A Study of Latino Undergraduate Students in Retention Cohorts at the University of Arkansas

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A Study of Latino Undergraduate Students in Retention Cohorts at the University of Arkansas

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Education in Higher Education

by

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Abstract

Higher education institutions do not have a history of being racially inclusive, and as a result, research and best practices around retention and student success have not been developed for underrepresented and minoritized students. Although there has been a surge in scholarship on diversifying higher education, literature, and identifying best practices focused on retaining students there is less research and literature that looks at Latino students.

The study's purpose was to better understand Latino undergraduate student retention patterns at the University of Arkansas, a midwestern public four-year research university. The significance of the study was to assist UA administrators and student affairs professionals in using the findings of the study to create strategic programming and target retention initiatives for Latino undergraduate students.

Data in the study was institutional pre-existing data gathered by the Office of Institutional Research and Assessment at the University of Arkansas. The data consists of retention cohorts at the University of Arkansas from 2009-2018. The University of Arkansas institution collects data through students' applications for admissions and other self-reporting forms. The institution grouped students into retention cohorts. In the data sample, the overall student population was 38,154; of that total, there were 2,532 (6.6%) Latino undergraduate students. The data were analyzed by using descriptive statistics to look at frequencies, percentages, and one-way ANOVAs.

The findings in the research indicated that the Latino student profile was similar to the overall student population. However, about half of the Latino population in the study was first-generation and or low-income. The study also found that overall females had higher retention rates than Latino females, and overall males had higher retention rates than Latino males. In
terms of GPA, Latino students had lower retention rates in than the overall student population except for those Latino students who were between a GPA of (3.6-3.9). In terms of area of study, Latino students had lower retention rates in most subcategories but had higher retention rates in Art and Sciences. Finally, the study found there is no significant difference when comparing retention rates of the Latino undergraduate sub-population when looking at gender, low-income status, first-generation status, and in-state status.

The study shows the need for further research needed on Latino retention and more specifically the need for a retention theory that may be able to guide researchers through the complex identity of Latino students. This study shows that region, Midwest US in this case, place a role in the identities and experiences of Latino students.
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Dedication

It all started with a kid from a rancho (village) in Mexico with no running water and no electricity. A father and a mother (Alberto y Maria S. Balderas) who wanted something better for their kids and chose to migrate to the United States of America in search of that American dream. I am thankful beyond measure for the sacrifices my parents made. Their efforts have provided incredible opportunities for their children and generations to follow. Gracias Madre and Padre!!

I hope that I have made you proud and that I have made your sacrifice worth it. The sacrifice of leaving our home country, family, and friends to provide a better opportunity for your children. I just wanted to express my gratitude for your unwavering love and support. It's because of you both that I found the courage to keep pushing forward and striving for greater heights.

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Chapter I

Introduction

A. Context of the Problem

The idea of college student persistence and retention has grown increasingly important in recent years. Although most traditional campus experiences still place great importance on the maturation and developmental aspects of student life, the persistence and retention of students, from semester to semester all the way to graduation, is increasingly seen as a hallmark of institutional quality. Additionally, persistence can impact a wide variety of campus elements. Burke (2019) wrote that “as students fail to persist at higher education institutions, there are impacts on both the academic and social environments” (p. 13). Burke went on to explain the financial impact this can have on institutions as “student persistence also plays a major impact in institutions’ financial planning, as student tuition and fees are major drivers of institutional income” (p. 13). In other words, retention and persistence are essential to the life of universities and colleges. Further, as the cost of higher education continues to rise and the number of college-age students continues to decrease, colleges and universities will need to focus on the retention of the students they already have while at the same time continuing to grow their enrollment numbers. In 2016, 47% of Hispanic high school graduates ages 18 to 24 were enrolled in college, up from 32% in 1999. By comparison, the share of college enrollees among 18- to 24-year-old White, Black, and Asian high school graduates increased more modestly (Gramlich, 2017). More recently, the Pew Research Center (Krogstad, 2020) declared that in 2019, the number of Hispanics reached a record 60.6 million, making up 18% of the U.S. population. This is up from 50.7 million in 2010, when Hispanics were 16% of the population.
These recruitment efforts must reflect changing American demographics. Among this changing demographic, one of the highest populations is that of Latino undergraduate students, meaning that Latino students are an increasingly important population for colleges and universities to court. According to Mora (2022), Hispanic enrollment at postsecondary institutions in the United States has seen an exponential increase over the last few decades, rising from 1.5 million in 2000 to a new high of 3.8 million in 2019, partly reflecting the group’s rapid growth as a share of the overall US population.

The reason Latino undergraduate students are a key population is that they are one of the fastest-growing populations of diverse students enrolled in post-secondary institutions. The US Department of Education published the following from the National Center for Education Statistics (2019): between 2000 and 2016, Hispanic undergraduate enrollment more than doubled (a 134% increase from 1.4 million to 3.2 million students). The enrollment for most other racial/ethnic groups also increased during the first part of this period, then began to decrease around 2010, but did so at a much lower rate than those of their White counterparts. Further, the rapid growth of the Latino student population has challenged institutions of higher education to provide for the often-unique needs of these students. This has led to many universities being ill-prepared to handle this growth of Latino student enrollment. Subsequently, a very real problem that has arisen is the level at which Latino undergraduate students persist and complete their four-year degrees.

There are multiple reasons Latino undergraduate students may not be successful in college. Some may be first-generation college students who do not have pre-existing knowledge about how the college systems work. For others, it may be the campus climate that can feel unwelcoming. And for others, it may be their lower socioeconomic backgrounds and a lack of
secondary education preparation. As a result of one or more of these reasons, Latino undergraduate students have a lower retention rate than their White counterparts. According to the National Student Clearinghouse Research Center (2020) Compared to White students’ persistence rate, there was an 8.8%-point difference for Hispanic students and a 14.3% point difference for African American students. However, some researchers (Hernandez, 2000) found that there is limited research on Latino, undergraduate-student retention, and graduation. This highlights the need for more in-depth research about Latino undergraduate-student persistence, and graduation, more specifically for universities in the Midwestern and Southern US, where Latino populations are growing the most rapidly.

B. Statement of the Problem

As the US continues to change demographically, so do its institutions of higher education. However, many higher education institutions do not have a history of being racially inclusive, and as a result, research and best practices around retention and student success have not been developed specifically for Latino students. Although there has been a surge in scholarship on diversifying higher education, literature, and the identification of best practices focused on the retention of students from different underrepresented populations have only begun to emerge. Of specific interest to the current study, there is little scholarship or reporting of best practices for Latino student retention. In their research, Crisp, Taggart, and Nora (2015) found that existing reviews are also limited in that they focus on a single college academic outcome (i.e., persistence) rather than a broad range of academic outcomes such as transfer to a four-year institution or degree completion. The researcher hoped to add to this literature through this study.
Other researchers (Hernandez, 2000; Longerbeam et al., 2004; Tinto, 2006) also suggested a need for a deeper understanding of Latino students from different US regions and also from different Latino subcategories. Research is needed that focuses on Latino college students. Only since the mid-1970s have scholars begun to test retention theories and models on various underrepresented groups (Hernandez, 2000). Researchers believe that this can help student retention efforts and deliver a more positive experience for these students in college, resulting in higher satisfaction with the collegiate experience, enhanced student learning, and a better time-to-degree. (Longerbeam et al., 2004)

Another critical issue, the author hoped to highlight in the study was the lack of understanding about the applicability of retention theory specifically directed to Latino undergraduate students. This was important because identifying an applicable Latino retention theory or framework could help create programming and efforts that are directly connected to the retention of Latino students. Even Tinto’s theories, which have been a staple in student retention, do not address the specific needs of Latino undergraduate students. Tinto (2006) suggested that part of learning and creating new models is exploring the complexity of the students as well as the complexity of student retention. Tinto (2006) wrote, “As we learn more about the complexity of student retention, we have come to appreciate the limits of our early models of retention” (p. 4). This demonstrates the need for research studies and research that connect retention models with the Latino undergraduate student population.

Further, it is not only enough to have retention theories that apply to the Latino student population, but it is also important to understand that the theories on Latino retention need to be practical rather than just theoretical. As Tinto (2006) explained, “Unfortunately, most institutions have not yet been able to translate what we know about student retention into forms of action
that have led to substantial gains in student persistence and graduation” (p. 5). This highlights the need for a practical theoretical framework that is specific to the retention of Latino students.

The current study focused on trying to address the needs and gaps in the literature that are mentioned above. The study also focused on adding research that will help the reader understand more about Latino undergraduate students’ characteristics and identifiers to examine their effects on Latino undergraduate student retention, from first-year to second-year, at the University of Arkansas, a public research four-year university.

C. Purpose of the Study

The purpose of this study was to develop a better understanding of Latino undergraduate student retention patterns at the University of Arkansas, a Midwestern public four-year research institution. The purpose was achieved by examining Latino undergraduate student retention data from retention cohorts at the University of Arkansas. The retention cohorts consisted of undergraduate students at the University of Arkansas who were traditional first-time, full-time status, and degree-seeking. The study did this to describe retention, from first-year to second-year, patterns for Latino undergraduate students for the academic years from 2009-2018. The study used Latino student retention data based on (a) gender, (b) first-generation status, (c) income status, (d) major/college, and (e) high school GPA.

D. Research Questions

The following research questions were answered in the study:

1. What was the academic profile of Latino undergraduate students in retention cohorts and how does it compare to the overall student population in the retention cohorts, at the University of Arkansas over a 10-year period of time?
2. What were the retention rates from first-year to second-year, over a 10-year period of
time, for Latino undergraduate students at the University of Arkansas based on gender,
entering collegiate grade point average, and area of study?

3. Was there a significant difference between Latino male student retention and Latino
female student retention, from first-year to second-year, at the University of Arkansas
over a 10-year period of time?

4. Was there a significant difference between retention rates, from first-year to second-year,
of first-generation Latino Undergraduate students and non-first-generation Latino
undergraduate students at the University of Arkansas over a 10-year period of time?

5. Was there a significant difference between retention rates, from first-year to second-year,
of low-income Latino undergraduate students and non-low-income Latino undergraduate
students at the University of Arkansas over a 10-year period of time?

6. Was there a significant difference between retention rates, from first-year to second-year,
of in-state Latino undergraduate students and out-of-state Latino undergraduate students
at the University of Arkansas over a 10-year period of time?

E. Limitations of the Study

1. The study was limited by the fact that it only examined one university which is located
in the US Midwest/South that has a community with a very small minority population. This
limited the study because the case study was very specific to the type of university and its
geographical location so the data may not be comparable to other institutions or different types
of institutions.

2. The study was limited by the way the data were collected through the case
study institution. The institution used its own method of data collection from admission records and self-reporting data.

3. The study was limited by the access to the most accurate data due to the COVID-19 pandemic. During the COVID-19 pandemic, retention patterns were affected because students were transitioned to online classes and/or may have been directly or indirectly affected. The study was examined only through the 2019 academic year because the pandemic changed the environment of university students and created different variables that could not be accounted for and as a result this would skew the data in some way.

F. Definitions

In the study, there were key terms that need to be defined in order to give the reader a better understanding. These key terms are more commonly used in the world of higher education, and giving the reader context and definitions allows them to better understand the study.

First-generation college student: an individual who had neither parent complete a baccalaureate degree; or in the case of any individual who regularly resided with and received support from only one parent, an individual whose only such parent did not complete a baccalaureate degree (Higher Education Act of 1965, 2008).

Grade Point Average: Also referred to as GPA.

Hispanic: do not fully or accurately reflect the heterogeneity of this ethnic group within the United States, and that individuals may prefer to identify themselves by their specific ethnic heritage, political, regional, or national origins.” (Perrakis & Hagedorn, 2012, p. 798).

Latino: The term Latino transitioned from Latino or Latina to describe populations in the United States who identify as having Latin American ancestry. Within this term, other labels
include but are not limited to Latino, Hispanic, Mexican American, Chicano, Puerto Rican, Cuban American, etc. (Salinas & Lozano, 2019)

*Low-income college students:* Low-income students are those whose family income was below 125% of the federally established poverty level for their family size (US Department of Education, 2000).

*Pan-ethnicity:* Pan-ethnicity refers to the consolidation of groups who have had previously distinct ethnic or national identities “into a single racial or in the case of Latinos, ethnic, category.”

*Persistence:* Persistence is typically used to define a student's continued enrollment from a second-year of enrollment until degree completion (Belch, et al. 2001; Chambers & Paull 2008; Kerby 2015)

*Student Retention:* Student retention in higher education is typically defined as the continued enrollment of a student from the first-year or semester to the second-year or semester and continuing through degree completion (Burke, 2019).

**G. Assumptions of the Study**

1. The study accepted the assumption that all students in the study self-reported correctly in their respective categories as Latino, gender, first-generation, home income, and high school GPA in their application and intake forms as the data was collected.

2. The study accepted the assumption that the case-study university was thorough and reliable in its collection and analysis of data; and the same processes were used in their data collection each academic year from 2007 to 2019.

3. The study also accepted the assumption that all students in the study were first-time
college students when they were assigned to their corresponding retention cohorts. It was furthered assumed that none of the students in the study were labeled correctly as transfer students or returning students by the University.

H. Significance of the Study

The significance of the study was to provide insight into the retention, from first-year to second-year, of Latino undergraduate students over a 10-year period, 2009-2018, at a public four-year research institution. The study also was meant to add depth to the research and understanding of the retention of Latino undergraduate college students, especially at public four-year research institutions by highlighting identifying factors that may influence the persistence and retention of Latino retention cohorts. The results of the study may increase knowledge about how Latino student success might be enhanced or supported more effectively at the University of Arkansas.

The information from the study can also be used to help faculty and administrators who are outside of STEM fields and two-year colleges. Most of the research found on Latino undergraduate retention is centered around Latino retention of students in two-year colleges. Other research focuses largely on Latino students in STEM fields but did not explore the overall Latino student population. Further, when research does examine Latino undergraduate students, it rarely looked at the different factors that affect retention for these Latino undergraduate students. Hernandez (2000) noted the need for more meaningful research, writing “While there is research on student retention is a complex and multidimensional process future retention studies should take into account this complexity from the frame of reference of college students” (p. 583). This was especially true for such a diverse population as the Latino student population. Examining the retention of the Latino undergraduate student population by subcategories such as
gender, income status, first-generation status, and high school GPA may give researchers valuable information about how these characteristics affect their persistence and graduation rates.

It is also noteworthy to mention that this research is of importance to higher education administrators and student affairs professionals. Administrators and student affairs professionals create retention processes and programming based on the available research. Latino retention research is still very new in comparison to other retention research. “Research is needed that focuses on the persistence of Latino college students. Only since the mid-1970s have scholars begun to test retention theories and models on various underrepresented groups” (Hernandez, 2000, p. 575). This is especially important for the administrators and student affairs professionals at the University of Arkansas because the data is very specific to their institution. The study findings could inform higher education administrators and student affairs officials to see the patterns in their institutions and help to highlight the Latino undergraduate student population that may be most at risk. This could also allow higher education professionals to begin preparing new processes and programs that are specific to their institution and their Latino undergraduate student population.

Finally, this would be valuable research to the case study institution’s mission for diversity and inclusion. In recent years the institution has created different programs that are directed at making the university a more inclusive and diverse institution. This research may allow the different departments in charge of diversity and inclusion to better understand one of the fastest-growing demographics in their institution. One of the main concepts in teaching and communicating is understanding your audience/clients and in this case, it’s the Latino student population. More importantly, the research may help the University of Arkansas understand how to help this new influx of Latino students.
I. Theoretical Framework

In thinking about the theoretical framework for this study, it was necessary to include Tinto’s Institutional Departure Model because it has created the foundation for many retention theories. Tinto's Model is one of the most popular and accepted retention models. Burke (2019) believed that this model is the most cited (Tinto 1975; 1993) and perhaps the most well-accepted because it has been repeated, tested, and reviewed repeatedly since its inception. Tinto's model also explains the relationships between students and their engagement on campus and highlights the different variables that can affect whether a student persists in their college journey. Tinto (1975; 1993) argued that the social transition for incoming, first-year students is essential to their success. During the stage of separation from one life (high school, hometown, etc.) to college, students must develop new relationships and a new community in order to be successful. This can be difficult to accomplish as there are potentially new values, priorities, and behaviors within the college community that students were not exposed to previously.

Tinto’s theory is an important foundation for research and has much applicability to many aspects of under-represented minority student experiences, but it may not fully capture the experiences of Latino students. Furthermore, Tinto’s model usually puts the burden on Latino students to adapt to higher education. Winterer et. al. (2020) stated “Tinto’s model and associated models focus on the characteristics of individual students (e.g., goal commitments) and what individual students can do to improve success (e.g., assimilate to existing campus communities)” (p. 3). This creates more challenges for Latino students because, in this model, they have to work harder to assimilate and possibly give up elements of their culture, as opposed to the institutions of higher education meeting them halfway or creating a sense of belonging for these students. Winterer et. al. (2020) also mentioned this as
critiques of the theory point out how Tinto defines students traditionally (e.g., full-time, 18–22-year-old students living on campus) and describes cultural assimilation to the dominant Eurocentric culture as the norm rather than promoting the evolution of campuses to value the distinct and diverse assets Latino students bring from their cultural values and experiences. (p. 3)

The study sought to look at the characteristics of Latino undergraduate students not as limiters, but rather as indicators for student affairs professions and higher education institutions to understand in order to create programs and resources to help students in their retention and graduation rates. While other minoritized groups may have retention theories to guide their work, Latino students do not have their own retention theory. It was important to acknowledge that there was no Latino retention theory at the time of this study. The closest thing to a retention theory was the Latino Critical Race theory. Therefore, this study used the Latino Critical Race theory as its theoretical framework.

In her research, Yosso (2005) explained how the Latino Critical Race theory came to be. Yosso’s research begins by showing how Critical Race Theory (CRT) has evolved from a legal term that focuses on the oppression of the Communities of Color to a theory that focuses on the wealth of knowledge and experiences that these Communities of Color possess and how they can make our American society, as a whole, stronger. Yosso (2005) explained:

CRT shifts the research lens away from a deficit view of Communities of Color as places full of cultural poverty disadvantages, and instead focuses on and learns from the array of cultural knowledge, skills, abilities, and contacts possessed by socially marginalized groups that often go unrecognized and unacknowledged. (p. 69)
In the same research article, Yosso explained how CRT can be used as a tool to create theories and knowledge that highlights and values the presence and voices of People of Color. Furthermore, Yosso explained why CRT had to move away from Critical Legal Studies. Yosso (2005) stated that “not listening to the lived experiences and histories of those oppressed by institutionalized racism limited CLS scholarship. This argument had also been taking place in social science and history circles, specifically in ethnic and women’s studies scholarship” (p. 71).

However, Critical Race Theory also came with its own limitations. One of the main limitations was that CRT focused on only Black vs White experiences. As a result, Women and People of Color who felt their gendered, classed, sexual, immigrant, and language experiences and histories were being silenced, challenged this tendency toward a Black/White binary (p. 72). This created the need for Critical Race Theories to be extended to incorporate the racialized experiences of women, Latinos, Native Americans, and Asian Americans.

This brings the researcher to Latino Critical Race Theory (LatCrit). In the same research, Yosso cites the work of Arriola and Stefancic to explain what LatCrit is. Yosso explained that Latina/o critical race (LatCrit) theory extends critical race discussions to address the layers of racialized subordination that comprise Chicana/o, Latina/o experiences (Arriola, 1997, 1998; Stefancic, 1998).” (p. 72) In her previous work, Yosso along with Solorzano was able to map out how Latino Critical Race Theory stemmed not only from CRT but also from earlier social science literature. The following is an image from Solorzano and Yosso (2001):
Figure 1. An intellectual genealogy of critical race theory

Another thing that LatCrit did was analyze Latino experiences deeper by looking at certain identifying factors within the Latino population. Bernal (2002) wrote that LatCrit theorizes issues such as language, immigration, ethnicity, culture, identity, phenotype, and sexuality (Espinoza, 1990; Garcia, 1995; Hernández-Truyol, 1997; Johnson, 1997; Martinez, 1994; Montoya, 1994). Lastly, Bernal noted how Latino Critical Race theory also addresses the intersectionality and diversity of the identity of Latino Students. Latino students are not only a diverse population from different cultures and countries, but they also have even more diverse identities because of their experiences that are shaped by systems of oppression in an Anglo-dominant society and historical culture. Bernal (2002) reported that the “LatCrit” is a theory that elucidates Latinas/Latinos’ multidimensional identities and can address the intersectionality of racism, sexism, classism, and other forms of oppression. This intersectionality offers an important lens from which to envision a raced-gendered epistemology, especially for Chicanas/Latinas (p. 108).

In other research, researchers made the case for why Latino Critical Race Theory (LatCrit) and Critical Race Theory (CRT) should be used by researchers to better understand the
experiences of Latino students. Bernal (2002) wrote that “LatCrit” is similar to critical race theory. However, LatCrit is concerned with a progressive sense of a coalitional Latina/Latino pan-ethnicity (Valdes, 1996), and it addresses issues often ignored by critical race theorists (p. 108). Bernal then explained that Latino Critical Race Theory adds important dimensions that are specific to the Latino student population and that this adds important dimensions to a critical race analysis. In other words, LatCrit would add context to Latino student identities by not only focusing on the oppression of Latino students but rather on their lived experiences and subcultures from a very diverse Latino community.

Latino Critical Race theory indicates that the experiences unique to the Latino community can affect their education, not only the Latino student’s learning, but participation, involvement, and experience on campus. As applied to the current study, the LatCrit theory holds that the researcher would expect the variables of identity and intersectionality to influence student retention or persistence. This was the reason for including ethnicity, gender, first-generation status, income status, area of study, and high school grade point average in the study.

J. Chapter Summary

The chapter introduced the research problem of this study as well as the research questions guiding the study and highlighted the Latino Critical Race theory as the framework to add context to the challenges surrounding Latino college retention at the University of Arkansas. The chapter also explored the limitations of the study and the implications of the findings for research. This study’s findings hopefully will add to the current body of literature on Latino undergraduate student retention. The hope is that the case study institution could use this research to focus its energy on programming and resources for its growing college Latino student population.
Chapter II

Review of Related Literature

A. Introduction

The literature in this review was obtained primarily through the University of Arkansas’ library resources. This included the use of the UA Interlibrary loan resources, as well as ERIC, EBSCO, and Google Scholar. It was important to note that most of the research articles collected focused on the Latino undergraduate student population who attend four-year public institutions in other areas outside the Midwest/South in the US, where Latinos have a longer history such as Texas and California. A large portion of the research focuses on Latinos in two-year institutions. According to the American Association of Community Colleges (2019), there has been a steady increase in the percentage of Latino students who have enrolled in community colleges. In other reports, however, there are gaps in research on the subcategories within the Latino undergraduate student populations that need to be addressed in future research. Some of these student populations include transfer Latino undergraduate students and non-traditional Latino undergraduate students.

The researcher found articles that addressed the needs of Latino undergraduate students in terms of retention and persistence. However, little research was found that addresses Latino student retention at four-year public research institutions in the Midwest. The reason that there is more research that focuses on two-year colleges may be due to the fact that Latino undergraduate students usually attend two-year public colleges in order to save money. Similarly, Latino students tend to enroll in STEM fields so there is more research on Latino STEM students. Latino STEM students enroll in public, 2-year colleges in higher proportions than any other
group, and Latino students account for 25.2% of traditionally aged students enrolled in 2-year colleges (Fry & Lopez, 2012).

Another interesting theme found was the lack of practical theories that were directly connected to the retention of Latino students. According to Tinto (2006) “In the world of action, what matters are not our theories per se, but how they help institutions address pressing practical issues of persistence. Unfortunately, current theories of the student leaving are not well-suited to that task” (p. 6). This highlighted a need for more research on actual practices that would help Latino undergraduate students. Student Affairs professionals are the ones who really need this research and literature in order to create solutions to help these students. Gamboa and Vazquez (2006) mention that “Although the graduation rates of Hispanic students entering four-year institutions are relatively positive, many student affairs professionals have concerns about how they can help retain and graduate Latino college students” (p. 335).

Another common theme found in the literature was that not enough literature exists to address the intersectionality of the Latino undergraduate population because its layers of identity will further complicate the student’s experiences. Longerbeam et al. (2004) highlighted the need to understand the diverse identifiers of Latino student populations such as first-generation, low-income, gender, and high school GPA as predictors of potential retention patterns. The study examined all this without diving into the intersectionality of such identifiers and the challenges that arise from them. A study was needed that dives deeper into intersectional ties and subcultures of Latino undergraduate students. Delgado and Stefancic (2017) mentioned that “intersectionality” means the examination of race, sex, class, national origin, and sexual orientation, and how their combination plays out in various settings” (p. 51). For this reason, this study looked at the identifying factors such as (a) gender, (b) first-generation status, (c) income
status, (d) major/college, and (e) high school GPA to examine retention patterns of Latino undergraduate students at the University of Arkansas.

B. Latino Undergraduate Student Enrollment

For the purpose of the study, the researcher began by looking at data on Latino enrollment trends and patterns. In a report by Lauren Mora published in the Pew Research, Mora shows the increase in Latino enrollment from 2000 to 2019. Mora (2022) reports that in 1980, there were about 470,000 Latinos enrolled at degree-granting postsecondary institutions, accounting for 4% of all students. By 2000, Latino enrollment had increased to 1.5 million, or 10% of all students. And by 2020, 3.7 million Latinos were enrolled, accounting for a fifth of all postsecondary students. It was also important to note that, of those 3.7 million Hispanic students in 2020, 2.4 million were at four-year institutions. This was important to highlight because the case study university is a four-year institution.

In the same report, Mora discussed how enrollment alone was not enough but rather looking at how many of those students who are enrolling are actually graduating and getting a degree. Mora (2022) noted that, despite growing enrollment, relatively small shares of young Hispanics are enrolled in college or have obtained a bachelor’s degree. This showed a need to highlight persistence and retention patterns to see why there was only a small share of young Latino students graduating.

In another report in the Pew Research by Gramlich, the author makes the case that the high enrollment of Hispanics does not mean that they are graduating at the same rate. Gramlich (2017) reported that, while Hispanics have made important strides in educational attainment in recent decades, it’s important to note they still lag behind other races and ethnicities in several other academic measures. For example, Hispanics are less likely than other groups to obtain a
four-year college degree. This information was important to the study because it guided the researcher to compare retention rates at the case study institution.

C. A Profile of Latino Undergraduate Students Profile

Research also showed us that one of the main mistakes administrators make is that they think of the Latino undergraduate student as an identity category when it is actually a diverse group of identities within Latino populations. As an example, it would be like if someone tried to create a profile of what a North American is. Trying to pinpoint all the following: language, color, culture, religion, etc., about a North American, is quite difficult, and that is just looking at one country. So, it would be very complicated to pinpoint the profile of the Latino identity that spans over many countries, races, cultures, languages, etc. Some researchers have examined how complex the Latino identity is in terms of college students.

Longerbeam and company highlight one of the main points when it comes to the Latino student identity. Longerbeam et al. (2004) mentioned that “studying Latino students and the variables that influence their retention is made more challenging by the fact that Latinos as a group are extremely diverse” (p. 539). The authors mention that the main reason why Latino students are so diverse is that their identity is usually based on their ethnicity and culture rather than their race. Their culture and roots have a stronger meaning to who they are rather than just one race. This means that culture and environment play a big role in their sense of belonging. This may also be the reason why Latino undergraduate students are influenced so much by Latino representation on campus. It allows them to feel seen and understood because they are individuals rather than just a stereotype or groups of identifiers. All this helps us better understand a bit more about the Latino undergraduate student population but also helps us understand the challenges of trying to meet the needs of these students, and a major part of that is
figuring out who these students are on a deeper level. That is what creates our Latino undergraduate retention issues.

As mentioned in the sections above, one of the reasons the Latino undergraduate student is so complicated to understand is that it is such a diverse population within just one group. In order to help with this, we must break down the Latino category by looking at the intersections of Latino undergraduate students and creating subcategories. Cuellar and Johnson-Ahorlu (2019) mentioned why it was important to look at intersectionality within student groups by stating that “When intersections of identities and experiences are not considered, critical intragroup differences may be masked and further perpetuate inequities” (p. 28). This helped to understand the importance of looking at each student as their own person and realizing that even though they come from a specific marginalized group, they will still have different experiences. Something to also consider was whether other factors such as their income, first-generation status, whether they commute, etc. will further complicate their experience. Cuellar and Johnson-Ahorlu (2019) also mentioned “additionally, colleges ascribe other statuses that further distinguish students, such as first-time freshmen and transfers, which may also shape perceptions of campus climates” (p. 28).

Other studies explain how intersectionality can be applied to the Latino undergraduate student population. Loveland (2018) wrote that “the growing Latino student populations have grown from 22% to 35% in recent years” (p. 46). The author goes on to break down some of the challenges and barriers that these students face in colleges and offers some tips for recruiting Latino undergraduate students. Loveland (2018) mentioned “Be cautious of bias- Latino students’ aren’t always students of color and low-income and first-generation. Latino students have a wide array of experiences, and they all deserve respect and appreciation” (p. 46). This
was great advice as we must check our own biases when looking at the Latino student population and make sure that we are respecting their diverse nature instead of assuming that they are all the same.

Other research also looks at the intersectionality of students of color along with the other college status or identities that they may possess. Lundberg et al. (2007) analyzed the level of engagement for students of color, especially for those students that show other factors such as low-income, first-generation, commuter, and adult learners. The authors first explain that some of these students do not participate; not because they do not want to but rather because they cannot afford to participate whether because they are working, helping their family, or another reason.

This also plays a part in how they interact on campus and their campus experiences. This is especially true for Latino students as their culture often influences them to help out the family and stay close to their family. This limitation on time also limits the interaction that these students have with their faculty. Lundberg et al. found that the impact is significant when a student is first-generation. However, it is more significant when the student is both a student of color and a first-generation. This helps us understand that Latino students have several factors and layers that play a part in their experiences in college that consequently affected their retention and graduation.

The concept of intersectionality within the Latino student population further complicates retention and persistence efforts. As mentioned, the Latino student population is already such a diverse population that more layers will create different subcategories for researchers to study and break down. For this reason, it is important to look at Latino undergraduate student characteristics that may be identifiers of student retention and persistence.
D. The Latino Identity

In order to better understand the retention and persistence patterns of the Latino undergraduate student population, we have to know who these students are. Researchers explained how Latino/a students came about to be called Latino students. In their research, Salinas and Lozano (2019) mentioned:

The term Latinx transitioned from Latino or Latina to describe populations in the United States that identify as having Latin American ancestry. Within this term, other labels include but are not limited to Latino, Hispanic, Mexican American, Chicano, Puerto Rican, Cuban American, etc. (p. 303)

This helps us understand how to identify these students but also mentions that this may hinder the students because it categorizes them into another label. Salinas and Lozano (2019) also examined how the term Latinx may offer a way for this population to identify in an inclusive and gender-non-specific way with the addition of the “x” at the end. However, there is a fear that it may be oversimplifying the diversity within this population. The problem with oversimplifying diverse Latino students is that these students may lose part of their identities when they are grouped in the “Latinx” category. The authors also pointed out that the term is mainly used within the realm of higher education, and it is gaining popularity in other realms because it represents a form of liberation. Something to keep in mind for this study is that prior research most often used the term Latino/Hispanic/Mexican American/ or Chicano because the term “Latinx” was still relatively new in the literature.

An interesting thing about the Latinx label was that it is mostly used in academia and other social sciences. However, it’s not a term used by the general Latino population and in some cases, resistance against the Latinx label was experienced and, in some cases, many in the
general population resist the term. According to Salinas (2020) usage of the term *Latinx* in scholarship seeks to be inclusive of all people from Latin American origin and descent, yet it is important to acknowledge that the term *Latinx* is also exclusive. Salinas also mentioned that Moreover, the review of the literature has failed to include Latinx/a/o students’ perspectives of the term *Latinx*. This was also important because it highlights the need for support of this Latino diverse student population. Furthermore, institutions that are not proactive in support of diversity or do not acknowledge the diversity of these students tend to homogenize them, which is a disservice to each individual subgroup in the Latino community.

An example, of why how quickly the Latinx label changes, was that during the process of the study, the term Latinx term was forced to be used as Latino or Latinas by a new law that was passed in the state of Arkansas. This law forced federal institutions to change their use of Latinx to Latino/Latina. Under the new law *EO 23-07 Latinx Ban* found on the governor.arkansas.gov (2023) the following procedures were passed:

That within sixty (60) days of this Order, all state offices, departments, and agencies shall revise all existing written materials by replacing the terms “Latinx,” “latinx,” “Latinxs,” or “latinxs” with “Hispanic,” “Hispanics,” “Latino,” “Latinos,” “Latina,” or “Latinas.” If the changes to the revised documents require promulgation under Arkansas law, then the requisite state office, department or agency shall promulgate the revised document in accordance with Arkansas law.

This required the researcher to change the term from Latinx to Latino, in order to comply with legislature. This study used the term “Latino” to encompass all of the Latino/a, Latinx, and Hispanic identities in order to avoid confusion for the reader.
E. Latinos in Northwest Arkansas

In order to add context to why this study was important to the gaps in the literature, it was important to know who these Latino undergraduate students are and what makes them different from Latinos in other states or geographical regions. In order to do this, it was important to note that the Latino community is fairly new in the US Midwest/South and in the geographical region where the study took place, Northwest Arkansas. According to Krogstad (2020) in an update in from the Pew Research Center, by region, the South saw the fastest growth in Latino population, increasing by 26% from 2010 to 2019, followed by the Northeast (18%), Midwest (18%) and West (14%). The South has accounted for nearly half (48%) of Latino population growth since 2010. Furthermore, studies showed that it was not until the into the 1980s and 1990s that the Latino population started migrating into the South and, as a result of being such a new race/demographic in the South, the Latino population struggles to find its place in US South and struggles to navigate the Black and White binary that still exists in the Southern States. The following studies highlight how the phenomenon of being a new race/demographic in the South influenced how the Latino community navigate the geographical area of Northwest Arkansas.

In one study, Guerrero (2010) wrote about her extensive research on the Latino community and their arrival to the Midwest/South, more specifically to the state of Arkansas. Guerrero wrote that Latinas/os, primarily ethnic Mexicans, began migrating in large numbers to the US Midwest/South in the 1990s. Regarding Arkansas, she mentioned that Arkansas was the second or third site of a settlement. Meaning that Arkansas was among the first three states that this Latino community decided to move to. One of the main reasons for the move to Arkansas was for work and more specifically it was due to the poultry industry. Guerrero wrote:
In the 1990s the poultry industry, searching for low-wage workers who were more exploitable, offered year-round employment and lax enforcement of employment verification restrictions on immigrants; meanwhile, the state’s low cost of living provided Latinas/os with opportunities for upward mobility and homeownership unavailable in traditional states of immigrant reception and settlement. (p. 200)

In another study, Guerrero (2016) mentioned how this migration influenced the growth of the Latino population in the state, as after enormous increases in the 1990s the Latina/o population (the majority of whom are ethnic Mexicans) had grown to more than 186,000 by 2010, or 6.4% of the state’s inhabitants; dramatic growth for a state that, according to the 1980 and 1990 census, had held fewer than 20,000 Latinas/os (p. 85). This was really important information because it adds context to the Latino populations in Northwest Arkansas. Many of them were first-generation Americans and did not have the same lived experiences of Chicano or Hispanic Americans in highly Latino-populated states such as Texas, California, Arizona, etc. In other words, this Latino population is creating its own identity in Northwest Arkansas as first-generation Americans.

In other studies, researchers examine the Latino experience for Latino in the Midwest/South. Aaron Arredondo, University of Missouri, and Juan Jose Bustamante, University of Arkansas, are two leading researchers in Latinos in the Midwest/South and have multiple studies that address gaps in the literature about Latinos in the Midwest/South and specifically in Northwest Arkansas. In one study, Arredondo and Bustamante examined how Latinos in the Midwest/South experience navigating a Black-and-White binary space. It also highlights the need for needed research on Latinos in this specific Northwest Arkansas region. Arredondo & Bustamante (2019) noted that adding to the complexity of new race relations in the American
South, their article delves into the spatial practices of Latinos in the Northwest Arkansas (NWA) region. In their study, they were able to examine the experiences of Latino newcomers as they partook in community life within public settings traditionally dominated by legal and cultural practices intended to maintain White outlooks. This means that the Latino population continues to try to find their place in Northwest Arkansas, but the region is still a very White-dominant area, where the spaces and policies are geared to benefit the dominant population.

Further, the study found that there is a need for further research to address gaps in studies that look deeper into the diversity of the Latino community in the area. Arredondo and Bustamante (2019) report that in addition to expanding a conceptual framework inclusive of whitespace, brown place, and Latino immigration in the Midwest/South, future research should consider the nuances of racialized access to public space based on phenotype and ancestral identity.

In another study, researchers found that the largest Hispanic community in Northwest Arkansas, specifically Springdale, is still having a hard time creating space for the Latino community in the area. Arredondo and Bustamante (2020) reported this as ethnographic data gathered between fall 2014 and winter 2020 and found that in both Springdale, Arkansas and Marshall, Missouri, organizations governing public space access make no genuine effort to support diversity, equity, and inclusion (DEI) practices. This is important to our research to understand the relationship between the Latino community and its relationship with N.W. Arkansas. Furthermore, Arredondo and Bustamante (2020) noted that while these perspectives account for Black and Latino experiences, there remains a conceptual void linking racialized spaces to issues of immigrant integration/inclusion. This was important to note because it allows
us to understand that these experiences may also affect the sense of belonging of this study’s Latino undergraduate students.

In the same study, Arredondo and Bustamante (2020) report that there remains a conceptual-theoretical void regarding racialized space productions in new immigrant neighborhoods and locales across the US South and rural Midwest. Migrant groups remain excluded from spaces that organizations promote as diverse and inclusive. One of the reasons for this may be that some educators struggle to see their institutions as inequitable and expect students to assimilate instead. Educators most often assume that schools work and that students, parents, and the community need to change to conform to this already effective and equitable system (Yosso, 2005). This highlighted how the geographical area may influence the retention and persistence of Latino undergraduate students at the University of Arkansas. It was also important to note that the University of Arkansas is considered to be located in the Midwest and the South US, so the researcher referred to the University as a Midwestern/Southern institution.

**F. College Retention and Persistence**

For this study, it was important to review the literature and research on college retention and persistence rates of Latino undergraduate students. In his research, Burke (2019) defined retention as the following: “Student retention in higher education is typically defined as the continued enrollment of a student from the first-year to the second-year” (p. 13). Burke (2019) also explained that the retention term is sometimes used interchangeably with student persistence “However, persistence is typically used to define students’ continued enrollment from years two until graduation” (p. 13).

It was also important to look at student background characteristics as research proves that there has been a correlation between specific student characteristics and attrition/retention. In his
research, Ishitani highlighted these characteristics as gender, race, high school achievement, and minority status. Ishitani (2006) wrote

Examples of these student characteristics include gender (Pascarella, Duby, & Iverson, 1983; Pascarella & Terenzini, 1978, 1980, 1983; Stage, 1988; Stage & Hossler, 1989), race (Braxton, Duster, & Pascarella, 1988; Pascarella & Terenzini, 1978, 1983; Stage, 1988; Stage & Hossler, 1989), and high school academic achievement (Braxton, Duster, & Pascarella, 1988; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1980). Braxton, Duster, and Pascarella (1988) suggested that minority students were more likely than their counterparts were to depart from college. (p. 862-863)

These findings have led the researcher to use these student background characteristics as identifiers to investigate retention patterns of Latino undergraduate students. This allowed the examination of the Latino undergraduate student population as a whole with their subcategories and compare them to the general student population at the University of Arkansas. This also allowed the researcher to create a baseline for comparison regarding how the case study, The University of Arkansas, measures against its institutional data. Further, the study looked at both but focused on persistence and graduation with a bachelor’s degree and, more specifically, a max of four-year graduation time frame. This helped paint a wider picture of Latino undergraduate retention and persistence within the retention cohorts and could highlight the issues that they face as a result. In the following, we will dive into literature that identifies barriers and issues for retention and persistence.
1. First-year to Second-year Retention

This study only focused on retention as the data available will lend itself to a better comparison base on first-year to second-year retention. Researchers have examined persistence from a variety of angles in the literature. In her study, Lambert (2012) shared that studies have explored course-to-course persistence, some within-year persistence, and some persistence to degree. Further, it was important to specifically look at first-year to second year retention as it was easier to compare other factors within that first year. The current study also examined different factors of persistence and determined that first-year to second-year retention was also the best model to use. So, for this study, the data was analyzed based on first-year to second-year retention.

2. Retention of Latino Undergraduate Students

In this study, the researcher examined retention patterns for Latino undergraduate students in hopes that it will help student affairs professionals and higher education administrators create programming that will be beneficial to the Latino student population at the case study university. The level of retention of these Latino students was also looked at in this literature review.

One study shared how political climate affected how Latino undergraduate students interact on college campuses. McMurtrie (2016) describes how the Black Lives Matter movement brought attention to a diversity problem by starting conversations and demonstrations about discrimination, marginalization, and isolation among black students and professors on many different campuses across the country. McMurtrie went to state the following:

American higher education as a whole, of course, has a diversity problem. Black and Latino students are underrepresented on many campuses, particularly at elite
liberal-arts colleges like Wheaton, and they drop out at higher rates than do white students.

So, institutions are left trying to figure out what to do about keeping Black and Latino undergraduate students from dropping out and making sure that they complete their degrees. Many universities are stuck taking reactive actions. Some universities have taken precautionary measures to ensure that they are creating an inclusive campus for all their students. However, as universities take on the complicated issue of diversity and inclusion, they tend to look at it as an issue that requires one overarching solution, and this is where universities get it wrong.

The retention and persistence issues are not ones that are specific to Latino undergraduate students but also apply to other marginalized student groups. Fisher (2007) looked at the racial and ethnic differences in adjusting to college and how this may determine certain college outcomes, focusing specifically on Latino and African American students. Fischer looks at three prominent factors that may affect adjustment to college. Those three factors are minority status, social-economic status, and first-generation status. These factors add to the challenge of adjusting to college and play a part in these students’ college experiences.

Another thing that Fischer examined was the level of campus involvement that students experience and their outcomes on student success. The study showed that there was a significant impact on attrition for Latino and African American students who had some kind of campus involvement. This highlights the need for students to feel comfortable enough to engage in campus activities. This is directly tied to Tinto’s model of student departure. Tinto (2006) mentions that “Involvement, or what is increasingly being referred to as engagement, matters and it matters most during the critical first-year of college (p. 4). Tinto (2006) also explained the need for more research by stating “What is less clear is how to make involvement matter, that is
to say how to make it happen in different settings (e.g., non-residential institutions) and for differing students (e.g., commuting students who work) in ways that enhance retention and graduation” (p. 4).

Another thing that complicates Latino undergraduate retention and persistence is the campus climate. Ironically, the increase in the Latino undergraduate population will have a direct effect on the campus racial climate. Research shows that even as the minority populations continue to increase in higher education, students of color continue to find themselves outnumbered by White students and also have minimal representation amongst faculty or administration. Being underrepresented can create a campus racial climate that results in negative college experiences for Latino undergraduate students. Harper (2013) mentioned "Encounters with racism, racial stereotypes, microaggressions, and low expectations from professors and others undermine their academic outcomes, sense of belonging, and willingness to seek help and utilize campus resources” (p. 3). It is also important to note the effects these experiences have on these students’ academic life. Harper (2013) also mentioned the following about minority students compared to White students: “These students suffer lower grade point averages; lower engagement in classes; lower enriching out-of-class experiences; and higher attrition rates” (p. 4). This is also related to Tinto's (1975; 1993) model which mentions that students need to be engaged on campus to have a better chance of persistence.

Lastly, the lack of diversity initiatives can leave minority students feeling frustrated with their institutions because they may feel unwelcome and unrepresented. Different articles argue that diversity initiatives are usually a result of an incident with campus racial climate. In one of them, McMurtrie (2016) mentioned the following “From the civil-rights protests of the 1960s to the debates on affirmative action of 1990s to the broadening of diversity to include sexual
orientation and gender identity, colleges have often been reactive, not proactive”. These are all issues that universities deal with when it comes to diversity and inclusion. However, institutions have to create initiatives that will help these diverse populations feel like they are being heard and that they are welcome in higher education. To help with this, I will provide some recommendations for administrators in higher education as it applies to the Latino undergraduate student population. However, these recommendations are also useful when there is a lack of representation of Latino undergraduate students, staff, and faculty.

Other research helps highlight some of the demographics of the Latino undergraduate student population. One of the key demographics is the Latino undergraduate student’s responsibilities at home as they are often expected to contribute to the family once, they are old enough for responsibilities. Elliot and Parks (2018) explained that “Latino families include a large extended familial network, which creates an inner support system rarely seen in Caucasian cultures. It is not uncommon to find three generations (grandparents, parents, and children) living in the same household” (p. 13).

Family is also an important influence on the retention of Latino college students. Latino students often prioritize approval from, and continued interaction with, their families. In some cases, the family may be the deciding factor in a student’s decision to continue their education and enroll in college or university. Elliot and Parks (2018) addressed this when speaking about Latino students as students whose home communities support their decision to pursue higher education are more likely to enroll and persist until graduation; families that disapprove of the choice or draw their students’ time and attention away from their education, may hinder, delay, or even end their college aspirations.
3. Retention of Latino Male and Female Undergraduate Students

The retention of Latino undergraduate students can also be affected by gender. As some of the studies highlighted this in their research. According to an analysis of the United States Census Bureau data, female Latinx students outpace their male counterparts in college enrollment by 14%, and as of 2014, 25% of Latinx females earned a college degree, compared to only 20% of Latinx males (Excelencia in Education, 2016). The study used this information to see if the same was true for the University of Arkansas in its study. The same analysis from Excelencia in Education (2016) also found that despite their growth in enrollment, Latino male representation in college was lower than Latino females. In Fall 2014, Latino males represented 43% of Latino undergraduates and Latino females represented 57% (1.26 million vs. 1.7 million). In both cases, there seemed to be a pattern of Latino males performing or being represented at lower levels than those of Latino females.

4. First-Generation and Low-Income Retention

Some of the main barriers to retention and persistence for college students are the financial burden and the lack of preparation for how to navigate the college system. Previous studies show that family income is related to student retention or persistence (Braxton, Brier, & Hossler, 1988; Hossler & Vesper, 1993; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1978, 1980; Stage & Hossler, 1989). Students who are first-generation and low-income face both of these barriers. This is an important identity to look at and how it intersects with that of Latino undergraduate students. So, this study also looked at identifying factors such as first-generation (FG) and/or low-income (LI) status.

Some research suggests that Latino students are more likely to be first-generation or low-income. The fact that a Latino student may also be a first-generation college student could create
compounding barriers for them because they do not know how to navigate the college system. Gamboa and Vasquez (2006) mentioned that:

First-generation college students are students whose parents did not attend college, regardless of citizenship status. Therefore, these students have limited or no role models that can help mentor and guide them as they attempt to navigate their way to the front door of what can appear to be foreign territory. (p. 329)

According to the Higher Education Act of 1965 (2008), a first-generation college student is an individual both of whose parents did not complete a baccalaureate degree; or (b) in the case of any individual who regularly resided with and received support from only one parent, an individual whose only such parent did not complete a baccalaureate degree. This identifying factor is important because research as you will see in the following creates challenges in navigating the college process for FG college students. As mentioned, the other identifying factor is that of a low-income college student. Research shows that low-income students have trouble being able to afford four-year institutions. Mora (2022) also mentioned this in her report as Latinos who do not have a bachelor’s degree and are not enrolled in school, about seven in ten Latinos (71%) say a major or minor reason why is that they need to work to help support family, while 69% say they couldn’t afford a four-year degree. This was found as a result of an October 2021 Research center survey.

According to the US Department of Education (2000), low-income students were defined as those whose family income is below 125% of the federally established poverty level for their family size. This factor also presents challenges for college students in the form of financial burdens. The study used FG and LI to abbreviate these terms and at times will use FGLI to refer to students who are both FG and LI.
Traditionally FGLI students have a harder time getting access or entry into institutions of higher education because of their lack of preparation. However, access to higher education is only the first part of the challenge for FGLI students. Once they arrive, these students are often faced with the challenge of navigating the higher education system without proper advising and may have trouble finding a community of students where they feel that they belong. These factors can affect the retention rates of FGLI college students because they increase the likelihood of departure among this group. In the following, we looked at these challenges in detail.

In a study, Thayer (2000) broke down some of the characteristics and challenges that those who are considered FGLI face. Thayer wrote that first-generation students are likely to enter college with less academic preparation. And that this is one of the biggest challenges for FGLI students because it makes the college system, which is already complicated for them, even more complicated. FGLI students are often required to take extra remedial classes. Having to take extra classes can result in the student feeling left behind compared to their non-FGLI peers. Furthermore, students who are already burdened by the cost of college need more money to pay for those classes.

Thayer also identified the limited information that FGLI students have about the college experience. In his research, Thayer (2000) stated “They are likely to lack knowledge of time management, college finances and budget management, and the bureaucratic operation of higher education”. This is a challenge because higher education is not only about the academic part of it but first-generation low-income students must also learn to manage themselves, their time, their study habits, etc. What I mean by this is that students not only have to worry about their class work but also have to worry about the navigation process of college from choosing the correct
classes to managing their finances. Students may also be discouraged by the added stress of having to deal with financial concerns as well as their academics.

Research has also shown that as demographics change the FGLI identifiers are more common among underrepresented communities and are necessary to consider. The ACPA (1996) stated that some of those things that are forcing transformation are economic conditions, eroding public confidence, accountability demands, and demographic shifts resulting in increased numbers of people from historically underrepresented groups going to college.

Lastly, first-generation students may find themselves “on the margin of two cultures,” and must often renegotiate relationships at college and at home to manage the tension between the two (Landon, 1992). This may be the biggest challenge a first-generation low-income student must face. As a first-generation low-income student, it is difficult for peers and family members to understand the student’s decision to go to college because no one in his or her family has been there before. Retention is affected by this because, when students face adversity or feel unwelcome, the doubt they experience about being a college student may win over their desire to persist. Many choose to accept their families’ perspective as truth causing them to drop out of college. This literature is important because it shows the necessity to also look at whether First generation status or low-income status affects the retention rates of Latino undergraduate students.

5. Retention Trends in Public Four-Year Universities

The National Student Clearinghouse Research Center (NSCRC) has published persistence and retention trend reports for colleges across the United States. In 2020, NSCRC published its Summer 2020 report on persistence and retention, which showed retention trends from 2009-2018. Even though there are reports for 2019, it is important just look at 2018
because the Covid-19 pandemic would have affected the retention patterns of students after the summer of 2019, as it is when the pandemic began. The report is seen in Appendix A. Table 1.

Community colleges also experienced nearly a 23% enrollment drop for first-time students, which were previously showing an increase in Fall 2019 (NSCRC, 2020). NSCRC published an update regarding enrollment trends during the Spring of 2021 semester. The NSCRC’s website (https://nscresearchcenter.org/stay-informed/) reported that “Undergraduate enrollment declined in all racial and ethnic categories” (NSCRC, 2021). The center reported that Asian and Latino enrollments dropped in Spring 2021 in contrast to their growth during Spring 2020, especially Latina women who declined to 10% at community colleges.

The researcher used the University of Arkansas, Office of Institutional Research and Assessment (OSAI) website to download a Retention Study Summary (seen in Appendix B) to see the retention and persistence patterns at the University of Arkansas. According to the University of Arkansas (2022) OSAI summary report in the year 2016, the six-year graduation rate for overall students was 69.2%. The summary report also broke down the six-year graduation rate by ethnicity. The four major ethnic groups that make up the majority of students enrolled were the following: White students, Hispanic/Latino students, Black/African American students, and Asian students. In the six-year graduation rate, Asian students graduated at 73.8%, while White students graduated at a 70.4% rate, Hispanic/Latino students graduated at 63.0%, and Black/African American students graduated at 61.5%.

The same summary also reported on first-year to second-year retention rates. According to the University of Arkansas (2022) OSAI summary report in the year 2021, the overall first-year to second-year retention rate was 85.6%. Once again, the summary report broke down the retention rates by ethnicity. In the first-year to second-year retention rate, Asian students were at
88.6% rate, while White students were at 86.3% rate, Hispanic/Latino students were at 84.0% rate, and Black/African American students were at 72.2%. The summary report also broke down the retention rates by gender. In terms of the gender of first-year to second-year retention rate, Females students were at 86.9% rate and Male students were at 83.7%.

In terms of first-year to second-year retention rate by college, there were six colleges to compare: Agricultural Food and Life Science; Architecture; Arts and Sciences; Education and Health Professions; Engineering; and Business college. The highest rates were from the Business college (87.2%) and the Architecture College (87.3%). The lowest rates were from the Engineering college with a rate of 83.7%, with the other 3 colleges being somewhere in the middle: Agricultural Food and Life Science (86.2%); Education and Health Professions (86.5%); Arts and Sciences (83.9%). Something interesting to consider is that the report does not show the data for how many students may have transferred to a different college, which would also affect the retention rates. It would be something to consider using in the report for the future. It was important to look at this information because it will help guide the researcher in creating a baseline of what student retention looks like at the case study university. This will also show how this data matches up against the 10-year data that focuses only on the Latino undergraduate student population from 2009-2018.

G. Chapter Summary

In the chapter, the researcher reviewed the literature research on Latino undergraduate students. More specifically the literature on Latino undergraduates in the Midwest/ South and in Northwest Arkansas. The researcher reviewed the research literature on who these Latino undergraduate students are and the varied identities that they bring. The chapter also looked at the retention of these students and the characteristics that may influence their retention and
persistence from first-year to second-year of college. This literature review is meant to set up the foundation for what has already been written/researched and to highlight the gaps in the literature that this study hopes to address and add to.
Chapter III

Methodology

A. Introduction

The purpose for conducting the study was to develop a better understanding of Latino undergraduate student retention patterns at the University of Arkansas, a midwestern public four-year research institution. The purpose was achieved by examining Latino undergraduate student retention data from retention cohorts at the University of Arkansas. The retention cohorts consisted of undergraduate students at the University of Arkansas who were traditional first-time; full-time status; and degree-seeking. The study did this to describe retention, from first-year to second-year, patterns for Latino undergraduate students for the academic years from 2009-2018. The study used Latino student retention data based on (a) gender, (b) first-generation status, (c) income status, (d) major/college, and (e) high school GPA.

In the study, the researcher used pre-existing retention data that was collected by the Office of Institutional Research and Assessment at the case study institution. The researcher selected the following identifying factors: gender, first-generation college status, income status, area of study, and high school GPA because studies have shown that these factors have an impact on college student retention. In a study of higher education, Astin and Osguera (2005) summarized several major factors that impact retention and ultimately graduation from college: high school preparation, standardized test scores, type of institution (private, public, two-year, four-year, graduate/research), race, and gender. Astin and Osguera (2005) further mentioned that other factors that often contribute to the outcome include parental college experience or degree; family income or socioeconomic status; high school preparation including courses, hours
working and type/location of work; involvement in educational experience; place of residence while enrolled; and so forth.

The study was conducted by examining institutional pre-existing data gathered by the Office of Institutional Research and Assessment at the University of Arkansas. The data consists of retention cohorts at the University of Arkansas from 2009-2018. The University of Arkansas institution collects data through students’ applications for admissions and other self-reporting forms. Within this process, the institution grouped students into retention cohorts. In these retention cohorts, the institution focused on traditional full-time first-year undergraduate students. Undergraduate students in these cohorts do not include part-time students, non-traditional students, or transfer students.

B. Research Design

The study was designed as a nonexperimental ex post facto quantitative research study that used institutional pre-existing data to analyze Latino undergraduate student retention over a 10-year period, from 2009-2018, at the University of Arkansas. In a nonexperimental ex post facto study, the researcher starts with the observation of dependent variables and goes back to the observation of independent variables that have previously occurred under uncontrolled conditions (Best & Khan, 1993) The reason the study was not an experiment was that the researcher had no control over the events or what had already occurred.

The study also used a comparative design to look at differences within the different groups of Latino undergraduate students, at the University of Arkansas, that were looked at in each of the research questions. According to Bukhari (2011), a comparative study is an act of comparing two or more things with a view of discovering something about one or all the things being compared. Bukhari further explained that comparative studies are used to identify a
relationship between two or more groups. This was important to note because this study was only looking at the relationship between retention and specific identifying factors of Latino undergraduate students at the University of Arkansas. Buhkari (2011) noted that comparative studies attempt to identify a cause-effect relationship between two or more groups. Furthermore, comparative studies involve comparison in contrast to correlation research which looks at relationships.

The study used descriptive statistics and analysis of variance to accomplish the following: (1) to identify the source variables or factors that affect the retention, first-year to second-year, of Latino undergraduate students at the University of Arkansas; (2) to examine the effects on retention of variables or factors such as (a) gender, (b) first-generation status, (c) income status, (d) major/college, and (e) high school GPA; (3) to determine if retention of Latino undergraduate students at the University of Arkansas differ from the retention of overall undergraduate students at the University of Arkansas; (4) to determine if retention of first-generation Latino undergraduate students at the University of Arkansas differ from the retention of non-first-generation Latino undergraduate students at the University of Arkansas; (5) to determine if retention of low-income Latino undergraduate students at the University of Arkansas differ from the retention of non-low income Latino undergraduate students at the University of Arkansas; and (6) to determine if retention of in-state Latino undergraduate students at the University of Arkansas differ from the retention of out-of-state Latino undergraduate students at the University of Arkansas.

C. Subjects of the Study

The subjects examined in the study were Latino undergraduate students who were full-time, first-time college students at the University of Arkansas. These students were part of
retention cohorts that the University of Arkansas tracked to examine retention patterns. The students were first-time, full-time, degree-seeking new freshmen at the University of Arkansas. The case study institution started collecting information in 1993 when it switched to a new information system. The new information system started collecting on all students since 1993 but there have been few studies that focus specifically on the Latino undergraduate student population. Since there is a lack of institutional research on the retention and persistence of Latino students at the UA, the researcher chose the UA as the case study institution. Furthermore, a major reason for the selection of Latino undergraduate students within the cohorts from 2009-2018 was that the COVID-19 pandemic happened in 2019 and the data would have been skewed as the pandemic affected retention rates in a number of ways. The researcher chose to look at 10 years of the cohort data as it would be a good sample that would give the study validity.

The setting for the case study was the University of Arkansas, which is a large public research institution located in Northwestern Arkansas. According to the Carnegie Foundation (2021), The University of Arkansas provides an internationally competitive education for undergraduate and graduate students in more than 200 academic programs. The University contributes new knowledge, economic development, basic and applied research, and creative activity while also providing service to academic and professional disciplines. This allowed the University of Arkansas to be a very attractive choice for many students in the US Midwestern/Southern area. One of those student populations that the University of Arkansas continues to attract is the Latino student population. Furthermore, the Carnegie Foundation classified the University of Arkansas among only 3% of universities in America that have the
highest level of research activity with research expenditures of 165.9 million dollars as of the fiscal year 2020.

According to the University of Arkansas (2022) Quick Facts website, the University had an enrollment of 30,936 students for the Fall 2022 semester. Of those 30,936 students, 85% (26,269) were undergraduate students and 14% (4,277) were graduate students. The average high school GPA of entering students was 3.74 and the Average ACT score was 24.5. As of 2016, the average six-year graduation rate was 69.2%.

Another interesting characteristic of the University of Arkansas was its geographical location and growing diverse populations. As mentioned, it is located in Northwest Arkansas, which is geographically situated closer to the Midwestern US than the southern US. That is why this study refers to the institution as a Midwestern University, although it could also be classified as ‘mid-Southern.’ The surrounding Northwest Arkansas area has a growing population of diverse identities. The biggest diverse population in the area was the Latino population. According to Guerrero (2016) at the beginning of the 21st century, Latinas/os accounted for 41% of the overall growth in Arkansas. They also tended to settle in Northwest Arkansas, an overwhelmingly White area for most of the 20th century. This was important to consider in the study because the Latino community will eventually enroll at the University of Arkansas once they graduate from high school and the University must be prepared to meet the needs of this student population.

D. Collection of Data

The study used pre-existing data collected by the Office of Institutional Research and Assessment at the University of Arkansas gathered through the Common Data Set (CDS). According to the Office of Institution Research and Assessment (2022) The CDS initiative is a
A collaborative effort among data providers in the higher education community and publishers as represented by the College Board, Peterson's, and US News & World Report. The goal of this initiative was to be more transparent about their data. The data were collected for first-time, full-time, degree-seeking new freshmen at the University of Arkansas. The data were used to track retention and graduation patterns for these retention cohorts as part of the new freshman tracking study.

To collect the data, a meeting was held to see if the data needed was available and if the Office of Institutional Research and Assessment was able to share the data once the IRB process was complete. An email was sent out to the Director of the Office of Institution Research and Assessment to see if the data required for the study were available. The researcher filled out an IRB to request the data from the retention cohorts from the years 2009-2018.

The IRB determined that the researcher did not have to go through the IRB request process as the data was not dealing or affected human subjects since it was past data. The only stipulation for the use of the data was that data be de-identified so that no identifying information could be tied back to the students. The received email is found under Appendix A. Once the IRB email was received, it was shared with the Office of Institutional Research and Assessment. The Office of Institutional Research and Assessment then shared the data via email to the researcher and the researcher’s dissertation chair. The data was received through email in the format of an excel sheet where it was then uploaded the data analytics program SPSS 29 for Analysis.

E. Data Analysis

For the study, the researcher analyzed 10 years of historical data from the Office of Institutional Research and Assessment at the University of Arkansas. The study examined retention cohort data of first-year, first-time, full-time students and focused on the retention data.
for the Latino undergraduate student population over the course of a ten-year period, from 2009-2018. The reason for stopping at 2018, was that a pandemic happened in 2019 and drastically affected college students, therefore the retention data after 2019 could be skewed.

The data received from the Office of Institutional Research and Assessment were analyzed using a quantitative SPSS 29 software system to run quantitative research in the form of descriptive statistics and ANOVAs to seek answers to the research questions.

Research question 1

1. What was the academic profile of Latino undergraduate students in retention cohorts and how does it compare to the overall student population in the retention cohorts, at the University of Arkansas over a 10-year period of time?

Research question 1 was answered by using descriptive statistical analysis. According to Best and Khan (1993), descriptive statistical analysis limits generalization to the particular group of individuals observed. No conclusions are expected beyond this group, and any similarity to those outside the group cannot be assumed. In the study, descriptive statistics were computed to examine the demographic and background profile of the sample in this study. In the study, the variables analyzed were the following: gender, First-generation status, Income status (Pell eligibility), In-state status, area of study (College), ACT score, and high school GPA. The variables were examined in the study for the total sample in the aggregate as well as separately for retention from first-year to second-year over the course of ten years, from 2009-2018.

Research question 2

2. What were the retention rates, based on gender, entering collegiate grade point average, and area of study, for Latino undergraduate students and how do they compare to the overall student population, at the University of Arkansas over a 10-year period of time?
Research question 2 was answered by using descriptive statistical analysis. According to Best and Khan (1993), descriptive statistical analysis limits generalization to the particular group of individuals observed. No conclusions are expected beyond this group, and any similarity to those outside the group cannot be assumed. In this study, descriptive statistics were computed to examine the demographic and background profile of the sample in this study. A table with frequencies and percentages for all the background and demographic variables. Latino undergraduate and a combination of the independent variables: gender, high school GPA, and area of study, at a case study institution. The gender group will use male and female identifiers. The high school GPA group used the following four GPA preselected categories: 0-2.49; 2.50-2.99; 3.00-3.49, and 3.50-4+. Finally, the area of the study group used the following colleges as identifiers: Agricultural Food and Life science; Architecture; arts and sciences; Education and Health Professions; Engineering; and Business. The variables were examined in the study for the total sample in the aggregate as well as separately for retention from first-year to second-year over the course of 10 years, from 2009-2018. All these variables will also be compared to the general student population.

Research question 3

3. Was there a significant difference between Latino male undergraduate student retention, from first-year to second-year, and Latino female retention rates, from first-year to second-year, at the University of Arkansas over a 10-year period of time?

Research question 3 was answered by using SPSS 29 to run an analysis of variance (ANOVA) test. Since the ANOVA test is used to compare the means of two or more groups. It was appropriate to use this to compare these two groups: Latino undergraduate students and non-Latino undergraduate students. The ANOVA was used to report the frequency and (%)
retention rate, first-year to second-year, of first-time, full-time, traditional Latino undergraduate students and Non-Latino undergraduate students at a case study institution. The ANOVA used the (.05) variance of difference to test for a significant difference. In the case that a significant difference is found between Latino undergraduate and non-Latino undergraduate students, a \textit{post hoc} test was planned on being used.

\textbf{Research question 4}

4. Is there a significant difference between retention rates, from first-year to second-year, of First-generation Latino Undergraduate students and non-first-generation Latino Undergraduate students at the University of Arkansas over a 10-year period of time?

Research question 4 was also answered by using SPSS 29 to run an ANOVA test. The ANOVA test is used to compare the means of two or more groups. In this case, the ANOVA was used to compare these two groups: first-generation Latino undergraduate students and non-first-generation Latino undergraduate students. The ANOVA was used to report the frequency and (\%) retention rate, first-year to second-year, of first-time, full-time, traditional, First-generation Latino undergraduate students and non-first-generation Latino undergraduate students at a case study institution. The ANOVA used the (.05) variance of difference to test for a significant difference. In the case that a significant difference is found between First-generation Latino undergraduate students and non-first-generation Latino undergraduate students, \textit{post hoc} test was planned on being used.
Research question 5

5. Was there a significant difference between retention rates, from first-year to second-year, of low-income Latino undergraduate students and non-low-income Latino undergraduate students at the University of Arkansas over a 10-year period of time?

Research question 5 was answered by using SPSS 29 to run an ANOVA test. Again, the ANOVA test is used to compare the means of two or more groups. In this case, the ANOVA was used to compare these two groups: low-income Latino undergraduate students and non-low-income Latino undergraduate students. The ANOVA was used to report the frequency and (%) retention rate, first-year to second-year, of first-time, full-time, traditional, low-income Latino undergraduate students and non-low-income Latino undergraduate students at a case study institution. The ANOVA used the (.05) variance of difference to test for a significant difference. In the case that a significant difference was found between low-income Latino undergraduate students and non-low-income Latino undergraduate students, post hoc test was planned on being used.

Research question 6

6. Was there a significant difference between retention rates, from first-year to second-year, of in-state Latino undergraduate students and out-of-state Latino undergraduate students at the University of Arkansas over a 10-year period of time?

Research question 6 was answered by using SPSS 29 to run an ANOVA test. Once again, the ANOVA test is used to compare the means of two or more groups. In this case, the ANOVA was used to compare these two groups: in-state Latino undergraduate students and out-of-state Latino undergraduate students. The ANOVA was used to report the frequency and (%) retention rate, first-year to second-year, of first-time, full-time, traditional, in-state Latino
undergraduate students and out-of-state Latino undergraduate students at a case study institution. The ANOVA will use the (.05) variance of difference to test for a significant difference. In the case that a significant difference was found between in-state Latino undergraduate students and out-of-state Latino undergraduate students, post hoc test was planned on being used.

F. Chapter Summary

In the chapter, the research methods of the study were described. The study was a non-experimental Ex Post Facto Qualitative research study that used institutional pre-existing data to analyze Latino undergraduate student retention over a 10-year period, 2009-2018, at the University of Arkansas. The study used a correlation study design to analyze how different demographics and identifying factors of Latino undergraduate students may influence or impact student retention at this case study university.
Chapter IV

Results and Findings

A. Introduction

As the US continues to change demographically, so do its higher education institutions. However, many higher education institutions do not have a history of being racially inclusive, and as a result, research and best practices around retention and student success have not been developed for Latino students, specifically. Although there has been a surge in scholarship on diversifying higher education, literature, and the identification of best practices focused on retaining students from different underrepresented populations have only begun to emerge. Of specific interest to the current study, there is little scholarship or reporting of Latino student retention. In their research, Crisp, Taggart, and Nora (2015) found that existing reviews are also limited in that they focus on a single college academic outcome (i.e., persistence) rather than a broad range of academic outcomes such as transfer to a four-year institution or degree completion. (p. 5) Other research suggests the need for more literature on Latino retention and more specifically in the US Midwest and South. This study attempted to add to the literature and develop a better understanding of Latino undergraduate student retention patterns at the University of Arkansas, a midwestern public four-year university.

This chapter provides a summary of the study and provides the results from the descriptive statistics to answer research questions one and two, concerning demographic and background characteristics of the Latino population within the retention cohorts. Furthermore, the chapter provides the results of the descriptive statistics and ANOVAs to address questions three through six of the study concerning how specific factors affect the first-to-second-year retention of these students.
B. Summary of the Study

The purpose for conducting the study was to develop a better understanding of Latino undergraduate student retention patterns at a midwestern public four-year research university. The study was conducted by examining Latino undergraduate student retention data from retention cohorts at the University of Arkansas. The retention cohorts consisted of undergraduate students who were traditional first-time, full-time, and degree-seeking. The study provided a description of retention, from first-year to second-year, patterns for Latino undergraduate students for the academic years from 2009-2018. The study used Latino student retention data based on (a) gender, (b) first-generation status, (c) income status, (d) major/college, and (e) high school GPA.

The study was significant as it provided insight into the retention, from first-year to second-year, of Latino undergraduate students over a 10-year period, 2009-2018, at the University of Arkansas. The study also added depth to the research and understanding of the retention of Latino undergraduate college students, especially at public four-year research institutions by highlighting identifying factors that may influence the retention of Latino retention cohorts. The results of the study may increase knowledge about how Latino student success might be enhanced or supported more effectively at the University of Arkansas.

The study was designed as a nonexperimental ex post facto quantitative research study that uses institutional pre-existing data to analyze Latino undergraduate student retention over a 10-year period, from 2009-2018, at the University of Arkansas. In a nonexperimental ex post facto study, the researcher starts with the observation of dependent variables and goes back to the observation of independent variables that have previously occurred under uncontrolled
conditions (Best & Khan, 1993). The reason the study was not an experiment was that the researcher has no control over the events or what had already occurred.

As mentioned in prior chapters, the study also used a comparative design to look at differences within the different groups of Latino undergraduate students, at the University of Arkansas, that were looked at in each of the research questions. According to Bukhari (2011), a comparative study is an act of comparing two or more things with a view of discovering something about one or all the things being compared. Bukhari further explained that comparative studies are used to identify a relationship between two or more groups. This was important to note because this study was only looking at the relationship between retention and specific identifying factors of Latino undergraduate students at the University of Arkansas. Bukhari (2011) noted that comparative studies attempt to identify a cause-effect relationship between two or more groups. Furthermore, comparative studies involve comparison in contrast to correlation research which looks at relationships.

The study used descriptive statistics and analyses of variance (ANOVA) to do the following: (1) To identify the source variables or factors that affect the retention, first-year to second-year, of Latino undergraduate students at the University of Arkansas; (2) examine the effects on retention of variables or factors such as (a) gender, (b) first-generation status, (c) income status, (d) major/college, and (e) high school GPA; (3) determine if retention of Latino undergraduate students at the University of Arkansas differ from the retention of overall undergraduate students at the University of Arkansas; (4) determine if retention of first-generation of Latino undergraduate students at the University of Arkansas differ from the retention of non-first-generation Latino undergraduate students at the University of Arkansas; (5) determine if retention of low-income Latino undergraduate students at the University of
Arkansas differ from the retention of non-low income Latino undergraduate students at the University of Arkansas; and (6) determine if retention of in-state Latino undergraduate students at the University of Arkansas differ from the retention of out-of-state Latino undergraduate students at the University of Arkansas.

To collect the data, a meeting was held to see if the data needed was available and if the Office of Institutional Research and Assessment was able to share the data once the IRB process was complete. An email was sent out to the Director of the Office of Institution Research and Assessment to see if the data required for the study was available. The researcher filled out an IRB to request the data from the retention cohorts from the years 2009-2018.

The IRB determined that the researcher did not have to go through the IRB request process as the data did not deal with or affected human subjects since they were historical data. The only stipulation for the use of the data was that it be de-identified so that no identifying information could be tied back to the students (see Appendix A for approval). Once the IRB email was received, it was shared with the Office of Institutional Research and Assessment. The Office of Institutional Research and Assessment then shared the data via email with the researcher and the researcher’s dissertation chair. The data were received through email in the format of an Excel sheet where it was then uploaded into the data analytics program SPSS 29 for Analysis.

C. Data Collection Results and Analysis

The data collected from the Office of Institutional Research and Innovation contained the data for the sample and sub-sample used for the study. The data consisted of Retention Cohorts from 2009 to 2018 in an Excel sheet. This was deidentified student data using fake identifications and columns that provided cohort year and student characteristics that are tied to
retention efforts; characteristics such as race, gender, first-generation, Pell eligibility, ACT 
scores, high school GPA, and whether they retained from first year to second year. In the overall 
sample there were 47,240 students of which 3,193 (6.7 %) students identified as Latino. Of the 
total 47,250 student profiles, 6,468 students were not used because they did not have an ACT 
score, and this would skew the ACT mean score. Further, another 105 students were not included 
because they did not have a high school GPA. These students were taken out from the overall 
number to avoid skewing the data by the missing variables, so the total number of students 
included in the study was an overall student population (N=38,154) of that total there were 
\( n=2,532 \) Latino undergraduate students for use in the data analysis (6.6% of the overall student 
population). It is also important to note that \( n=2,532 \) Latino undergraduate students are also 
included in the overall population. The following were the results of each research question.

**Research Question 1**

1. What was the academic profile of Latino undergraduate students in retention cohorts and 
   how does it compare to the overall student population, at the University of Arkansas over 
a 10-year period of time?

The data collected from the Office of Institutional Research and Innovation provided the 
Retention Cohorts from 2009 to 2018. The researcher used descriptive statistics to analyze the 
demographic and background profile of the sample. Table 2 presents the frequencies and 
percentages of all the demographic variables examined in the study for the total sample, as well 
as for Latino students and overall students separately. These findings provide valuable insights 
into the characteristics of the participants and can aid in understanding the factors that contribute 
to retention in the study.
In the sample, the overall student population was 38,154; of that total, there were 2,532 (6.6%) Latino undergraduate students. Among the Latinos (n= 2,532), 1,418 (56.0%) were female and 1,114 (44.0%) were male. Among the overall students (N= 38154), 20,499 (53.7%) were female and 17655 (46.3%) were male, indicating that the gender distribution among the Latino students was similar to the general student population.

In the sample, three identifiers were examined in Research Question 1. The frequency was calculated for each identifier for students who were first-generation, low-income, and in-state students. Among Latino students (n= 2,532), 1,283 (50.7%) were first-generation students; 1,109 (43.8%) were low-income students; 1,643 (65.1%) were in-state students. Among overall students (N=38,154), 9,276 (24.3%) were first-generation students; 8,770 (23.0%) were low-income students; 22,701 (59.5%) were in-state students. The in-state identifier was consistent for both student populations, however, the frequency for first-generation students was higher for Latino students (50.7%) than that of overall students (24.3%). This was also the case for the
frequency of low-income students. Latino students were higher at 43.8% as compared to 23.0% for overall student populations, representing a considerable difference in frequencies for both first-generation and low-income identifiers between both populations.

Finally, there were two academic credentials, e.g. scores, that were examined in Research Question 1. The mean for ACT scores and high school GPA was calculated for both populations of students. Among Latino students (n=2,532), the mean ACT score was 24.9 and the mean high school GPA was 3.59. Among the overall students (N=38,154), the mean ACT score was 26.1 and the mean high school GPA was 3.64. The mean scores for both ACT and GPA were comparable for both populations.

Therefore, the researcher has concluded that the academic profile a Latino undergraduate would likely be a Female student who is likely to be first-generation, more likely to be low-income, has a 25 ACT score, has 3.6 GPA, and is mostly likely an in-state student. So the academic profile of Latino undergraduate students was similar to the overall undergraduate student profile when it comes to characteristics such as gender, in-state status, mean GPA, and mean HS GPA. However, there was a large difference between the student populations when looking at low-income status and first-generation status. Among Latinos undergraduate students (50.7%) were first-generation students and (43.8%) were low-income students compared to the overall population (24.3%) were first-generation students (24.3%) and (23.0%) were low-income students.

Research Question 2

2. What were the retention rates, based on gender, entering collegiate grade point average, and area of study, for Latino undergraduate students and how do they compare to the overall student population, at the University of Arkansas over a 10-year period of time?
The data collected from the Office of Institutional Research and Innovation provided the Retention Cohorts from 2009 to 2018. The researcher used descriptive statistics to analyze first-year to second-year retention rates of Latino undergraduate students and the overall undergraduate student population from the sample. The researcher separated the data results for Research Question 2 by gender, high school GPA, and area of study.

**Latino Retention by Gender**

In Appendix D, Table 3 and Table 4 display the frequencies and percentages of first-year students who continued to their second year of studies. The data is segmented by gender and presented separately for Latino students and the overall student population, within each retention cohort. These tables also provided the information necessary to answer the gender analysis part of the question.

In the sample, the overall student population was 38,154, and of that total, there were 2,532 (6.6%) Latino undergraduate students. Among the Latinos \( n=2,532 \), 1,418 (56.0%) were female and 1,114 (44.0%) were male. Among the overall students \( N=38,154 \), 20,499 (53.7%) were female and 17,655 (46.3%) were male. The gender distribution was consistent across both student populations.

Among Latino undergraduate students, Latino females (1,418) had a total retention rate of 1,185 (83.6%) and Latino males (1,114) had a retention rate of 864 (77.6%). Throughout the retention cohorts, the average percentages were around these total numbers and the retention rates for Latino females were higher than those of Latino males. Latino Females had the highest retention rate in their 2013 cohort (87.1%) and in their 2014 cohort (87.6%). While Latino males had their highest retention rate in their 2010 cohort (80.9%).
Among overall undergraduate students, females \((n=20,499)\) had a total retention rate of 17,378 (84.8%) and males \((n=17,655)\) had a retention rate of 14,279 (80.9%). Throughout the retention cohorts, similar to the Latino male and female rates, the retention rates for females were higher than those of males. Females had the highest retention rate in their 2018 cohort (87.2%). The males had the highest retention rate in their 2009 cohort (82.2%) and in their 2010 cohort (82.9%).

When comparing Latino female students to overall female students, overall females \((n=20,499)\) had a higher retention rate of 17,378 (84.8%) than Latino females \((n=1,418)\) which had a retention rate of 1,185 (83.6%). Similarly, overall male students \((n=17,655)\) had a higher retention rate of 14,279 (80.9%) than Latino male students \((n=1,114)\) who had a retention rate of 864 (77.6%). It is also important to note that there were cohorts where Latino females had higher retention rates than that of overall females. Latino females had higher retention rates in the 2011 cohort (84.4%), 2013 cohort (87.1%), and 2014 cohort (87.6%), compared to overall females’ retention rates: 2011 cohort (83.2%), 2013 cohort (85.6%), and in their 2014 cohort (83.3%). Another noteworthy finding was that Latino females had higher total retention rates 83.6% than the overall males 80.9%.

**Latino Retention by GPA**

Table 5 (Appendix E) presents the frequencies and percentages for students who were retained from first-year to second-year for both populations and are separated by high school GPA, this was done for both Latino students and overall students separately within each retention cohort. Further, because GPA is based on a numerical scale that ranges from \((0-4.0+)\) it was necessary to create categories for GPA. It was separated into 4 categories: \(0-3.1, 3.2-3.5, 3.6-3.9, 4.0+\). 
In the sample, the overall student population was 38,154 of that total, there were 2,532 (6.6%) Latino undergraduate students. Among the Latinos (n= 2,532), a total of 2,049 (80.9%) were retained from the first-year to the second-year and 483 (19.1%) did not retain from the first-year to the second-year. Among the overall students (N=38,154), a total of 31,657 (83.0%) were retained from the first-year to the second-year and 6,497 (17.0%) did not retain from first-year to the second-year. The distribution varies between the two student populations in each GPA category mostly because the overall student population is so much greater than that of the Latino student population.

In the first GPA category (0-3.1), the total retention for the overall population was higher at 66.4% (3,769 of 38,154) than the total retention for the Latino population at 64.2% (283 of 2,532). In this GPA category, the overall population had better retention rates than the Latino population in half the cohorts. The cohorts where the Latino population had better retention rates were cohorts 2010, 2011, 2014, 2015, and 2016. The cohorts with the biggest difference in retention rate was in cohort 2009, with a Latino rate of 61.9% and overall retention of 74%, and cohort 2018, with a Latino rate of 51.9% and overall retention of 63%.

In the second GPA category (3.2-3.5), the total retention for the overall population was higher at 77.9% (8,439 of 38,154) than the total retention for the Latino population at 76.2% (606 of 2,532). In this GPA category, the overall population had better retention rates than the Latino population in most of the cohorts. The cohorts where the Latino population had better retention rates were cohorts 2009, 2013, and 2015. The cohorts with the biggest difference in retention rate were cohort 2016, with a Latino rate of 66.7% and overall retention of 76%, and cohort 2018, with a Latino rate of 68% and overall retention of 75.4%.
In the third GPA category (3.6-3.9), the research found an interesting surprise. The total retention for the overall population was lower at 87.4% (11,638 of 38,154) than the total retention for the Latino population at 87.6% (778 of 2,532). It is also important to note that this GPA category (3.6-3.9) also had the highest total frequencies for both the Latino population and the overall population. In this GPA category, the overall population had better retention rates than the Latino population in half the cohorts. The cohorts where the Latino population had better retention rates were cohorts 2011, 2012, 2013, 2014, and 2017. The cohort with the biggest difference in retention rate was cohort 2015, with a Latino rate of 84.6% and overall retention of 88.3%.

In the last GPA category (4.0+), the total retention for the overall population was higher at 93.7% (7,766 of 38,154) than the total retention for the Latino population at 93.6% (382 of 2,532). It is also important to note that this GPA category (4.0+) had the highest total retention rate when compared to all other categories. In this GPA category, the overall population had better retention rates than the Latino population in most of the cohorts. The cohorts where the Latino population had better retention rates were cohorts 2011, 2012, and 2017. The cohort with the biggest difference in retention rate was cohort 2009, with a Latino rate of 83.3% and overall retention of 93.3%.

**Latino Retention by Area of Study**

Table 6 (Appendix F) presents the frequencies and percentages for students who retained from first-year to second-year for both populations and are separated by area of study. This was done for both Latino students and overall students separately within each retention cohort. Further, the area of study is determined by the college that the students were enrolled in. There are six categories or colleges that the student populations were enrolled in a) College of
Agriculture, Food, and Life Science (AFLS); b) School of Architecture and Design (ARCH); c) College of Arts and Sciences (ARSC); d) College of Education and Health Professions (EDUC); e) College of Engineering (ENGR); f) College of Business (WCOB).

In the sample, the overall student population was $N=38,154$ of that total, there were 2,532 (6.6%) Latino undergraduate students. Among the Latinos ($n=2,532$), a total of 2,049 (80.9%) were retained from the first-year to the second-year and 483 (19.1%) did not retain from the first-year to the second-year. Among the overall students ($N=38,154$), a total of 31,657 (83.0%) were retained from the first-year to the second-year and 6,497 (17.0%) did not retain from the first-year to the second-year. The distribution varies between the two student populations in each area of study category mostly because the overall student population is so much greater than that of the Latino student population.

In the first area of study category, College of Agriculture, Food, and Life Science (AFLS), the total retention for the overall population was higher at 85.0% (1,978 of 38,154) than the total retention for the Latino population at 81.9% (86 of 2,532). Notably, AFLS also has the highest total retention rate for the overall population at 85%. In this area of study category, the overall population had better retention rates than the Latino population in most of the cohorts. The cohorts where the Latino population had better retention rates were cohorts 2010, 2014, and 2017. The cohorts with the biggest difference in retention rate were in cohort 2016, with a Latino retention rate of 61.5% and overall retention of 81.5%, and cohort 2018, with a Latino rate of 61.5% and overall retention of 88%.

In the next area of study category, the School of Architecture and Design (ARCH), the total retention for the overall population was higher at 84.1% (810 of 38,154) than the total retention for the Latino population at 75.3% (67 of 2,532). Notably, ARCH also has the lowest
total retention rate for the Latino population at 75.3%. Furthermore, ARCH also had the lowest total frequencies at 67 for Latino students and 810 for overall students. In this category, the overall population had better retention rates than the Latino population in most of the cohorts. The only cohort where the Latino population had better retention rates was cohort 2017. ARCH also had the most cohorts (4/10) with the biggest difference in retention rate. They were in cohort 2009, with a Latino rate of 60% and overall retention of 81.6%; cohort 2011 with a Latino rate of 66.7% and overall retention of 81.1%; cohort 2015, with a Latino rate of 62.5% and overall retention of 84.2%; and cohort 2018, with a Latino rate of 63.6% and overall retention of 86.8%.

In the third area of study category, the College of Arts and Sciences (ARSC), the results gave another interesting surprise. ARSC was the only category where the total retention rates for the overall population were lower than those of the Latino population. The total retention for the overall population was lower at 81.7% (10847 of 38154) than the total retention for the Latino population at 82.4% (752 of 2532). It is also important to note that ARSC also had the highest total retention rate for the Latino population at 82.4%. However, the overall population still had better retention rates than the Latino population in most of the cohorts. The cohorts where the Latino population had better retention rates were cohorts 2010, 2011, 2017, and 2018. The cohort with the biggest difference in retention rate was cohort 2011, with a Latino rate of 87.7% and overall retention of 79.9%.

In the fourth area of study category, College of Education and Health Professions (EDUC), similar to the other categories, the total retention for the overall population was higher at 82.8% (5274 of 38154) than the total retention for the Latino population at 80.3% (297 of 2532). In EDUC, the overall population also had better retention rates than the Latino population in most of the cohorts. The cohorts where the Latino population had better retention rates were
2009, 2013, and 2014. The cohorts with the biggest difference in retention rate were cohort 2010, with a Latino rate of 66.7% and overall retention of 81.7%, and cohort 2012, with a Latino rate of 70.4% and overall retention of 82%.

In the fifth area of study category, College of Engineering (ENGR), the total retention for the overall population was higher at 83.6% (5076 of 38154) than the total retention for the Latino population at 79.1% (372 of 2532). In ENGR, the overall population had better retention rates than the Latino population in most of the cohorts. There was only one cohort where the Latino population had better rates which was in cohort 2012 and interestingly there was also a cohort where retention rates and that was in cohort 2014. The cohorts with the biggest difference in retention rate were cohort 2009, with a Latino rate of 50% and overall retention of 82.1%, and cohort 2010, with a Latino rate of 75% and overall retention of 86.1%.

In the last area of study category, College of Business (WCOB), the total retention for the overall population was higher at 83.8% (7672 of 38154) than the total retention for the Latino population at 81.2% (475 of 2532). Similarly, to the other categories in WCOB, the overall population had better retention rates than the Latino population in most of the cohorts. The cohorts where the Latino population had better retention rates were 2009, 2013, and 2015. The cohort with the biggest difference in retention rate was cohort 2009, with a Latino rate of 95.8% and overall retention of 85.2%.

Therefore, the researcher was able to conclude that retention rates for Latino undergraduate students were lower than that of the overall student population based on the three factors of Gender, HS GPA, and Area of study. In terms of gender, Latino female students to overall female students, overall females \((n=20,499)\) had a higher retention rate of 17,378 (84.8%) than Latino females \((n=1418)\) which had a retention rate of 1,185 (83.6%). Similarly, overall
male students (n=17,655) had a higher retention rate of 14,279 (80.9%) than Latino male students (n=1,114) who had a retention rate of 864 (77.6%). In terms of GPA, Latino students had lower retention rates in three subcategories (0-3.1, 3.2-3.5, 4.0+). However, in the subcategory (3.6-3.9), the retention for the Latino population was higher at 87.6% (778 of 2,532) than the retention for the overall population at 87.4% (11,638 of 38,154). Lastly, in terms of Area of study, Latino students had lower retention rates in most subcategories (AFLS, ARCH, EDUC, ENGR, WCOB). However, Latino students had higher retention rates in ARSC.

Research Question 3

3. Was there a significant difference between Latino male student retention and Latino female student retention, from first-year to second year, at the University of Arkansas over 10 years?

Research question 3 to research question 6 focused specifically on the Latino undergraduate student population and subsequently, the Latino student data were pulled from the overall sample. The overall student population was 38,154; of that total, 2,532 (6.6%) were Latino undergraduate students. This was the Latino sub-sample data analyzed that was used to answer question 3 through question 6.

Table 7. shows descriptive data on Latino retention by gender from 2009 to 2018 retention cohorts. In the sub-sample of Latinos (N=2532), 1,418 (56.0%) were female and 1,114 (44.0%) were male. Among Latino undergraduate students, Latino females (n=1418) had a total retention rate of 1,185 (84%) and Latino males (n=1,114) had a retention rate of 864 (78%). This can be found in the mean column of Table 7., which also shows that the total retention rate for the Latino rate is 81%.
Table 8. shows the results of the one-way ANOVA to determine whether there was any significant difference between the retention rate of Latino females and Latino males when all the cohorts were analyzed. The results from the ANOVA showed a p-value of (<.001) in the Significance column, which indicates that no significant difference was identified between the retention rates of Latino female and Latino male undergraduate students who were part of the study.

Table 7.
Male vs Female Latino Students First Year Retention from 2009-2018

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>114</td>
<td>.78</td>
<td>.417</td>
<td>.013</td>
<td>.75 to .80</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>1418</td>
<td>.84</td>
<td>.371</td>
<td>.010</td>
<td>.82 to .85</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>2532</td>
<td>.81</td>
<td>.393</td>
<td>.008</td>
<td>.79 to .82</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 8.
Male vs Female Latino Students First Year Retention from 2009-2018

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2.253</td>
<td>1</td>
<td>2.253</td>
<td>14.671&lt;.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>388.610</td>
<td>2530</td>
<td>.154</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Total</td>
<td>390.864</td>
<td>2531</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

Therefore, the answer to question 3 was that there was no significant difference between Latino male student retention and Latino female student retention, from first-year to second year, at the University of Arkansas over 10 years.
Research Question 4

4. Was there a significant difference between retention rates, from first year to second year, of first-generation Latino Undergraduate students and non-first-generation Latino Undergraduate students at the University of Arkansas over 10 years?

Research question 4 used the same sub-sample of the Latino undergraduate student population and ran descriptive statistics and an ANOVA to determine if there was a difference between the retention rate of Latino first-generation students versus students who were not first-generation. The following were the results.

Table 9. shows descriptive data on Latino retention by first-generation status from 2009 to 2018 retention cohorts. In the sub-sample of Latinos \((n= 2,532)\), 1,249 (49.3%) were non-first generation and 1,283 (50.7%) were first-generation college students. Among these Latino undergraduate students, Latino non-first-generation students \((n=1,249)\) had a total retention rate of 84% and Latino first-generation students \((n=1,114)\) had a retention rate of 84%. The mean column also shows that the total retention rate for the total Latino rate population \((n= 2532)\) was 81%.

Table 10. shows the results of the one-way ANOVA to determine whether there was any significant difference between the retention rate of Latino first-generation and Latino non-first-generation students when the total population was analyzed. The results from the ANOVA showed a p-value of \(<.001\) in the significance column, which means that there is no significant difference between the retention rates of Latino first-generation and Latino non-first-generation undergraduate students from this sample.
Table 9.
First Gen vs Non-First-Gen Latino Students First Year Retention from 2009-2018

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFG</td>
<td>1249</td>
<td>.84</td>
<td>.368</td>
<td>.010</td>
<td>.82</td>
<td>.86</td>
<td>0</td>
</tr>
<tr>
<td>FG</td>
<td>1283</td>
<td>.78</td>
<td>.414</td>
<td>.012</td>
<td>.76</td>
<td>.80</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>2532</td>
<td>.81</td>
<td>.393</td>
<td>.008</td>
<td>.79</td>
<td>.82</td>
<td>0</td>
</tr>
</tbody>
</table>

NFG= Non-First Generation; FG= First Generation

Table 10.
First Gen vs Non-First Gen Latino Students First Year Retention from 2009-2018

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2.193</td>
<td>1</td>
<td>2.193</td>
<td>14.277</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>388.670</td>
<td>2530</td>
<td>.154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>390.864</td>
<td>2531</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

Therefore, the answer to question 4 was that there was no significant difference between the retention of Latino first-generation undergraduate students and Latino non-first-generation undergraduate students, from first-year to second year, at the University of Arkansas over a 10-year period of time.

Research Question 5

5. Was there a significant difference between retention rates, from first-year to second year, of low-income Latino undergraduate students and non-low-income Latino undergraduate students at the University of Arkansas over a 10-year period of time?

Research question 5 also used the same sub-sample of the Latino undergraduate student population and ran descriptive statistics and an ANOVA to determine if there was a difference
between the retention rate of Latino students who were considered low-income students versus students who were not low-income students. It is important to note that Pell eligibility was used to determine low-income status. The following were the results.

Table 11. shows descriptive data on Latino retention by low-income status from 2009 to 2018 retention cohorts. In the sub-sample of Latinos \( n = 2532 \), 1423 (56.2%) were non-low-income undergraduate students and 1109 (43.8%) were low-income undergraduate students. Among these Latino undergraduate students, Latino non-low-income students \( n = 1423 \) had a total retention rate of 84% and Latino low-income students \( n = 1109 \) had a retention rate of 77%. The mean column shows that the total retention rate for the total Latino rate population \( n = 2532 \) was 81%.

Table 12. shows the results of the one-way ANOVA to determine whether there was any significant difference between the retention rate of Latino low-income and Latino non-low-income students when the total population was analyzed. The results from the ANOVA showed a p-value of \(<.001\) in the significance column, which means that there is no significant difference between the retention rates of Latino low-income and Latino non-low-income undergraduate students from this sample.

Table 11.
Low-Income vs Non-Low-Income Latino Students First Year Retention from 2009-2018

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NLI</td>
<td>1423</td>
<td>.84</td>
<td>.365</td>
<td>.010</td>
<td>.82</td>
<td>.86</td>
<td>0</td>
</tr>
<tr>
<td>LI</td>
<td>1109</td>
<td>.77</td>
<td>.423</td>
<td>.013</td>
<td>.74</td>
<td>.79</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>2532</td>
<td>.81</td>
<td>.393</td>
<td>.008</td>
<td>.79</td>
<td>.82</td>
<td>0</td>
</tr>
</tbody>
</table>

\( NLI = \) Non-Low-Income; \( LI = \) Low Income
Therefore, the answer to question 5 was that there was no significant difference between the retention of Latino low-income undergraduate students and Latino non-low-income undergraduate students, from first-year to second year, at the University of Arkansas over a 10-year period of time.

Research Question 6

6. Was there a significant difference between retention rates, from first-year to second year, of in-state Latino undergraduate students and out-of-state Latino undergraduate students at the University of Arkansas over a 10-year period of time?

Finally, Research Question 6, like the previous four questions, used the same sub-sample of the Latino undergraduate student population and ran descriptive statistics and an ANOVA to determine if there was a difference between the retention rate of Latino students who were in-state students versus students who were out-of-state students in the sample. The following were the results.

Table 13. shows descriptive data on Latino retention by in-state status from 2009 to 2018 retention cohorts. In the sub-sample of Latinos (n= 2532), 883 (34.9%) were out-of-state undergraduate students and 1649 (65.1%) were in-state undergraduate students. Among these Latino undergraduate students, Latino out-of-state students (n=883) had a total retention rate of

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3.462</td>
<td>1</td>
<td>3.462</td>
<td>22.607</td>
</tr>
<tr>
<td>Within Groups</td>
<td>387.402</td>
<td>2530</td>
<td>.153</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>390.864</td>
<td>2531</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05
80%, and Latino in-state students (n=1649) had a retention rate of 81%. The mean column shows that the total retention rate for the total Latino rate population (n= 2532) was 81%.

Table 14. shows the results of the one-way ANOVA to determine whether there was any significant difference between the retention rate of Latino in-state and Latino out-of-state undergraduate students when the total population was analyzed. The results from the ANOVA showed a p-value of (.555) in the Significance column, which means that there was no significant difference between the retention rates of Latino in-state and Latino out-of-state undergraduate students from this sample.

Table 13.
*In-State vs Out-of-State Latino Students First Year Retention from 2009-2018*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>883</td>
<td>.80</td>
<td>.398</td>
<td>.013</td>
<td>.78</td>
<td>.83</td>
<td>0</td>
</tr>
<tr>
<td>IS</td>
<td>1649</td>
<td>.81</td>
<td>.390</td>
<td>.010</td>
<td>.79</td>
<td>.83</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>2532</td>
<td>.81</td>
<td>.393</td>
<td>.008</td>
<td>.79</td>
<td>.82</td>
<td>0</td>
</tr>
</tbody>
</table>

OS= Out-of-State; IS= In-State

Table 14.
*In-State vs Out-of-State Latino Students First Year Retention from 2009-2018*

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.054</td>
<td>1</td>
<td>.054</td>
<td>.348</td>
</tr>
<tr>
<td>Within Groups</td>
<td>390.810</td>
<td>2530</td>
<td>.154</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>390.864</td>
<td>2531</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

Therefore, the answer to question 6 was that there was no significant difference between the retention of Latino in-state undergraduate students and Latino out-of-state undergraduate students, from first-year to second year, at the University of Arkansas over a 10-year period of
time. It is important to add that research question three to six resulted in ANOVAs with no significant difference and therefore was not necessary to run a post-hoc test.

D. Chapter Summary

The chapter presented the results of descriptive statistics and one-way ANOVAs to determine if there were significant differences between Latino students to retain from first-year to second-year over the course of 10 years, from 2009-2018, at the University of Arkansas, a public research midwestern university. The results showed that descriptive statistics showed that the majority of Latino undergraduate students from these cohort samples were only a small percentage. There were 2,532 Latino undergraduate students in of the overall population of 38,154, which was 6.6% of the overall student population. In research question 1, the results from descriptive statistics showed that Latino undergraduate students within the sample were more likely to be first-generation and low-income students. Among Latinos undergraduate students 50.7% were first-generation students and 43.8% were low-income students compared to the overall population 24.3% were first-generation students 24.3% and 23.0% were Low-income students. Research question 2 also used descriptive statistics to determine that Latino undergraduate students retained from, first-year to second year, at lower rates based on Gender, High school GPA, and Area of Study (College) than that of the overall student population.

As for the second set of research questions (research questions 3-6), the results from the ANOVA analysis indicated that when controlling for all the other predictors in the study, that there was no significant difference in the retention rate of female Latino vs male Latino, first-generation Latino vs non-first-generation Latino, low-income Latino vs non-low-income Latino, and in-state Latino vs out-of-state Latino within the Latino sub-sample of the retention cohort data.
Chapter V

Conclusions and Recommendations

A. Introduction

As the US continues to change demographically, so do its institutions of higher education. However, many higher education institutions do not have a history of being racially inclusive, and as a result, research and best practices around retention and student success have not been developed for Latino students, specifically. Although there has been a surge in scholarship on diversifying higher education, literature, and the identification of best practices focused on the retention of students from different underrepresented populations have only begun to emerge. Of specific interest to the current study, there is little scholarship or reporting of best practices for Latino student retention. In their research, Crisp, Taggart, & Nora (2015) found that existing reviews are also limited in that they focus on a single college academic outcome (i.e., persistence) rather than a broad range of academic outcomes such as transfer to a four-year institution or degree completion. (p. 5) Other research suggests the need for more literature on Latino retention and more specifically in the US Midwest/South.

This study attempted to add to the literature and develop a better understanding of Latino undergraduate student retention patterns at the University of Arkansas, a midwestern public four-year university. The purpose was achieved by examining Latino undergraduate student retention data from retention cohorts at the University of Arkansas. The retention cohorts consisted of undergraduate students at the University of Arkansas who were traditional first-time; full-time status; and degree-seeking. This chapter provides a summary of the study results, discusses its results and conclusions, and presents recommendations for future research and practice.
B. Summary of the Study

The purpose of conducting the study was to develop a better understanding of Latino undergraduate student retention patterns at a midwestern public four-year research university. The study examined Latino undergraduate student retention data from retention cohorts at the University of Arkansas. The retention cohorts consisted of undergraduate students at the University of Arkansas who were traditional first-time, full-time, and degree-seeking.

The study was a nonexperimental ex post facto quantitative research study that uses institutional pre-existing data to analyze Latino undergraduate student retention over a 10-year period, from 2009-2018, at the University of Arkansas. The data collected from the Office of Institutional Research and Innovation provided the Retention Cohorts from 2009 to 2018. In total, the study had an overall student population (N=38,154) of that total there were n=2,532 Latino undergraduate students for use in the data analysis. Research questions 1 and 2 used descriptive statistics to compare profiles and student retention between Latino students and the overall student population. Research questions 3-6 used descriptive statistics and ANOVAs to compare populations within the sub-sample of only Latino undergraduate students (n=2532) The following were the results for each research question.

Research question 1

1. What was the academic profile of Latino undergraduate students in retention cohorts and how does it compare to the overall student population in the retention cohorts, at the University of Arkansas over a 10-year period of time?

For research question 1, the researcher has concluded that the academic profile of Latino undergraduate students was similar to the overall undergraduate student profile when it comes to characteristics such as gender, in-state status, mean GPA, and mean HS GPA. However, there
was a large difference between the student populations when looking at Low-income status and First-generation status. Among Latinos undergraduate students 50.7% were first-generation students and 43.8% were low-income students compared to the overall population 24.3% were first-generation students 24.3% and 23.0% were Low-income students.

**Research question 2**

2. What were the retention rates, based on gender, entering collegiate grade point average, and area of study, for Latino undergraduate students and how do they compare to the overall student population, at the University of Arkansas over a 10-year period of time?

For research question 2, the researcher was able to conclude that retention rates for Latino undergraduate students were lower than that of the overall student population based on the three factors of Gender, HS GPA, and Area of study. In terms of gender, Latino female students to overall female students, overall females ($n=20,499$) had a higher retention rate of 84.8% (17,378) than Latino females ($n=1,418$) which had a retention rate of 83.6% (1,185). Similarly, overall male students ($n=17,655$) had a higher retention rate of 80.9% (14,279) than Latino male students ($n=1,114$) who had a retention rate of 77.6% (864). Lastly, Latino females had higher total retention rates 83.6% than the overall males 80.9%. In terms of GPA, Latino students had lower retention rates in three subcategories (0-3.1, 3.2-3.5, 4.0+). However, in the subcategory (3.6-3.9), the retention for the Latino population was higher at 87.6% (778 of 2,532) than the retention for the overall population at 87.4% (11,638 of 38,154). Lastly, in terms of Area of study, Latino students had lower retention rates in most subcategories (AFLS, ARCH, EDUC, ENGR, WCOB). However, Latino students had higher retention rates in ARSC.
Research question 3

3. Was there a significant difference between Latino male undergraduate student retention, from first-year to second-year, and Latino female retention rates, from first-year to second-year, at the University of Arkansas over a 10-year period of time?

In research question 3, the researcher determined that there was no significant difference between Latino male student retention and Latino female student retention, from first-year to second year, at the University of Arkansas over 10 years. Among Latino undergraduate students, Latino females \((n=1418)\) had a total retention rate of 84% \((1,185)\) and Latino males \((n=1,114)\) had a retention rate of 78% \((864)\). The results from the ANOVA showed a p-value of \(<.001\) that no significant difference was identified between the retention rates of Latino female and Latino male undergraduate students.

Research question 4

4. Is there a significant difference between retention rates, from first-year to second-year, of First-generation Latino Undergraduate students and Non-First-generation Latino Undergraduate students at the University of Arkansas over a 10-year period of time?

In research question 4, the researcher determined that there was no significant difference between the retention of Latino First-generation undergraduate students and Latino Non-first-generation undergraduate students, from first-year to second year, over a 10-year period of time. Among these Latino undergraduate students, Latino Non-first-generation students \((n=1,249)\) had a total retention rate of 84% and Latino First-generation students \((n=1,283)\) had a retention rate of 78%. Further, the ANOVA showed a p-value of \(<.001\) in the Significance column, which means that there is no significant difference between the retention rates of Latino First-generation and Latino Non-first-generation undergraduate students.
Research question 5

5. Was there a significant difference between retention rates, from first-year to second-year, of Low-income Latino undergraduate students and non-low-income Latino Undergraduate students at the University of Arkansas over a 10-year period of time?

In research question 5, the researcher determined that there was no significant difference between the retention of Latino low-income undergraduate students and Latino non-low-income undergraduate students, from first-year to second year, over a 10-year period of time. Among these Latino undergraduate students, Latino non-low-income students (n=1423) had a total retention rate of 84% and Latino low-income students (n=1,109) had a retention rate of 77%.

Further, the ANOVA showed a p-value of (<.001) in the Significance column, which means that there is no significant difference between the retention rates of Latino low-income and Latino non-low-income undergraduate students.

Research question 6

6. Was there a significant difference between retention rates, from first-year to second-year, of in-state Latino Undergraduate students and out-of-state Latino undergraduate students at the University of Arkansas over a 10-year period of time?

In research question 6, the researcher determined that there was no significant difference between the retention of Latino In-state undergraduate students and Latino Out-of-state undergraduate students, from first-year to second year, over a 10-year period of time. Among Latino undergraduate students, Latino Out-of-state students (n=883) had a total retention rate of 80%, and Latino In-state students (n=1,649) had a retention rate of 81%. The ANOVA showed a p-value of (.555) in the Significance column, which means that there was no significant
difference between the retention rates of Latino In-state and Latino Out-of-State undergraduate students.

C. Conclusions

1. When looking at the academic profile of Latino undergraduate students in retention cohorts and how it compared to the overall student population, at the University of Arkansas over a 10-year period of time, the researcher concluded that Latino students would likely be a female student who was likely to be first-generation, low-income, has a 25 ACT score, has 3.6 GPA, and is mostly likely an in-state student. While the Latino students would have a similar profile to that of the overall student population, the main difference was that Latino students are more likely to be first-generation students and/or low-income students.

2. Next, when looking at Latino undergraduate students' retention rates, based on gender, entering collegiate grade point average, and area of study, and how they compared to the overall student population, the researcher concluded a couple of things for each group of retention rates. First, Latino students had lower retention rates in most categories than that of the overall student population. In terms of gender, Among the overall student populations female students had higher retention rate than that of male students. Similarly, among Latino students female students also had higher retention rate than Latino male students. Further, overall females had higher retention rates than Latino females. And overall males had higher retention rates Latino males. However, Latino females had higher retention rates than overall males. In terms of GPA, Latino students had lower retention rates in than the overall student population except for those Latino students that were between the GPA of (3.6-3.9). And in terms of Area of study, Latino students had lower retention rates in most subcategories (AFLS, ARCH, EDUC, ENGR, WCOB). However, Latino students had higher retention rates in ARSC.
3. When looking at the difference in student retention, from first-year to second-year, between Latino female and Latino male undergraduate students, Latino females have higher retention rates than those of Latino male students but not enough to be a significant difference.

4. Further, when looking at the difference in student retention, from first-year to second-year, between Latino first-generation and Latino non-first-generation undergraduate students, Latino non-first-generation had a higher retention rate than Latino first-generation students but also not large enough to be considered a significant difference.

5. When looking at the difference in student retention, from first-year to second-year, between Latino low-income and Latino non-low-income students, non-low-income students had higher retention rates than of low-income students. Just like in the previous two research questions, there was not enough to be considered a significant difference.

6. Finally, when looking at the difference in student retention, from first-year to second-year, between Latino in-state and Latino out-of-state students, in-state Latino students had similar retention rates but were slightly better than the rates of out-of-state students. Again, there was no significant difference between the two.

D. Recommendations

Recommendations for Research

This study examined Latino undergraduate student retention data from retention cohorts at the University of Arkansas. The retention cohorts consisted of undergraduate students at the University of Arkansas, who were traditional first-time, full-time, and degree-seeking. While there is much more research to be done on Latino undergraduate students in four-year public research universities, this study provides some insight into the retention patterns at the University
of Arkansas. And the hope is that it is the beginning of more research to come. The following are the researcher’s recommendations for future research.

1. The first recommendation for research is that the study be replicated with a larger sample size of Latino undergraduate students. The small sample size made it difficult when looking at percentages when looking at small frequencies. In anything lower than 20 frequencies the impact of one or two students could affect the data significantly.

2. The second recommendation for research is that the study be replicated but to focus on four-year and 6-year graduation rates as opposed to just first-year retention. Looking at first-year retention only tells one part of the story and a study on graduation rates could prove very useful. The results from that data could also be very valuable to researchers and administration.

3. The third recommendation for research is that future research would be done to determine what identifying factors have the most effect on Latino undergraduate student retention. This study looked at the profile and comparison analysis, however a study that looks at cause and effect would be a great addition to the literature on Latino retention and persistence.

4. The fourth recommendation for research is that a mixed-method study be done so that qualitative data is also included to help highlight some of the factors that affect Latino undergraduate retention. Student narratives would be very insightful to future studies.

5. The final recommendation for research is that future studies also look at the whole Latino student population at the UA. The study only looked at retention cohort data only captured a portion of the Latino students but did not include Latino graduate students, transfer students, part-time students, and non-traditional students. This was because the
Recommendations for Practice

As mentioned, this study examined Latino undergraduate student retention data from retention cohorts at the University of Arkansas. The retention cohorts consisted of undergraduate students at the University of Arkansas, who were traditional first-time, full-time, and degree-seeking. The data from this study can be used to help University of Arkansas administrators and student affairs professionals make data-informed action plans that can help increase the retention of Latino undergraduate students. The following are the researcher’s recommendations for practice.

1. Administrators and professionals should use the profile of Latino undergraduate students at the University of Arkansas. It is important to highlight that Latino undergraduate students have a higher chance of being first-generation and/or low-income. Administrators and SA professionals should create a campaign to connect Latino students to the already established resources on campus that assist students who are first-generation and/or low-income.

2. UA administrators and SA professionals should review data that reflect the largest gaps in retention rates of Latino students at the University of Arkansas. This information may provide insight into how to better help Latino students based on their Gender, GPA, and Area of study. This information could also guide the development of resources and programming aimed at the retention of Latino students.

3. UA administrators and SA professionals should establish a culture of research-based decision-making in regard to Latino undergraduate students. The steady increase in
Latino student populations requires that administrators and SA professionals be well-versed in how to best retain these Latino Students.

4. Increase the Representation of Latino Staff, Faculty, and Researchers at the University of Arkansas.

E. Discussion

In the study, the researcher looked at the retention of Latino undergraduate students over a 10-year time frame at the University of Arkansas, a public research institution in the US Midwest. The following are some of the points for discussion. One of the main objectives of this study was to add to the literature on Latino graduate retention for universities located in the Midwest. The reason that this is so important is that the Latino population in the area is fairly new and has to navigate a black-and-white binary that is still trying to make sense of their relationship. Arredondo and Bustamante (2020) noted this as there remains a conceptual-theoretical void regarding racialized space productions in new immigrant neighborhoods and locales across the US South and rural Midwest.

This only complicates the arrival of new demographics and diverse populations because when new populations begin to arrive, they will have different needs then those that were traditionally only Black and White. This is very much the case for the Latino population and Northwest Arkansas. Something else that should be considered is that the Latina population in the area and Arkansas has a very different history than what you may see in other high Hispanic/Latino states. For example, states like Texas, Arizona, New Mexico, and California may have Latinos that have their own history that dates back overall several generations. This gives them a long history of them finding their place in those states that now drives who they are and their identity as Chicanos or early Latinos in the US. The difference with the Latino populations in
Arkansas is that most of them are first-generation American. Perla Guerrero (2010) pointed out that one of the main reasons that the Latino community ended up in Northwest Arkansas was the poultry industry and, in most cases, this was the first arrival from their native land. So, there is no history of Chicano-eism but rather it's more a Latino community that is trying to make sense of their new life in Arkansas. Similarly, it is also an Arkansas, a Midwestern/Southern state, that is still trying to figure out how to adjust to a new influx of diversity.

One may wonder why this history is important. The reason is that this gives us an insight into who the Latino student population at the University of Arkansas is. This is also why theories such as Latino retention theory are very much needed because they highlight the individual needs of a Latino population not only on the Latino identity but more so on the intersection and history of such. This was also the reason that the researcher decided to use the Latino critical race theory because there was no framework that was specific to the Latino student population. LatCrit was the closest thing that could lead this research to consider the different characteristics of Latino students. This was pointed out in the literature review where Bernal (2002) stated that (“LatCrit” is a theory that elucidates Latinas/Latinos’ multidimensional identities and can address the intersectionality of racism, sexism, classism, and other forms of oppression. This intersectionality offers an important lens from which to envision a raced-gendered epistemology, especially for Chicanas/Latinas (p. 108).

The findings in the research highlighted that about half of the Latino population in the study is first-generation and or low-income. This could be attributed to the fact that the Latino population is still so new to the area and so the Latino community is still building a generation of wealth and a generation that have not had the opportunity to go to college. This leads the researcher to believe that the number of Latino students in college will only continue to increase.
in the Northwest Arkansas area. Especially as the generational wealth begins to grow and the Latino community begins to enroll in higher education. And if that is the case, the research recommends that the University of Arkansas make sure they have the infrastructure to help those Latino First-generation and/or low-income students as they may not have the preparation to navigate the college process. Thayer (2000) pointed this as “They are likely to lack knowledge of time management, college finances and budget management, and the bureaucratic operation of higher education”.

Lastly, the study found there is no significant difference when comparing retention rates of the Latino undergraduate sub-population when looking at gender, low-income status, first-generation status, and in-state status. The researcher believes there may be two reasons for this. First, the sub-population of Latino undergraduate students may still be too small to give the most accurate results. Second, the University of Arkansas must recruit a very specific type of Latino undergraduate student that is primed to retained based on their HS GPA and ACT requirements. This could be because of the admission requirements that requires a specific GPA and ACT score. It is also important to remember that the Latino sub-population does not include transfer students and non-traditional students which may enter the University of Arkansas with different GPA’s and ACT scores than what the University requires for admission. For this reason, the researcher recommended that future research include the whole Latino population that includes all the Latino students that were omitted from this study.

**F. Chapter Summary**

This chapter presents a comprehensive summary of the study, addressing all six research questions that served as the study's purpose. Six key conclusions drawn from the study are also shared, along with five recommendations for further research and three recommendations for
practice, that could benefit University of Arkansas administrators in their retention efforts of Latino undergraduate students. Moreover, the chapter delves into a discussion about the results and findings. Finally, study hopes to contribute in advancing Latino retention research at the University of Arkansas, potentially serving as a case study for other public research universities in the Midwest/South U.S.
References

https://static.ark.org/eeuploads/adhe/2.1_Annual_Report_on.Student_Retention_and_Graduation.pdf


Burke, A. (2019). Student retention models in higher education: A literature review. College and University, 94(2), 12-21


Appendix A: IRB Exemption Letter

IRB Exemption Letter

Ramon Balderas

Subject: IRB Process inquiry

From: IRB Coordinator <irb@uark.edu>
Sent: Thursday, March 9, 2023 9:30 AM
To: Ramon Balderas <rbalderas@uark.edu>
Subject: Re: IRB Process inquiry

Ramon,

As we discussed in person, the regulatory definition of a "human subject" is "a living individual about whom an investigator conducting research (i) obtains information or biospecimens through intervention or interaction with the individual, and uses, studies, or analyzes the information or biospecimens; or (ii) obtains, uses, studies, analyzes, or generates identifiable private information or identifiable biospecimens". As you will not be interacting with the people about whom you are collecting data, they don't meet definition (i), and as you stated that another department would be gathering the dataset together for you, you will never have access to the original identifiable data, only the final dataset containing the datapoints listed below, then there is not enough information in those datapoints to be considered identifiable, and it does not meet category (ii).

I would say this does NOT meet the definition of research with "human subjects" by the regulatory definition, and does not require IRB review. You may proceed with your research without IRB oversight.

Thank you for checking,

Ro

Iroshi (Ro) Windwalker, CIP
IRB Coordinator
Research Integrity and Compliance
Appendix B: Table 1

Table 1.

*National Retention and Persistence Rate 2009-2017*

<table>
<thead>
<tr>
<th>Beginning Enrollment Intensity</th>
<th>Fall 2009 Entering Cohort</th>
<th>Fall 2010 Entering Cohort</th>
<th>Fall 2011 Entering Cohort</th>
<th>Fall 2012 Entering Cohort</th>
<th>Fall 2013 Entering Cohort</th>
<th>Fall 2014 Entering Cohort</th>
<th>Fall 2015 Entering Cohort</th>
<th>Fall 2016 Entering Cohort</th>
<th>Fall 2017 Entering Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Retention Rate</td>
<td>63.2%</td>
<td>62.9%</td>
<td>62.9%</td>
<td>63.9%</td>
<td>65.0%</td>
<td>64.9%</td>
<td>66.3%</td>
<td>66.5%</td>
<td>66.7%</td>
</tr>
<tr>
<td>Persistence Rate</td>
<td>72.4%</td>
<td>72.3%</td>
<td>72.3%</td>
<td>73.2%</td>
<td>74.1%</td>
<td>74.1%</td>
<td>75.6%</td>
<td>75.8%</td>
<td>75.6%</td>
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<tr>
<td>Full-Time Retention Rate</td>
<td>70.2%</td>
<td>69.7%</td>
<td>69.6%</td>
<td>70.5%</td>
<td>71.5%</td>
<td>71.7%</td>
<td>73.3%</td>
<td>73.4%</td>
<td>73.2%</td>
</tr>
<tr>
<td>Persistence Rate</td>
<td>80.0%</td>
<td>79.6%</td>
<td>79.5%</td>
<td>80.2%</td>
<td>81.0%</td>
<td>81.3%</td>
<td>83.0%</td>
<td>83.0%</td>
<td>82.4%</td>
</tr>
<tr>
<td>Part-Time Retention Rate</td>
<td>42.0%</td>
<td>41.4%</td>
<td>41.3%</td>
<td>42.1%</td>
<td>42.9%</td>
<td>42.3%</td>
<td>46.2%</td>
<td>45.7%</td>
<td>45.7%</td>
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<td>Persistence Rate</td>
<td>49.5%</td>
<td>49.3%</td>
<td>49.1%</td>
<td>50.0%</td>
<td>50.8%</td>
<td>50.2%</td>
<td>53.1%</td>
<td>52.6%</td>
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(The National Student Clearinghouse Research Center NSCRC, 2020)
### Appendix C: Retention Study Summary - Office of Institutional Research and Assessment

#### Retention and Graduation 1st Year Retention

<table>
<thead>
<tr>
<th>Fall Cohort</th>
<th>Overall</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Admission ACT Score</th>
<th>Admission HS GPA</th>
<th>Housing</th>
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<tr>
<td></td>
<td>2017</td>
<td>2018</td>
<td>2019</td>
<td>2020</td>
<td>2021</td>
<td>2021</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>5,032</td>
<td>4,977</td>
<td>4,562</td>
<td>4,685</td>
<td>6,012</td>
<td>83.3%</td>
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<td><strong>Gender</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>2,762</td>
<td>2,769</td>
<td>2,590</td>
<td>2,650</td>
<td>3,505</td>
<td>83.5%</td>
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<td>Male</td>
<td>2,270</td>
<td>2,208</td>
<td>2,062</td>
<td>2,035</td>
<td>2,507</td>
<td>80.3%</td>
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<td><strong>Ethnicity</strong></td>
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<tr>
<td>American Indian or Alaska Native</td>
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<td>43</td>
<td>36</td>
<td>21</td>
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<tr>
<td>Asian</td>
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<td>124</td>
<td>125</td>
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<td>86.8%</td>
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<tr>
<td>Black or African American</td>
<td>196</td>
<td>183</td>
<td>139</td>
<td>168</td>
<td>189</td>
<td>76.6%</td>
</tr>
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<td>Hawaiian or Pacific Islander</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>7</td>
<td>6</td>
<td>*57.1%</td>
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<td>Hispanic or Latino</td>
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<td>422</td>
<td>412</td>
<td>445</td>
<td>468</td>
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<td>Non-Resident Alien</td>
<td>55</td>
<td>43</td>
<td>48</td>
<td>29</td>
<td>41</td>
<td>90.9%</td>
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<tr>
<td>Two or more races</td>
<td>219</td>
<td>245</td>
<td>206</td>
<td>260</td>
<td>302</td>
<td>80.8%</td>
</tr>
<tr>
<td>Unknown</td>
<td>23</td>
<td>40</td>
<td>45</td>
<td>104</td>
<td>38</td>
<td>78.3%</td>
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<tr>
<td><strong>White</strong></td>
<td>3,955</td>
<td>3,870</td>
<td>3,527</td>
<td>3,579</td>
<td>4,577</td>
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<td><strong>College</strong></td>
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<td>Agricultural Food and Life Sciences</td>
<td>305</td>
<td>318</td>
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<td>314</td>
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<td>Architecture</td>
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<td>157</td>
<td>189</td>
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<td>Arts and Sciences</td>
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<td>Education and Health Professions</td>
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<td>Engineering</td>
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<td>816</td>
<td>711</td>
<td>692</td>
<td>772</td>
<td>82.6%</td>
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<tr>
<td>Walton College of Business</td>
<td>1,389</td>
<td>1,347</td>
<td>1,334</td>
<td>1,327</td>
<td>1,818</td>
<td>84.2%</td>
</tr>
</tbody>
</table>

#### Updated: October 24, 2022

(University of Arkansas- Office of Institutional Research and Assessment, 2022)
Appendix D: Table 3 and Table 4

Table 3.
Retention Data based on Gender, Latino Students and Overall Student Population (Frequencies)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
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<tbody>
<tr>
<td>Latino</td>
<td>N= 2532</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Female Retention</td>
<td>97</td>
<td>152</td>
<td>208</td>
<td>217</td>
<td>261</td>
<td>270</td>
<td>314</td>
<td>394</td>
<td>393</td>
<td>271</td>
<td>1185</td>
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<td>Male Retention</td>
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<td>77</td>
<td>84</td>
<td>89</td>
<td>89</td>
<td>93</td>
<td>110</td>
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<td>864</td>
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<tr>
<td>Overall</td>
<td>N= 2528</td>
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<td>3854</td>
<td>3922</td>
<td>3713</td>
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Table 4.
Retention Data based on Gender, Latino Students and Overall Student Population (Percentage)

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Appendix E: Table 5

Table 5.  
*Retention Data based on High School GPA, Latino Students and Overall Student Population*

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*Total Latino Student Retention: N= 2532, Retained = 2049 (80.9%), Not Retained = 483 (19.1%)*  
*Total Overall Student Retention: N= 38154, Retained = 31657 (83.0%), Not Retained = 6497 (17.0%)*
Table 6.
Retention Data based on Area of Study, Latino Students and Overall Student Population

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Total Latino Student Retention: N= 2532, Retained = 2049 (80.9%), Not Retained = 483 (19.1%)
Total Overall Student Retention: N= 38154, Retained = 31657 (83.0%), Not Retained = 6497 (17.0%)