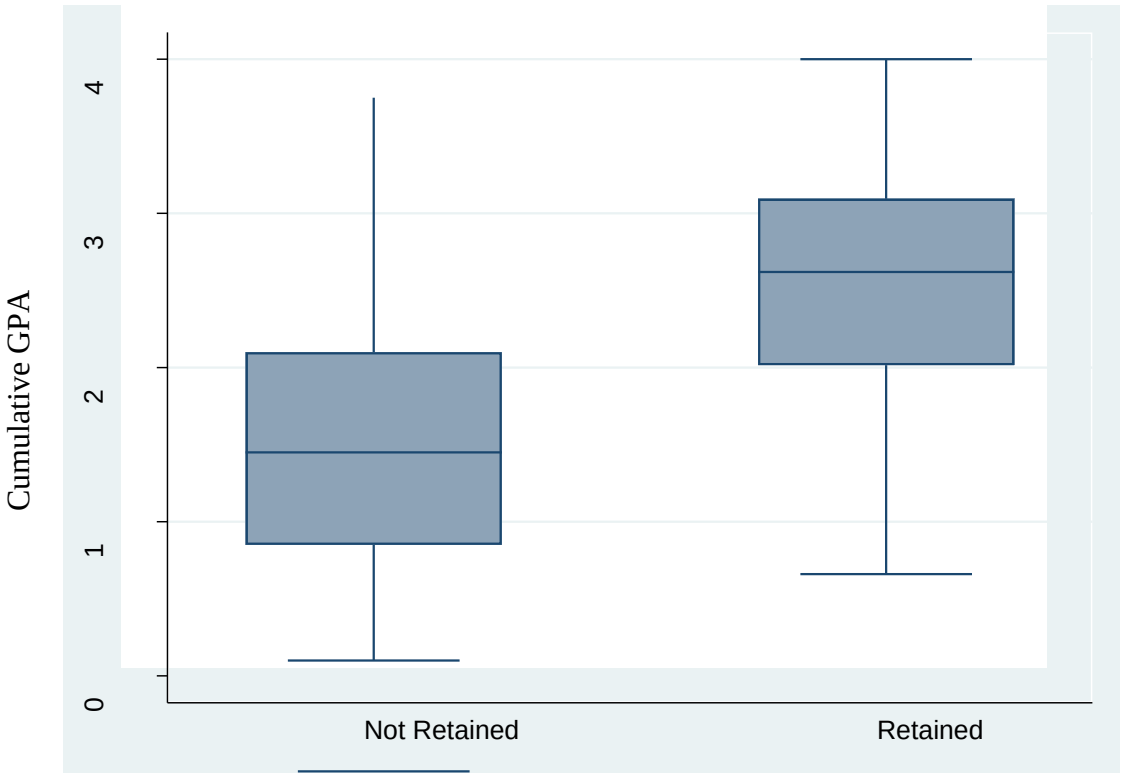
Retention by Race and Ethnicity

		Ethnicity				
Gender	Retention Classification	African American	Hispanic	Asian American	Native American	TOTAL
Female	Retained	44	3	0	0	47
	Not Retained	12	0	0	0	12
Male	Retained	17	0	0	0	17
	Not Retained	10	0	0	0	10
	TOTAL	83	3	0	0	86

Boxplots by GPA for students who were retained and not retained are provided (see Figure 4). From viewing Figure 4, a contrast can be seen in GPA for those not retained in comparison to students who were retained.

Figure 4

GPA by Retention Difference



Pairwise correlations were conducted to determine whether relationships among study variables existed. A significant relationship existed between institutional commitment and academic integration, academic motivation and academic integration, and academic efficacy and integration. Of the factors that were compared, academic efficacy was most significantly correlated with all the variables except collegial stress (see Table 4).

Table 4

Pairwise Correlations of CPQ Factors

CPQ Factors	1	2	3	4	5	6	7	8	9	10
1. Academic Integration	1.0000									
2. Financial Strain	0.131	1.000								
3. Institutional Commitment	0.463***	0.199	1.000							
4. Degree Commitment	0.261*	0.061	0.401***	1.000						
5. Academic Motivation	0.589****	0.143	0.186	0.094	1.000					
6. Social Integration	0.228**	0.274**	0.353*	0.218*	0.116	1.000				
7. Collegial Stress	0.009	0.324**	0.021	-0.114	0.196	0.020	1.000			
8. Academic Conscientiousness	0.370***	0.126	0.285**	0.237*	0.266**	0.180	0.151	1.000		
9. Academic Efficacy	0.499****	0.312**	0.402***	0.376**	0.311**	0.302**	0.071	0.369***	1.000	
10. Cumulative GPA	0.141	-0.093	0.124	0.342***	0.095	-0.134	-0.083	0.207	0.308**	1.000

*$p < .05$. **$p < .01$. ***$p < .001$. ****$p < .0001$.

Independent-samples *t*-tests were used to determine whether a significant difference existed among persistence factors between categories of students who were retained and not retained (see Table 5). Table 5 reports the means and standard deviations of the likelihood of students being retained or not retained from freshman to sophomore year by college persistence factors.

Table 5

Mean and Standard Deviation of Student Retainment by CPQ Factors

CPQ Factors	Not Retained *M* (*SD*) (*n* = 21)	Retained *M* (*SD*) (*n* = 64)	*t* (84)	*p*	Cohen's *d*
1. Academic Integration	38.52 (2.29)	39.63 (3.80)	-1.640	0.053[a]	-.321
2. Financial Strain	20.14 (2.25)	20.02 (2.35)	0.214	0.416	.053
3. Institutional Commitment	25.59 (2.36)	25.70 (2.59)	-0.158	0.438	-.039
4. Degree Commitment	22.42 (1.86)	23.14 (1.74)	-1.654	0.051*	-.409
5. Academic Motivation	11.67 (1.12)	11.93 (1.33)	-0.822	0.204	-.206
6. Social Integration	24.99 (2.73)	25.42 (2.57)	-0.680	0.249	-.168
7. Collegial Stress	7.62 (1.11)	7.74 (1.01)	-0.437	0.332	-.108
8. Academic Conscientious	11.77 (1.59)	12.27 (1.76)	-1.740	0.083	-.245
9. Academic Efficacy	11.51 (1.73)	12.25 (1.32)	-1.815	0.040*	-.510
10.Cumulative GPA	1.51 (1.01)	2.59 (.73)	-4.53	.0001***	-1.337

Note: *p < .05. **p < .01. ***p < .001. [a]marginally significant.

Academic integration appeared to be marginally significant ($M_{\text{not retained}}$ = 38.52, M_{retained} = 39.63, *p*-value = 0.0531). Degree commitment appeared to be significant ($M_{\text{not retained}}$ = 22.42, M_{retained} = 23.14, *p*-value = 0.0509, *d* = -.4088). Academic Efficacy was significant ($M_{\text{not retained}}$ = 11.51, M_{retained} = 12.25, *p*-value = 0.0398, *d* = -.5101). Cumulative GPA was found to be significant ($M_{\text{not retained}}$ = 1.51, M_{retained} = 2.59, *p*-value = .0001, *d* = 1.3372).

Findings for Research Question 1

RQ1: Can the likelihood of minority student persistence be reliably predicted using Academic Integration, Social Integration, Academic Conscientiousness, Academic Efficacy as well as Cumulative GPA of minority participants in an intervention program?

Forward and backward logistic regression was conducted to determine which independent variables (Academic Integration, Financial Strain, Institutional Commitment, Degree Commitment, Academic Motivation, Social Integration, Collegial Status, Academic Conscientiousness, Academic Efficacy, and Cumulative GPA) were predictors of the response variable. The response variable was retained from Fall to Spring semester during the first year in college. The response variable was measured as dichotomous (retained = 1, not retained = 0). Regression results from the forward and backward elimination yielded GPA as significant. As a result, the researcher used the literature as well as personal knowledge to identify four predictors for inclusion (Academic Integration, Social Integration, Academic Conscientiousness, and Academic Efficacy).

The regression model results indicate the overall model of five predictors (Cumulative GPA, Academic Integration, Social Integration, Academic Conscientiousness, and Academic Efficacy) was statistically significant (-2 Log

Likelihood = -36.421; χ^2 (5) = 24.96, $p < .0001$) from the null model. Regression coefficients are presented in Table 6. The model correctly classified 82.56% of the cases (see Appendix D).

The log likelihood ratio test statistic was the difference in the -2log likelihood (-2LL) between the current model that contains all five predictors and the intercept, as well as the null model that contains only the intercept. The null hypothesis of the log likelihood ratio chi-square test was the overall model with all predictor variables, which was not significantly more appropriate than the model with only the intercept.

The alternative hypothesis was that the overall model was significantly more appropriate than the model with only the intercept ($LR\,\chi^2_{(5)}$ = -36.42, $p < .001$), which indicated the null hypothesis was rejected. Therefore, the overall model with all five predictors was retained.

The general logistic regression model was:

$\ln (\pi(x) / (1 - \pi(x)) = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \ldots + \beta_nX_n$, where $X_1, X_2, \ldots, X_n$ are predictor variables and $\beta_1, \beta_2, \ldots, \beta_1$ are the logit coefficients.

For the present study, the model became:

$\ln (\pi(x) / (1 - \pi(x)) = -7.527 + 1.544$ (Cumulative GPA) - .018 (Academic Integration) + .146 (Social Integration) + .056 (Academic Conscientiousness) + .144 (Academic Efficacy) + ε

The corresponding table of the Odds Ratios along with standard errors and confidence intervals are presented in Appendix C.

Table 6

Results of Comparing the Null and Full Models

	Intercept Only Model		Full Model	
Variables	*b* (SE(*b*))	OR	*b* (SE(*b*))	OR
Cumulative GPA			1.544	4.685
			(.408)	(1.912)
Academic Integration			-.017	.982
			(.107)	(.105)
Social Integration			.146	1.158
			(.128)	(.149)
Academic Conscientiousness			.056	1.058
			(.203)	(.214)
Academic Efficacy			.143	1.154
			(.249)	(.288)
Constant	1.067	2.909	-7.527	.001
	(.247)	(.718)	(4.019)	(.002)
Observations	86	86	86	86
LR R^2			0.256	
Log likelihood	-48.902		-36.420	
df_m			5	
LR χ^2			24.96	

Findings for Research Question 2

RQ2: If so, what factors from Academic Integration, Social Integration, Academic Conscientiousness, Academic Efficacy as well as Cumulative GPA are significant when predicting minority student persistence?

The multiple logistic regression analysis was conducted to estimate the probability of students persisting to the next year from five predictor variables. The dependent variable was returning or not returning; and the independent variables were cumulative GPA, academic integration, social integration, academic conscientiousness, and academic efficacy. None of the predictors were categorical variables, so dummy coding was not used. An intercept-only model with no predictor variables was fitted first. The full model with all five predictors was fitted next. The log likelihood ratio chi-square test statistics for the full model, $LR\ \chi^2_{(5)} = -36.420$, $p < .0001$, indicated the overall model with all five predictors was significant. Table 7 presents the logit coefficients, standard errors, and odds ratios for the full model.

For the cumulative GPA predictor, the odds ratio = 4.685 was significant ($p < .0001$) and larger than 1, indicating for each one-unit increase in GPA, the odds of returning increased by 4.685 while controlling for all other predictors. This meant the percentage change in odds (4.685 – 1) x 100% = 36.8%. This indicated each one-unit increase in GPA corresponded to an increase of 36.8% in the odds of returning.

For academic integration as a predictor, the odds ratio = .982 was not significant. This was less than 1, indicating for each unit increase in academic integration, the odds of returning decreased by .982 while controlling for all other predictors. This meant the

percentage change in odds (.982 – 1) x 100% = -1.8%. This indicated for each one-unit increase in academic integration, a decrease of 1.8% was seen in the odds of returning.

Table 7

Regression Coefficients

	B	*std. err*	*Wald*	*df*	*p*	*Odds Ratio*
Cumulative GPA	1.544	.408	3.78	1	0.000	4.685
Academic Integration	-.018	.107	-0.17	1	0.868	.982
Social Integration	.146	.128	1.14	1	0.252	1.158
Academic Conscientiousness	.056	.203	0.28	1	0.782	1.058
Academic Efficacy	.144	.249	0.58	1	0.564	1.154
Constant	-7.527	4.020	-1.87	1	0.061	.001

For social integration as a predictor, the odds ratio = 1.158 was not significant and larger than 1, indicating for each unit increase in social integration, the odds of returning increased by 1.158 while controlling for all other predictors. This meant the percentage change in odds (1.158 – 1) x 100% = 15.8%, indicating each one-unit increase in social integration corresponded to an increase of 15.8% in the odds of returning.

For academic conscientiousness as a predictor, the odds ratio = 1.058 was not significant and larger than 1, indicating for each unit increase in social integration, the odds of returning increased by 1.058 while controlling for all other predictors. This meant

the percentage change in odds (1.058 – 1) x 100% = 5.8%, indicating each one-unit increase in social integration corresponded to an increase of 5.8% in the odds of returning.

For academic efficacy as a predictor, the odds ratio = 1.154 was not significant and larger than 1, indicating for each unit increase in social integration, the odds of returning increased by 1.154 while controlling for all other predictors. This meant the percentage change in odds (1.154 – 1) x 100% = 15.4%, indicating each one-unit increase in social integration corresponded to an increase of 15.4% in the odds of returning.

Findings for Research Question 3

RQ3: How do components of the Living Learning Community (Live Only, Learn Only, Live and Learn, and Not Live and Learn) relate to minority student persistence of an intervention program?

The data suggested more of the students who were in the Live Only community (n = 36) were retained when compared to students in the other components. In the Live and Learn community (n = 28), females had the greatest ratio of being retained (n = 21) (see Table 8). Females also were the highest retained in the Live Only community (n = 16) (see Figure 5). Males who participated in the Live Only community (n = 9) had a higher retention rate than males who participated in other components of the community. Forty-seven (80%) of the 59 females were retained across all components. Of the 27 males, only 17 (63%) were retained.

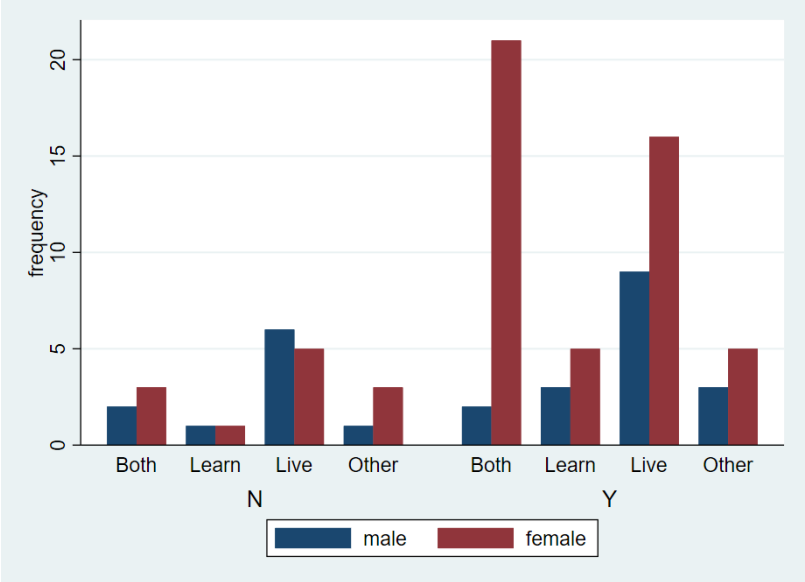
Table 8

Retention by Gender and Living and Learning Components

		Components of Living and Learning Community				
Retention Classification	Gender	Learn Only	Live Only	Not Live and Learn	Live and Learn	TOTAL
Not Retained	Male	1	6	1	2	10
	Female	1	5	3	3	12
Retained	Male	3	9	3	2	17
	Female	5	16	5	21	47
	TOTAL	10	36	12	28	86

Figure 5

Program Experience by Gender and by Retention (N = No, Y = Yes)



A chi-square test of independence was performed to examine the relationship between components of the Living and Learning Community and student persistence. The relationship between components of the Living and Learning Community and student persistence was not significant, χ^2 (3, 86) = 1.89, p = 0.596. When looking at each Live and Learn component (see Table 9), data revealed the retained "learn only" actual observed was 8, exceeding the expected amount of 7.4. The "live and learn" actual observed was 23, exceeding the expected amount of 20.8. When observing the "not retained" student demographics, data shared the "live only" and "not live and learn" had numbers higher than predicted to be not retained. "Live only" actual observed was 11, exceeding the expected amount of 9.2. "Not live and learn" actual observed was 4, exceeding the expected amount of 3.1. The "not retained learn only" and "learn and live only" components actual observed were lower than expected.

Table 9

Retention by Living and Learning Components

	Components of Living and Learning Community				
Persistence	Learn Only	Live Only	Learn and Live	Not in Live and Learn	TOTAL
Not Retained	2	11	5	4	22
(expected)	(2.6)	(9.2)	(7.2)	(3.1)	
Retained	8	25	23	8	64
(expected)	(7.4)	(26.8)	(20.8)	(8.9)	
TOTAL	10	36	28	12	86

Pearson $\chi^2(3) = 1.8878$. p-value = 0.596. Cramér's V = 0.1482.

Note. A significance level of 0.05 was determined as appropriate for all tests.

Summary

This chapter presented the findings relative to three research questions: (1) Can the likelihood of minority student persistence be reliably predicted using Academic Integration, Social Integration, Academic Conscientiousness, Academic Efficacy as well as Cumulative GPA of minority participants in an intervention program?; (2) If so, what factors from Academic Integration, Social Integration, Academic Conscientiousness, Academic Efficacy as well as Cumulative GPA are significant when predicting minority student persistence?; and (3) How do components of the Living Learning Community (Live Only, Learn Only, Live and Learn, and Not Live and Learn) relate to minority

student persistence of an intervention program? Furthermore, persistence factors relative to minority students, minority student retention, and findings of components of the intervention Living and Learning Community were presented. Regarding Research Question One, the overall model with the five chosen persistence factors of Cumulative GPA, Academic Integration, Social Integration, Academic Conscientiousness, and Academic Efficacy was found significant when looking at the likelihood of reliably predicting minority student persistence. The findings for Research Question Two revealed Cumulative GPA was significant, although the following factors were not significant: Academic Integration, Social Integration, Academic Conscientiousness, and Academic Efficacy when predicting minority student persistence. Relative to Research Question Three regarding the Living and Learning Community components of the intervention program, the component of Live Only was shown to be possibly related to minority student persistence. These findings are discussed in Chapter V, to include implications and suggestions for future research.

CHAPTER V: DISCUSSION

This study examined persistence factors associated with minority students participating in an intervention program and the components of the Living and Learning Community that impact student retention. Three research questions guided this study: (1) Can the likelihood of minority student persistence be reliably predicted using Academic Integration, Social Integration, Academic Conscientiousness, Academic Efficacy as well as Cumulative GPA of minority participants in an intervention program?; (2) If so, what factors from Academic Integration, Social Integration, Academic Conscientiousness, Academic Efficacy as well as Cumulative GPA are significant when predicting minority student persistence?; and (3) How do components of the Living and Learning Community (Learn Only, Live Only, Not Live and Learn, and Live and Learn) relate to minority student persistence related to the intervention program?

The data provided information on persistence factors deemed important to retaining minority students in an intervention program. This chapter discusses findings relative to the research questions. Implications and suggestions for future research also are included.

Overview of the Study

The purpose of this study was to investigate the relationship of factors that predict the persistence of minority students participating in a minority intervention program. The study also investigated the extent and relationship of how living-learning communities assist in student persistence. The sample consisted of 86 students from two cohorts in aggregate of minority students who participated in an intervention program that promoted their retention and graduation. The study utilized convenience sampling and a

quantitative methodology with a correlational design to capture the essence of this research. The CPQ-V2 and a demographic questionnaire were used to measure the association of persistence factors on predicting student retention.

Review of Findings

All 86 participants were first-year students of which 59 were female and 27 were male. All completed the College Student Persistence Questionnaire, which used persistence factors to predict the likelihood of students returning their second year. The participants identified their Living and Learning Communities: Live Only (36), Learn Only (10), Live and Learn (28), and Not Live and Learn (12).

Upon examination of minority student persistence, findings suggest the combination of five factors in a logistic regression model was significantly different from a null model. These five factors were Cumulative GPA, Academic Integration, Social Integration, Academic Conscientiousness, and Academic Efficacy. The odds ratio relating to each of these factors was used in predicting minority student persistence. Among the factors, a significant result was Cumulative GPA. The log odds suggest for each unit increase in Cumulative GPA, the odds of retention in this sample were four times more than for those not retained. The higher a participant's Cumulative GPA, the more likely they were to persist to the next year. Similarly, a study by Stewart et al., (2015) supported that cumulative GPA was the strongest predictor variable for student persistence which is a common predictor of persistence.

First-semester college cumulative GPA had a statistically significant inverse effect on persistence even when being interchanged with high school GPA (HS GPA), supporting the finding that cumulative GPA can be a reliable predictor of student

persistence. Cumulative GPA was also significantly correlated when paired with other persistence variables that were examined such as Degree Commitment and Academic Efficacy. Noting the higher the participant's Cumulative GPA, the more likely the participant was to persist to degree attainment. Cumulative GPA also was significantly correlated to Academic Efficacy, simply meaning the participants' beliefs that they can excel academically were reflected in their Cumulative GPA.

Cumulative GPA and Financial Strain were inversely correlated. When an increase was seen in Cumulative GPA, a decrease occurred in financial strain. Thus, participants who had high Cumulative GPAs were not as stressed financially. When a decrease was noted in Cumulative GPA, an increase occurred in financial strain. Participants who had low Cumulative GPAs were stressed about their finances. This finding supported Robb's (2017) study concluding that students' financial stress impacts their enrollment from semester to semester having a significant impact on degree completion. Braxton and Hirschy's (2005) model, which was a revision of Tinto's Model of Student Motivation and Persistence (2015), also supported the finding from this study that a student's ability to pay for college has a critical impact on student departure.

Academic Integration and Academic Efficacy was 1.5 times likely to predict a participant's persistence to the following year. The log odds suggest for each unit increase in Academic Integration and Academic Efficacy, the odds of retention in this sample were 1.5 times more than for those not retained. The log odds also suggest for each unit there is an increase in Academic Conscientiousness; the odds of retention in this sample were one time more than for those not retained. Academic Efficacy was included as a variable examined under Academic Conscientiousness in a study conducted by

Metofe et al., (2014). This study supports that Academic Conscientiousness along with Academic Efficacy was not a significant predictor of academic performance, supporting the results that it would not be a reliable variable for predicting persistence. Academic Integration had less than one unit in log odds, not presenting as a stable factor in predicting student persistence. Despite what other literature has shared (Astin, 1991; Chickering & Gamson, 1987; Chickering & Reisser, 1993; Cole, 2008; Pascarella & Terenzini, 1991) academic integration was not proven to be a reliable predictor of student persistence in this study.

The final research question investigated how components of the Living and Learning Community (Live Only, Learn Only, Live and Learn, and Not Live and Learn) related to minority student persistence. The findings from the analysis suggest no significant association between the components and retention. However, when examined, the components suggest some differences. The Learn Only component reflected eight out of 10 participants were retained, five being female and three being male. The Live Only component reflected 25 out of 36 participants were retained, nine being female and 16 being male. The Live and Learn component reflected 23 out of 28 participants were retained, 21 being female and two being male. The Not Live and Learn component reflected eight out of 12 participants were retained, five being female and three being male.

Live and learn communities can assist students with the transition to college. Brower and Inkelas (2010) found that students who participate in LLCs have great academic self-confidence, commitment to civic engagement, and easier academic and social transitions to college. A study conducted by Cintron et al. (2020) revealed that

higher GPAs, as well as retention rates, were achieved by Black males participating in an LLC than Black males who did not participate. More research is needed on gender-based Live and Learn Communities, specifically male-focused.

While there was no significant relationship between Live and Learn Communities (i.e., Live only, Learn only, or Live and Learn) and persistence. It is important to note that participants had an option to not participate in the Live and Learn Community. Participants who were in the Learn component (i.e., Learn only or Live and Learn) of the intervention program were placed based on ACT benchmark scores. Overall, the participants who were classified under the Live Only component had the highest retention rate of 42%. Participants who were classified under Live and Learn had the second-highest retention rate of 33%. The component with the lowest retention rate was the Learn Only component.

While the components of the Live and Learn Community in this study were not proven significant when looking at persistence, Live and Learn Communities can still play a meaningful role in student persistence. Wilson et al. (2015) conducted a study on students participating in a Live and Learn Community and found that there was no significance in retaining students within the institution; however the percentage of those who participated in the Live and Learn Community was higher than those who did not, which supports the results of this current study that students who participate in the Live and Learn Only component are retained at a higher percentage rate those who are not even if the overall study shows no significance.

Live and Learn Communities is a topic that is still being developed and explored. There have been mentions and studies of Live and Learn communities by researchers like

Pascarella and Terenzini (1991), Pike et al., (1997), Inkelas and Wiseman (2003), Stassen (2003), and Wawrzynski and Jessup-Anger (2010). More research in this area is needed to learn about the variety of LLCs that are offered. Similarly pertaining to the focus of this study, a study by Pike et al. (1997) focused on the relationship of LLC participation and persistence. Supporting the researcher's results that LLCs had no direct impact on student persistence, however, no direct statistical impact does not allude to LLCs being insignificant overall. In an article examining positive outcomes of LLCs, it was stated that LLCs with diverse students were more successful in improving student persistence (Andrade, 2007). The types of LLCs that have been deemed more successful are those that target academically at-risk students (Baker & Pomerantz, 2000; Johnson, 2001) and LLC's that focus on students who are high achieving according to test scores and college readiness (Borden & Rooney, 1998; Johnson, 2001; Logan et al., 2000). The studies also supported that LLCs with gains in persistence had some type of peer mentoring, group tutoring, and/or faculty mentoring to assist students (Baker & Pomerantz, 2000; Borden & Rooney, 1998; Johnson, 2001; Logan et al., 2000).

Implications

This study provides support for previous research related to student persistence. Conclusions cannot be based on one study; nevertheless, elements of this research provide insight into minority student persistence of participants in an intervention program. Although the sample size is small, the data reveal some significant findings on persistence factors associated with minority student retention. These findings can serve as a resource for university administrators, Student Affairs professionals, and higher education retention specialists regarding retaining, persisting, and graduating minority

students.

University administrators can work collaboratively with Student Affairs professionals to ensure extended intervention programs are available for Black and Brown students, who tend to have lower retention rates per NCES data (2017). When reviewing the literature, the researcher found an abundance of information on intervention programs that have been established as short 5-week programs or summer bridge programs. These programs are effective in acclimating incoming students who are transitioning to college; however, some students require more than a month of transitioning to be successful in college. Extended time intervention programs can assist students in not only persisting through the first year but also persisting each year until graduation. While the first year can be critical for minority students with simply navigating college, the second and third years are equally important in helping students persist to degree attainment. Extended time intervention programs can provide students with a long-standing meaningful connection with university staff, a constant stable support system, a cohort group to lean on and build experiences with, a consistent place to go to as a campus resource, and for minority students on a PWI a place where they feel they belong. While the average intervention program provides the tools for students to be successful an extended time intervention program assists students in applying those tools to potentially build the confidence to go out and share with others.

ACT benchmarks can be used to categorize students who are considered underprepared before stepping foot into a classroom. Most colleges and universities use ACT benchmarks to assign students to student support programs for their first year. While high school GPA and ACT may seem sufficient to predict those who need

assistance, more information should be considered when determining the type of assistance needed. College and universities could consider a student's ability to acclimate through socialization, their financial need, and family support. The variables listed above can have just as much impact on a student persisting than their ability to score high on the ACT or having a high GPA. While the College Student Persistence Questionnaire was used in this study as an instrument to predict persistence, an instrument exclusive to minority students featuring factors related to minority student success in PWIs would be better suited to predict minority student persistence. While the goal is degree attainment, students face different cultural barriers that prevent persistence, which should be explored.

Discussion

Many theories exist on student persistence and retention. As students evolve, researchers have altered pre-existing theories to assist students. Previous theories created by Tinto (1975), Pascarella and Terenzini (1980), and Bean and Eaton (2000) have been successful in setting up a framework to establish schemes to perceive student persistence. For practitioners who are theory-based, having a theory or outline navigating students through the process of dealing with situations could play a pertinent role in assisting students in situations they encounter that could prevent persistence.

Theories have reiterated that certain variables, if properly implemented, can assist with student persistence and as students evolve, other attributes to student success are becoming equally important. How students deal with situations they encounter while also discovering what being a college student entails and navigating a new environment are two of those attributes. Adopting the "personal competence" component from Emotional

Intelligence 2.0 written by Travis Bradberry and Jean Greaves (2009) could assist students in working through difficult situations that could lead to attrition. The components in personal competence are self-awareness and self-management. Self-awareness, defined by Bradberry and Greaves, is not being afraid of your emotional "mistakes". As one's self-awareness increases the book states their ability to attain their goal at work and home increases. Students enter college unaware of a lot of things, trying to discover who they are and how they "fit" or "belong" the lack of self-awareness sometimes instills fear, lack of confidence, and often uncertainty if college is for them. Self-management, as defined in the book, happens when one acts or does not act. It is a student's ability to tolerate uncertainty as they explore their emotions and options. Self-management is also dependent on the individual's self-awareness. Having students be able to navigate self-awareness and self-management alongside the pre-existing variables that attribute to student persistence can provide students with a solid foundation on how to acclimate and navigate their freshman year. Institutions can create modules that are required to be completed virtually before students arrive on campus that focus on self-awareness and management. These modules can incorporate current students' experiences and how they dealt with self-awareness and management. The modules can serve as first-year acclimation tools.

This study also provides ideas for how institutions can assist with student persistence. A policy could be established with Cumulative GPA as a focal point to encourage student persistence. The policy could state once a student has successfully made it through their first year, deemed by Cumulative GPA criteria, and has confirmed they will be returning their second year, the price of their tuition will be examined. An

institution could provide tuition discount incentives on a sliding scale based on Cumulative GPA. This practice not only encourages persistence but also sets a precedent that institutions care if they return the following year and care about their students.

Historically, the success of students of color (persist/graduate) at Predominately White Institutions (PWIs) are lower than their counterparts. This research would suggest that PWIs offer LLCs as an option for all students and offer subsets (Black, Hispanic/Latino/a, male and female) to meet the needs of the most vulnerable populations to promote student success/persistence. Doing this allows for students to foster a sense of belonging amongst students who have similar backgrounds and may look like them. Another takeaway from the study was the lack of Black male representation within the intervention program, which was evident when reviewing the results of the LLC. PWI institutions could benefit from focusing more on the Black male student experience that could aid in their persistence considering Black males have the lowest completion rate at 40% (Center, 2020). This strategy could be paired with the above proposed policy to incentivize Black male student persistence.

Limitations

There are three major limitations in this study that could be addressed in future research. First, the length of the study was long as far as the instrument used and could have impacted response bias/fatigue. Second, included fewer components of the CPQ which per developer would not have impacted the reliability of CPQ. Third, conducted the study only as a quantitative study instead of mixed-method which would have allowed the researcher to gain follow-up on the results of the data. And last, the lack of previous research studies on minority student persistence in an intervention program.

Recommendations and Future Research

The current study selected a specific group of minority students and persistence factors to explore the likelihood of predicting persistence and the intent to remain in college. Based on results, opportunities exist for research that would provide Student Affairs professionals further knowledge relating to persistence factors and their impact to minority student retention. The following research is suggested:

1. An evaluation of an intervention program that has existed longer with a larger sample composition is suggested. This would allow for more substantial findings and would increase generalizations.
2. Develop or utilize an existing instrument that is shorter in length. This will assist in controlling for response bias.
3. Future research also should include different persistence variables of interest identified in previous research. These could include a sense of belonging, familial support, and high school educational background. The different variables may be deemed as important for persistence and intent to remain in college for minority students and may offer Student Affairs professionals additional information necessary for retaining minority students.
4. A different research design is recommended. A qualitative element in this study would assist in gaining a better understanding of the data. By utilizing a qualitative approach, open-ended responses could provide distinctions concerning factors that influence the prediction of minority student persistence and the intent to remain in college for the selected population.
5. A replication of the current study, open to all minority students to be used as

comparison data, is recommended. Such assessments may reveal a broad range of nuances that impact overall minority students and their intent to persist in college that the current study failed to capture.

Conclusions

An understanding of persistence factors and their relationship to minority student retention is important to educational leaders in Student Affairs and university administrators. This study identifies Cumulative GPA as a significant predictor of minority study persistence in an intervention program. The study also identifies two factors of the CPQ with a significant correlation to Cumulative GPA, which are Academic Efficacy (participants' ability to believe they can excel academically) and Degree Commitment (how committed the participants were to attain the degree), when studying factors that predict minority student persistence in the intervention program. Tinto's (1975; 1993; & 2015) theories support that academic efficacy aids in degree commitment whether is providing motivation to persist Tinto's (2015) Model of Student Motivation and Persistence or the opposite and being the reason students depart Tinto's (1975; 1993) Student Integration Model.

Intervention programs such as the one examined in this study can instill in their students the necessary qualities to be successful scholars. These qualities can be instilled through workshops, providing tools and resources, matching students with mentors, consistent advising, and various other opportunities. All the resources listed above can empower students to feel comfortable and confident in the classroom aiding in Academic Efficacy. Once students feel comfortable in their ability to excel in the classroom it naturally shows through their cumulative GPA. While outside situations that are out of a

student's control often factor into their persistence, their GPA often influences their commitment to attaining a degree. The results from this study provide a starting point for predicting the persistence of minority students in an intervention program. However, there is still more to be examined to grasp a concrete understanding of the characteristics that should be considered when predicting the persistence of minority students. Nevertheless, the three factors that were brought to the forefront all influence each other to aid in minority student persistence.

REFERENCES

Adams, T., & McBrayer, J. (2020). The lived experiences of first-generation college students of color integrating into the institutional culture of a predominantly white institution. *The Qualitative Report*, 25(3), 733–757. https://doi.org/10.46743/2160-3715/2020.4224

Allen, D. (1999). Desire to finish college: An empirical link between motivation and persistence. *Research in Higher Education*, 40(4), 461–485. https://doi.org/10.1023/A:1018740226006

Andrade, M. S. (2007). Learning communities: Examining positive outcomes. *Journal of College Student Retention: Research, Theory & Practice*, 9(1), 1–20. https://doi.org/10.2190/E132-5X73-681Q-K188

Astin, A. W. (1991). The changing American college student: Implications for educational policy and practice. *Higher Education*, 22(2), 129–143. https://doi.org/10.1007/BF00137472

Baker, C. N. (2013). Social support and success in higher education: The influence of on-campus support on African American and Latino college students. *The Urban Review*, 45(5), 632–650. https://doi.org/10.1007/s11256-013-0234-9

Baker, S., & Pomerantz, N. (2000). Impact of learning communities on retention at a metropolitan university. *Journal of College Student Retention*, 2(2), 115–126. https://doi.org/10.2190/62P5-CQ2U-NTUW-DM1C

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44(1), 1–26. https://doi.org/10.1111/j.1744-6570.1991.tb00688.x

Baum, S., Ma, J., & Payea, K. (2013). *Education pays: The benefits of higher education for individual and society.* The College Board.

Bean, J. P., & Eaton, S. B. (2000). A psychological model of college student retention. Reworking the student departure puzzle. *Journal of College Student Retention*, 3(1), 48–61.

Bean, J., & Eaton, S. B. (2001). The psychology underlying successful retention practices. *Journal of College Student Retention: Research, Theory & Practice*, 3(1), 73–89. https://doi.org/10.2190/6R55-4B30-28XG-L8U0

Bean, J. P. (1982). Student attrition, intentions, and confidence: Interaction effects in a path model. *Research in Higher Education*, 17(4), 291–320. https://doi.org/10.1007/BF00977899

Berger, J. B., & Lyon, S. C. (2005). Past to present: A historical look at retention. In A. Seidman (Ed.), *College student retention: Formula for student success* (pp. 1–30). Praeger.

Blackwell, E., & Pinder, P. (2014). What are the motivational factors of first-generation minority college students who overcome their family histories to pursue higher education? *College Student Journal*, 48(1), 45–56.

Booker, K. (2016). Connection and commitment: How sense of belonging and classroom community influence degree persistence for African American undergraduate

women. *International Journal of Teaching and Learning in Higher Education*, 28(2), 218–229.

Borden, V. M. H., & Rooney, P. M. (1998). Evaluating and assessing learning communities. Metropolitan Universities, 9(1), 73–88.

Bradberry, T., & Greaves, J. (2009). *Emotional Intelligence 2.0*. TalentSmart.

Bragg, A. D. (1976). *The socialization process in higher education: ERIC/higher education research report.* American Association for Higher Education. https://files.eric.ed.gov/fulltext/ED132909.pdf

Braxton, J. M., & Hirschy, A. S. (2005). Theoretical developments in the study of college student departure. In A. Seidman (Ed.), *College student retention: Formula for student success* (pp. 61–87). Praeger Publishers.

Brock, T. (2010). Young adults and higher education: Barriers and breakthrough to success. *The Future of Children*, 20(1), 109–132. https://doi.org/10.1353/foc.0.0040

Brower, A. M., & Inkelas, K. K. (2010). Living-learning programs: One high-impact educational practice we now know a lot about. *Liberal Education*, 96(2), 36–43. Retrieved from https://www.aacu.org/liberaleducation

Brown, Mark. (2020). *College students dropping out without cosigners*. https://lendedu.com/blog/college-students-dropping-out-without-cosigners

Cabrera, A. F., Nora, A., & Castaneda, M. B. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *Journal of*

Higher Education, 64(2), 123–139. https://doi.org/10.2307/2960026

Cabrera, A. F. (1994). Logistic regression analysis in higher education: An applied perspective. In John C. Smart (Ed.), *Higher education: Handbook of theory and research* (pp. 225–256). Agathon Press.

Carnevale, A., & Rose, S. (2011). *The undereducated American*. Georgetown University's Center on Education and the Workforce. https://1gyhoq479ufd3yna29x7ubjn-wpengine.netdna-ssl.com/wp-content/uploads/2014/11/undereducatedamerican.pdf

Center, N. R. (2020, September 1). *Completing College - National by Race and Ethnicity - 2017*. National Student Clearinghouse Research Center. https://nscresearchcenter.org/signaturereport12-supplement-2/

Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin*, *3*, 1–6. https://files.eric.ed.gov/fulltext/ED282491.pdf

Chickering, A. W., & Reisser, L. (1993). Education and identity (2nd ed.). *The Jossey-Bass Higher and Adult Education Series*. Jossey-Bass Inc.

Cintron, D. W., Hines, E. M., Singleton II, P., & Golden, M. N. (2020). Improving the retention and gpas of Black males at a primarily White institution: A living and learning community approach. *Journal of African American Males in Education (JAAME)*, *11*(1), 37–57.

Conrad, N., & Patry, M. W. (2012). Conscientiousness and academic performance: A mediational analysis. *International Journal for the Scholarship of Teaching and Learning*, 6(1), Article 8. n1. https://doi.org/10.20429/ijsotl.2012.060108

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson Education Inc.

Davidson, W. B., Beck, H., & Milligan, M. (2009). The college persistence questionnaire: Development and validation of an instrument that predicts student attrition. *Journal of College Student Development*, 50(4), 373–390. http://doi:10.1353/csd.0.0079 engle

Duranczyk, I. M., Higbee, J. L., & Lundell, D. B. (2004). *Best practices for access and retention in higher education*. Center for Research on Developmental Education and Urban Literacy, University of Minnesota. https://files.eric.ed.gov/fulltext/ED491508.pdf

Engle, J. (2007). Postsecondary access and success for first-generation college students. *American Academic*, 3(1), 25–48.

Flores, B., & Della Piana, C. K. (2000). Undergraduate student retention strategies for urban engineering colleges [Paper presentation]. 30th ASEE/IEEE Frontiers in Education Conference, Kansas City, MO, United States. https://doi.org/10.1109/FIE.2000.897695

Fosnacht, K., & Dong, Y. (2013, November 15). Financial stress and its impact on first-year students' college experiences [Paper presentation]. Annual Meeting of the

Association for the Study of Higher Education, St. Louis, MO, United States. https://scholarworks.iu.edu/dspace/handle/2022/23905

Fowler, F. (2014). *Survey research methods.* Sage Publications.

Fries-Britt, S. L., & Turner, B. (2001). Facing stereotypes: A case study of Black students on a white campus. *Journal of College Student Development*, 42(5), 420–429.

Gardner, J. (2005). Barriers influencing the success of racial and ethnic minority students in nursing programs. *Journal of Transcultural Nursing*, 16(2), 155–162. https://doi.org/10.1177/1043659604273546

Glenn, F. S. (2001). The retention of Black male students in Texas public community colleges. *Journal of College Student Retention: Research, Theory & Practice*, 5(2), 115–133. https://doi.org/10.2190/GYEU-WWER-N8W7-XTBK

Gloria, A. M., Robinson, K. S. E., Hamilton, K. D., & Wilson, M. S. (1999). African American students' persistence at a predominately white university: Influences of social support, university comfort, and self-beliefs. *Journal of College Student Development*, 40(3), 257–268.

González, K. P. (2002). Campus culture and the experiences of Chicano students in a predominantly White university. *Urban Education*, 37(2), 193–218. https://doi.org/10.1177/0042085902372003

Grabmeler, J. (2015). *70 percent of college students stressed about finances*. The Ohio State University. Retrieved May 4, 2021, from Len https://news.osu.edu/70-percent-of-college-students-stressed-about-finances/

Green, D. O. (2007). Using qualitative methods to assess academic success and retention programs for underrepresented minority students. *New Directions for Institutional Research*, *2007*(136), 41–53. https://doi.org/10.1002/ir.230

Grier-Reed, T., Arcine, F., & Inman, E. (2016). The African American student network: An intervention for retention. *Journal of College Student Retention: Research, Theory & Practice*, 18(2), 183–193. https://doi.org/10.1177/1521025115584747

G. R., Schroeder, C. C., & Berry, T. R. (1997). Enhancing the educational impact of residence halls: The relationship between residential learning communities and first-year college experiences and persistence. Journal of College Student Development, 38(6), 609–621. Retrieved from https://psycnet.apa.org/record/1997-43668-006

Guiffrida, D. A. (2003). African American student organizations as agents of social integration. *Journal of College Student Development.*, 44(3), 304–319. https://doi.org/10.1353/csd.2003.0024

Guiffrida, D. (2005). Othermothering as a framework for understanding African American students' definitions of student-centered faculty. *The Journal of Higher Education*, 76(6), 701–723.

Guiffrida, D. A. (2006). Toward a cultural advancement of Tinto's theory. *Review of Higher Education: Journal of the Association for the Study of Higher Education*, 29(4), 451–472. https://doi.org/10.1353/rhe.2006.0031

Guiffrida, D. A., & Douthit, K. Z. (2010). The Black student experience at predominately white colleges: Implications for school and college counselors. *Journal of Counseling & Development*, 88(3), 311–318. https://doi.org/10.1002/j.1556-

6678.2010.tb00027.x

Hall, R. R. (2017). Factors contributing to the persistence of African American and Hispanic undergraduate males enrolled at a regional predominantly white institution. *Administrative Issues Journal*, 7(1), 51–65. https://doi.org/10.5929/2017.7.1.4

Harvey, W. B., Harvey, A. M., & King, M. (2004). The impact of the *Brown v. Board of Education* decision on post-secondary participation of African Americans. *The Journal of Negro Education*, 73(3), 328–340. https://doi.org/10.2307/4129615

Hotchkiss, J. L., Moore, R. E., & Pitts, M. M. (2006). Freshman learning communities, college performance, and retention. *Education Economics*, 14(2), 197–210. https://doi.org/10.1080/09645290600622947

Hu, S., & St. John, E. P. (2001). Student persistence in a public higher education system: Understanding racial and ethnic differences. *The Journal of Higher Education*, 72(3), 265–285. https://doi.org/10.2307/2649332

Hunt, J. B., Jr., Carruthers, G., Callan, P. M., & Ewell, P. T. (2006). *Measuring up, 2006. The National Report Card on Higher Education*. National Center for Public Policy and Higher Education. Retrieved May 4, 2021, from https://files.eric.ed.gov/fulltext/ED493360.pdf

Humphries, F. S. (1995). A short history of Blacks in higher education. *Journal of Blacks in Higher Education* 6(winter 94-95), 57. https://doi.org/10.2307/2962465

Hurtado, S., Milem, J., Clayton-Pederson, A., & Allen, W. (1999). *Enacting diverse learning environments: Improving the climate for racial/ethnic diversity in higher*

education (Report No. ED430514). ASHE-ERIC Higher Education. https://files.eric.ed.gov/fulltext/ED430514.pdf

Hurtado, S., & Carter, D. F. (1997). Effects of college transition and perceptions of the campus racial climate on Latino college students' sense of belonging. *Sociology of Education*, (70)4. 324–345. https://doi.org/10.2307/2673270

Inkelas, K. K., & Weisman, J. (2003). Different by design: An examination of outcomes associated with three types of living-learning programs. Journal of College Student Development, 44(3), 335–368. https://doi.org/10.1353/csd.2003.0027

Ishitani, T. T., & DesJardins, S. L. (2002). A longitudinal investigation of dropout from college in the United States. *Journal of College Student Retention: Research, Theory & Practice*, 4(2), 173–201. https://doi.org/10.2190/V4EN-NW42-742Q-2NTL

Jessup-Anger, J., Johnson, B. N., & Wawrzynski, M. R. (2012). Exploring living learning communities as a venue for men's identity construction. Journal of College and University Student Housing, 39(1), 162–175. Retrieved from https://epublications.marquette.edu/cgi/viewcontent.cgi?article=1235&context=edu_fac

Johnson, J. L. (2001). Learning communities and special efforts in the retention of university students: What works, what doesn't, and is the return worth the investment? *Journal of College Student Retention*, 2(3), 219–238. https://doi.org/10.2190/V0PA-BL4B-1X2L-W5VT

Johnson, D. R., Wasserman, T. H., Yildirim, N., & Yonai, B. A. (2014). Examining the effects of stress and campus climate on the persistence of students of color and

White students: An application of Bean and Eaton's psychological model of retention. *Research in Higher Education*, 55(1), 75–100. https://doi.org/10.1007/s11162-013-9304-9

Knapp, L. G., Kelly-Reid, J. E., & Ginder, S. A. (2010). *Enrollment in postsecondary institutions, fall 2008; graduation rates, 2002 & 2005 cohorts; and financial statistics, fiscal year 2008. First look*. NCES 2010-152. National Center for Education Statistics. https://nces.ed.gov/pubs2010/2010152rev.pdf

Kentucky Council on Postsecondary Education. (2016). *Diversity, equity and inclusion.* http://cpe.ky.gov/policies/academicaffairs/diversitypolicy.pdf

Lee, C. (1991). *Achieving diversity: Issues in the recruitment and retention of underrepresented racial/ethnic students in higher education: A review of the literature*. National Association of College Admission Counselors.

Li, A. Y. (2019). Lessons learned: A case study of performance funding in higher education. *Academix*. Retrieved July 6, 2021, from https://thirdway.imgix.net/pdfs/override/FINAL-LessonsLearned.pdf

Logan, C. R., Salisbury-Glennon, J., & Spence, L. D. (2000). The learning edge academic program: Toward a community of learners. *Journal of the First-Year Experience*, 12(1), 77–104.

McClain, K. S, & Perry, A. (2017). Where did they go: Retention rates for students of color at predominantly white institutions. *College Student Affairs Leadership*, 4(1), 2332–4430.

Metofe, P. A., Gardiner, C., Walker, A., & Wedlow, W. (2014). The influence of psychological factors on academic performance in African-American students: Another case for conscientiousness. *Psychology Journal*, 11(2), 60–67.

Miles, J., & Shevlin, M. (2001). *Applying regression and correlation: A guide for students and researchers*. Sage.

Mitchel, M., Leachman, M., Masterson, K., & Waxman, S. (2018). *Unkempt promises: State cuts to higher education threaten access and equity*. Center on Budget and Policy Priorities. https://www.cbpp.org/sites/default/files/atoms/files/10-4-18sfp.pdf

Morley, K. M. (2003). Fitting in by race/ethnicity: The social and academic integration of diverse students at a large predominantly white university. *Journal of College Student Retention: Research, Theory & Practice*, 5(2), 147–174. https://doi.org/10.2190/K1KF-RTLW-1DPW-T4CC

Museus, S. D., Yi, V., & Saelua, N. (2017). The impact of culturally engaging campus environments on sense of belonging. *The Review of Higher Education*, *40*(2), 187–215. https://doi.org/10.1353/rhe.2017.0001

Myers, S. (2004). The relationship between perceived instructor credibility and college student in-class and out-of-class communication. *Communication Reports*, 17(2), 129–137. https://doi.org/10.1080/08934210409389382

National Center for Education Statistics. (2017). *Trend generator*. https://nces.ed.gov/ipeds/TrendGenerator/app/answer/7/19

Nelson-Laird, T. F., Bridges, B. K., Morelon-Quainoo, C. L., Williams, J. M., & Holmes,

M. S. (2007). African American and Hispanic student engagement at minority serving and predominantly White institutions. *Journal of College Student Development*, 48(1), 39–56. https://doi.org/10.1353/csd.2007.0005

Nichols, A. H., & Evans-Bell, D. (2017). *A look at Black student success: Identifying top- and bottom-performing institutions.* Retrieved August 11, 2021, from https://edtrust.org/wp-content/uploads/2014/09/A-Look-at-Black-Student-Success.pdf

Nora, A., Barlow, E., & Crisp, G. (2005). *Student persistence and degree attainment beyond the first year in college*. *College student retention: Formula for success* (A. Seidman, ed), 129–153. (book).

Oseguera, L., Park, H. J., De Los Rios, M. J., Aparicio, E. M., & Johnson, R. (2019). Examining the role of scientific identity in black student retention in a stem scholar program. *The Journal of Negro Education*, 88(3), 229–248. https://doi.org/10.7709/jnegroeducation.88.3.0229

Opp, R. D. (2002). Enhancing program completion rates among two-year college students of color. *Community College Journal of Research & Practice*, *26*(2), 147–163. https://doi.org/10.1080/106689202753385483

Pan, W., Guo, S., Alikonis, C., & Bai, H. (2008). Do intervention programs assist students to succeed in college? A multilevel longitudinal study. *College Student Journal*, 42(1), 90–99.

Pascarella, E. T., & Terenzini, P. T. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *Journal of Higher Education*, 51(1), 60–75. https://doi.org/10.2307/1981125

PennState College of Agricultural Sciences.(2021). *Definitions*. https://agsci.psu.edu/diversity/awareness/definitions

Perrakis, A. I. (2008). Factors promoting academic success among African American and white male community college students. *New Directions for Community Colleges*, *2008*(142), 15–23. https://doi.org/10.1002/cc.321

Person, D. R., & Christensen, C. M. (1996). Understanding Black student culture and Black student retention. *NASPA Journal,* 34(1), 47–56. https://doi.org/10.2202/1949-6605.1008

Pifer, A. (1973). *The higher education of Blacks in the United States*. Carnegie Corporation of New York.

Postsecondary National Policy Institute. (2020). *African American students in higher education* [Fact sheet]. https://pnpi.org/african-american-students/#

Rankin, S. R., & Reason, R. D. (2005). Differing perceptions: How students of color and white students perceive campus climate for underrepresented groups. *Journal of College Student Development*, 46(1), 43–61. https://doi.org/10.1353/csd.2005.0008

Reason, R. D. (2009). An examination of persistence. *Journal of College Student Development*, 50(6), 659–682. https://doi.org/10.1353/csd.0.0098

Reid, M. J., & Moore, J. L. (2008). College Readiness and Academic Preparation for Postsecondary Education: Oral Histories of First-Generation Urban College Students. *Urban Education, 43(2*), 240–261. https://doi.org/10.1007/BF00137472

Robb, C. A. (2017). College student financial stress: Are the kids alright? *Journal of Family and Economic Issues*, 38(4), 514–527. https://doi.org/10.1007/s10834-017-9527-6

Roberts, J., & Styron, R. (2010). Student satisfaction and persistence: Factors vital to student retention. *Research in Higher Education*, 6(1), 1–18.

Schwitzer, J. E., Griffin, O. T., Ancia, J. R., & Thomas, C. R. (1999). Social adjustment experiences of Black college students. *Journal of Counseling & Development*, 77(2), 189–197. https://doi.org/10.1002/j.1556-6676.1999.tb02439.x

Severiens, S., & Wolff, R. (2008). A comparison of ethnic minority and majority students: Social and academic integration, and quality of learning. *Studies in Higher Education*, 33(3), 253–266. https://doi.org/10.1080/03075070802049194

Shahid, N. N., Nelson, T., & Cardemil, E. V. (2018). Lift every voice: Exploring the stressors and coping mechanisms of Black college women attending predominantly White institutions. *Journal of Black Psychology*, 44(1), 3–24. https://doi.org/10.1177/0095798417732415

Sneyers, E., & De Witte, K. (2018). Interventions in higher education and their effect on student success: A meta-analysis. *Educational Review*, 70(2), 208–228. https://doi.org/10.1080/00131911.2017.1300874

Sousa, T. (2015, September 9). *Student retention is more important than ever*. *Higher Ed Live*. Retrieved May 4, 2021, from https://higheredlive.com/3-reasons-student-retention-is-more-important-than

ever/#targetText=Student%20Retention%20and%20Reduced%20Costs,yields%20a%20higher%20financial%20benefit.

Spady, W. G. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, 1(1), 64–85. https://doi.org/10.1007/BF02214313

Stassen, M. L. A. (2003). Student outcomes: The impact of varying living-learning community models. Research in Higher Education, 44(5), 581–613. https://link.springer.com/content/pdf/10.1023/A:1025495309569.pdf

Stewart, S., Lim, D. H., & Kim, J. (2015). Factors influencing college persistence for first-time students. *Journal of Developmental Education*, 38(3), 12–20. https://www.jstor.org/stable/pdf/24614019.pdf

Swail, S. W., Redd, E. K., & Perna, W. L. (Eds.). (2003). *Retaining minority students in higher education* (ASHE-ERIC Higher Education Report ED No. 483024). Wiley Publishers.

Switzer, F. S., III, Roth, P. L., & Switzer, D. M. (1998). Systematic data loss in HRM settings: A Monte Carlo analysis. *Journal of Management, 24*, 763–779. https://doi.org/10.1016/S0149-2063(99)80083-X

Tichavakunda, A. A. (2017). Perceptions of financial aid: Black students at a predominantly white institution. *The Educational Forum*, 81(1), 3–17. https://doi.org/10.1080/00131725.2016.1242679

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89–125. https://doi.org/10.3102/00346543045001089

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. University of Chicago Press.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). University of Chicago Press. https://doi.org/10.7208/chicago/9780226922461.001.0001

Tinto, V. (1997). Colleges as communities: Exploring the educational character of student persistence. *Journal of Higher Education*, 68(6), 599–623. https://doi.org/10.2307/2959965

Tinto, V. (1998). Colleges as communities: Taking the research on student persistence seriously. *Review of Higher Education*, 21(2), 167–178.

Title VI, Civil Rights Act of 1964, Pub. L. No. 88-352, 78 Stat. 241 (1964). https://www.dol.gov/agencies/oasam/regulatory/statutes/title-vi-civil-rights-act-of-1964##targetText=

Wagerman, S. A., & Funder, D. C. (2007). Acquaintance reports of personality and academic achievement: A case for conscientiousness. *Journal of Research in Personality*, 41(1), 221–229. https://doi.org/10.1016/j.jrp.2006.03.001

Walton, G., & Cohen, G. (2007). A question of belonging: Race, social fit, and achievement. *Journal of Personality and Social Psychology*, 91(1), 82–96. https://doi.org/10.1037/0022-3514.92.1.82

Wellman, M. (2017, March 7). *Report: The race game in higher education is very real*. USA Today. https://www.usatoday.com/story/college/2017/03/07/report-the-race-gap-in-higher-education-is-very-real/37428635/

Wilson, N., Bjerke, E., & Martin, L. (2015). Aviation living learning community: Impacts on student success. *Collegiate Aviation Review*, 33(1), 29 –43 https://doi.org/10.22488/okstate.18.100462

Xu, Y. J., & Webber, K. L. (2018). College student retention on a racially diverse campus: A theoretically guided reality check. *Journal of College Student Retention: Research, Theory & Practice*, 20(1), 2–28. https://doi.org/10.1177/1521025116643325

APPENDIX A

IRB APPROVAL LETTER

IMPLIED CONSENT

Project Title: An Examination of Factors and Attributes that Impact Student Persistence of participants in the Intercultural Student Engagement Center Academy
Investigator: Cres'Sena, Western Kentucky University Educational Leadership Doctoral Student.
cressena.manning@wku.edu

You are being asked to participate in a project conducted through Western Kentucky University The University requires that you give your agreement to participate in this project.
You must be 18 years old or older to participate in this research study.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have. You should keep a copy of this form for your records.

1. **Nature and Purpose of the Project:** The purpose of this research is to view perceptions of your integration, persistence, commitment, consciousness, and satisfaction of Americsn higher education institutions.

2. **Explanation of Procedures:** This online or paper questionnaire will take about 20-25 minutes to complete.

3. **Discomfort and Risks:** There are no anticipated risks, discomforts, and/or inconveniences associated with this study.

4. **Benefits:** While you may not benefit directly from participation in this study, it is hoped that this study will add to the scholarly research regarding the experiences of minority college students in American higher education institutions. This study will also help key staff and faculty at institutions of higher education better understand the views of the minority student population and possibly find ways to improve services on college campuses.

5. **Confidentiality:** You will also be asked to provide basic demographic information, but not your name. Anonymity is assured and all data will be reported in the aggregate.

6. **Refusal/Withdrawal:**
Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Your continued cooperation with the following research implies your consent.

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Robin Pyles, Human Protections Administrator
TELEPHONE: (270) 745-3360

APPENDIX B

Background Information- SURVEY

Write your name 801 #? _____

2. **Age**
   19 or younger
   20-23
   24-29
   30-39
   40-55
   Over 55

3. **Gender**
   Male
   Female
   Other/I prefer not to respond

4. **Your current classroom level is**:
   Freshmen (undergrad)
   Sophomore (undergrad)
   Junior (undergrad)
   Senior (undergrad)

5. **Did either of your parents graduate from college?**
   No
   Yes, both parents
   Yes, father only
   Yes, mother only
   Don't know

6. **Who supports you while you are in college?**
   Mother
   Father
   Both mother and father
   No one, I support myself
   Other_____

7. **What high school did you attend? (Include city and state)**
   _____

8. **How are you paying for college? (Circle all that apply)**
   Personal loan
   Scholarship
   Government sponsored/free tuition
   Self-financed (from own salary or other)
   Parents and/or relatives
   Other_____

9. **What is your major?**
   _____

College Persistence Questionnaire

Instructions: Students differ a great deal from one another in how they feel about their college experiences. This questionnaire asks you about your reactions to many aspects of your life here at this college. Please consider each of the questions carefully, and circle the answer that best represents your thoughts. There are no "right or wrong" answers, so mark your real impressions. There are 45 questions, and it is very important that you answer all of them. This should take you about 20- 25 minutes. Your answers will be treated as confidential information.

1. **On average across all your courses, how interested are you in the things that are being said during class discussions?**
    A. Very interested
    B. Somewhat interested
    C. Neutral
    D. Somewhat disinterested
    E. Very disinterested
    F. Not applicable

2. **What is your overall impression of the other students here?**
    A. Very favorable
    B. Somewhat favorable
    C. Neutral
    D. Somewhat unfavorable
    E. Very unfavorable
    F. Not applicable

3. **How supportive is your family of your pursuit of a college degree, in terms of their encouragement and expectations?**
    A. Very supportive
    B. Somewhat supportive
    C. Neutral
    D. Somewhat unsupportive
    E. Very unsupportive
    F. Not applicable

4. **Students differ quite a lot in how distressed they get over various aspect of college life. Overall, how much stress would you say that you experience while attending this institution?**
    A. Very much stress
    B. Much stress
    C. Some stress
    D. A little stress
    E. Very little stress / not applicable

5. **In general, how enthused are you about doing academic tasks?**
    A. Very enthusiastic
    B. Somewhat enthusiastic
    C. Neutral
    D. Somewhat unenthusiastic
    E. Very unenthusiastic
    F. Not applicable

6. **College students have many academic responsibilities. How often do you forget those that you regard as important?**
    A. Very often
    B. Somewhat often
    C. Sometimes
    D. Rarely
    E. Very rarely
    F. Not applicable

7. **How confident are you that this is the right college or university for you?**
    A. Very confident
    B. Somewhat confident
    C. Neutral
    D. Somewhat unconfident
    E. Very unconfident
    F. Not applicable

8. **How confident are you that you can get the grades you want?**
    A. Very confident
    B. Somewhat confident
    C. Neutral
    D. Somewhat unconfident
    E. Very unconfident
    F. Not applicable

9. **Some courses seem to take a lot more time than others. How much extra time are you willing to devote to your studies in those courses?**
    A. Very much extra time
    B. Much extra time
    C. Some extra time
    D. A little extra time
    E. Very little extra time
    F. Not applicable

10. **In general, how satisfied are you with the quality of instruction you are receiving here?**
    A. Very satisfied
    B. Somewhat satisfied

C. Neutral
D. Somewhat dissatisfied
E. Very dissatisfied
F. Not applicable

11. How much have your interactions with other students had an impact on your personal growth, attitudes, and values?

A. Very much
B. Much
C. Some
D. Little
E. Very little
F. Not applicable

12. How difficult is it for you or your family to be able to handle college costs?

A. Very difficult
B. Somewhat difficult
C. Neutral
D. Somewhat easy
E. Very easy
F. Not applicable

13. At this moment in time, how strong would you say your commitment is to earning a college degree, here or elsewhere?

A. Very strong
B. Somewhat strong
C. Neutral
D. Somewhat weak
E. Very weak
F. Not applicable

14. How well do you understand the thinking of your instructors when they lecture or ask students to answer questions in class?

A. Very well
B. Well
C. Neutral
D. Not well
E. Not at all well
F. Not applicable

15. How often do you turn in assignments past the due date?

A. Very often
B. Somewhat often
C. Sometimes
D. Rarely
E. Very rarely

F. Not applicable

16. How much thought have you given to stopping your education here (perhaps transferring to another college, going to work, or leaving for other reasons)?

A. A lot of thought
B. Some thought
C. Neutral
D. Little thought
E. Very little thought
F. Not applicable

17. How strong is your sense of connectedness with others (faculty, students, staff) on this campus?

A. Very strong
B. Somewhat strong
C. Neutral
D. Somewhat weak
E. Very weak
F. Not applicable

18. When you think of the people who mean the most to you (friends and family), how disappointed do you think they would be if you quit school?

A. Very disappointed
B. Somewhat disappointed
C. Neutral
D. Not very disappointed
E. Not at all disappointed
F. Not applicable

19. When considering the financial costs of being in college, how often do you feel unable to do things that other students here can afford to do?

A. Very often
B. Somewhat often
C. Sometimes
D. Rarely
E. Very rarely
F. Not applicable

20. When you think about your overall social life here (friends, college organizations, extracurricular activities, and so on), how satisfied are you with yours?

A. Very satisfied
B. Somewhat satisfied
C. Neutral
D. Somewhat dissatisfied
E. Very dissatisfied

F. Not applicable

21. There are so many things that can interfere with students making progress toward a degree; feelings of uncertainty about finishing are likely to occur along the way. At this moment in time, how certain are you that you will earn a college degree?

A. Very certain
B. Somewhat certain
C. Neutral
D. Somewhat uncertain
E. Very uncertain
F. Not applicable

22. How often do you miss class for reasons other than illness or participation in school related activities?

A. Very often
B. Somewhat often
C. Sometimes
D. Rarely
E. Very rarely
F. Not applicable

23. How much have your interactions with other students had an impact on your intellectual growth and interest in ideas?

A. Very much
B. Much
C. Some
D. Little
E. Very little
F. Not applicable

24. When you consider the techniques you use to study, how effective do you think your study skills are?

A. Very effective
B. Somewhat effective
C. Neutral
D. Somewhat ineffective
E. Very ineffective
F. Not applicable

25. After beginning college, students sometimes discover that a college degree is not quite as important to them as it once was. How strong is your intention to persist in your pursuit of the degree, here or elsewhere?

A. Very strong
B. Somewhat strong
C. Neutral

D. Somewhat weak
E. Very weak
F. Not applicable

26. How concerned about your intellectual growth are the faculty here?

A. Very concerned
B. Somewhat concerned
C. Neutral
D. Somewhat unconcerned
E. Very unconcerned
F. Not applicable

27. How much do you think you have in common with other students here?

A. Very much
B. Much
C. Some
D. Little
E. Very little
F. Not applicable

28. How much of a financial strain is it for you to purchase the essential resources you need for courses such as books and supplies?

A. Very large strain
B. Somewhat of a strain
C. Neutral
D. A little strain
E. Hardly any strain at all
F. Not applicable

29. How much do other aspects of your life suffer because you are a college student?

A. Very much
B. Much
C. Some
D. Little
E. Very little
F. Not applicable

30. How much time do you spend proofreading writing assignments before submitting them?

A. A lot
B. Some
C. Little
D. Very little
E. None
F. Not applicable

31. How would you rate the academic advisement you receive here?

A. Excellent
B. Good
C. Fair
D. Poor
E. Very poor
F. Not applicable

32. When you consider the benefits of having a college degree and the costs of earning it, how much would you say that the benefits outweigh the costs, if at all?

A. Benefits far outweigh the costs
B. Benefits somewhat outweigh the costs
C. Benefits and costs are equal
D. Costs somewhat outweigh the benefits
E. Costs far outweigh the benefits
F. Not applicable

33. How likely is it that you will re-enroll here next semester?

A. Very likely
B. Somewhat likely
C. Neutral
D. Somewhat unlikely
E. Very unlikely
F. Not applicable

34. How likely is it you will earn a degree from here?

A. Very likely
B. Somewhat likely
C. Neutral
D. Somewhat unlikely
E. Very unlikely
F. Not applicable

35. How much does the cost of courses limit how many you take?

A. Very much
B. Much
C. Some
D. Little
E. Very little
F. Not applicable

36. When you think about the advantages and disadvantages of attending this school, how much do you think the advantages outweigh the disadvantages or vice versa?

A. Disadvantages far outweigh the advantages

B. Disadvantages somewhat outweigh the advantages
C. Disadvantages and advantages are equal
D. Advantages somewhat outweigh the disadvantages
E. Advantages far outweigh the disadvantages
F. Not applicable

37. During the first class session, many instructors present students with an overview of the course. In general, how accurate have these previews been in forecasting what you actually experienced in these courses?

A. Very accurate
B. Somewhat accurate
C. Neutral
D. Somewhat inaccurate
E. Very inaccurate
F. Not applicable

38. How much do the instructors and the courses make you feel like you can do the work successfully?

A. Very much
B. Much
C. Some
D. Little
E. Very little
F. Not applicable

39. Based on your current financial situation, how inclined are you to work more hours per week than you want in order to pay bills?

A. Very inclined
B. Somewhat inclined
C. A little inclined
D. Not very inclined
E. Not at all inclined
F. Not applicable

40. In general, when you receive evaluative feedback from instructors, how useful has it been in figuring out how to improve?

A. Very useful
B. Somewhat useful
C. Neutral
D. Not very useful
E. Not at all useful
F. Not applicable

41. On a typical day, how preoccupied are you with personal troubles?

A. Very preoccupied
B. Somewhat preoccupied

C. A little preoccupied
D. Not very preoccupied
E. Not at all preoccupied
F. Not applicable

42. How fair are the tests at this school?

A. Very unfair
B. Somewhat unfair
C. Neutral
D. Somewhat fair
E. Very fair
F. Not applicable

43. Relative to what you expected when beginning college, how interesting have you found class sessions to be?

A. Much less interesting
B. Less interesting
C. About as interesting as expected
D. More interesting
E. Much more interesting
F. Not applicable

44. How much loyalty do you feel to this college, based on your experiences here?

A. Very much loyalty
B. Much loyalty
C. Some loyalty
D. Little loyalty
E. Very little loyalty
F. Not applicable

45. How good is your school performance relative to the expectations of your parents or others who are important to you?

A. Far below their expectations
B. Below their expectations
C. About what they expected
D. Better than they expected
E. Much better than they expected
F. Not applicable

Thank you for completing the questionnaire!

APPENDIX C

CORRESPONDING TABLE OF ODDS RATIOS

CPQ Variables	Odds Ratio	Std. Err	Z	P> l z l	[95% Conf.	Interval]
Cum GPA	4.685	1.913	3.78	0.000	2.105	10.429
Academic Integration	.982	.105	-0.17	0.868	.796	1.212
Social Integration	1.158	.149	1.14	0.253	.900	1.489
Academic Conscientiousness	1.058	.215	0.28	0.783	.710	1.575
Academic Efficacy	1.154	.288	0.58	0.564	.708	1.881
cons	.001	.002	-1.87	0.061	2.04e-07	1.422

N	=	86
LR $chi^2(5)$	=	24.96
Prob > chi^2	=	0.0001
Log Likelihood = -36.421	Pseudo R^2	= 0.255

Note: cons estimate baseline odds.

APPENDIX D

LOGISTIC MODEL FOR RETENTION

Classified	D	~D	Total
+	61	12	73
-	3	10	13
Total	64	22	86

Classified + if predicted Pr (D) > = .5.

True D defined as RETENTION_1 Yes_0 No ! = 0.

Sensitivity	Pr (+ | D)	95.31%
Specificity	Pr (- | ~D)	45.45%
Positive predictive value	Pr (D | +)	83.56%
Negative predictive value	Pr (~D | -)	76.92%
False + rate for true ~D	Pr (+ | ~D)	54.55%
False - rate for true D	Pr (- | D)	4.69%
False + rate for classified +	Pr (~D | +)	16.44%
False - rate for classified -	Pr (D | -)	23.08%
Correctly classified		82.56%