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AN ANALYSIS OF RACIAL DISPARITIES AFFECTING COLLEGE OF BUSINESS
DEGREE COMPLETION AT A UNIVERSITY'S SATELLITE CAMPUSES

by

John S. Jaggi

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Education

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ABSTRACT

An Analysis of Racial Disparities Affecting College of Business Degree Completion at a
University's Satellite Campuses

by

John S. Jaggi, Doctor of Philosophy

Utah State University, 2021

Major Professor: Dr. Ryan Knowles
Department: Teacher Education and Leadership

The longitudinal study investigated the completion rates of students of color enrolled in the Jon M. Huntsman School of Business at Utah State University's main and satellite campuses. Research focused on one key metric: degree completion.

This research study completed a survival analysis to determine whether racial disparities relating to academic achievement exist in the College of Business at Utah State University. This study also investigated whether the campus type (i.e., main campus, satellite campus) has an effect on graduation for students of color.

(184 pages)

PUBLIC ABSTRACT

An Analysis of Racial Disparities Affecting College of Business Degree Completion at a
University's Satellite Campuses

John S. Jaggi

This research study provides campus-type specific insight into the graduation rates of students of color at a departmental (i.e., School of Business) level. With underrepresented student populations comprising up to a third of business school enrollment, there is institutional and departmental value in understanding how, and at what levels, undergraduate business students of color persist and graduate at satellite campuses.

Findings from this study could be used to inform institutional and departmental administrators and program managers on different strategies to foster not only a more diverse matriculation, but also to improve graduation outcomes for underrepresented student populations. Study results could also provide insight into how campus differences (i.e., main, satellite) impact graduation rates.

DEDICATION PAGE

for Diane, Matthew, Isabel, Emily, and Lily
simply extraordinary in their support

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Chapter 1 Introduction

Overview

Each year, millions of undergraduate students in the United States enroll in degree-granting post-secondary institutions (IPEDS, 2020). Their reasons for embarking on this educational journey are often predicated on securing lifelong advantages. Advantages of completing collegiate studies are myriad and include increased intellectual capabilities, improved self-esteem and self-confidence, enhanced civic-mindedness, increased consumer savviness, and increased earning power (Gardner, Jewler, & Barefoot, 2007). These advantages are secured through colleges and universities that teach students a wide range of competencies and skills, positioning them to live responsible, ethical, productive, and creative lives (Haigh & Clifford, 2011; Rossi, 2014).

Recognizing these benefits, universities aspire to be places where diverse stakeholders can come together to achieve social meaning and understanding (Tyack & Tobin, 1994). The aspirational narrative espoused by universities asserts that no matter what a student's circumstances, higher education can be the great equalizer of opportunity. Those who want to succeed badly enough, will succeed. (Agu, 2019). In theory, each student that enrolls is provided an equal opportunity to succeed academically. In practice, however, the ideals of equality, open-mindedness, and individual worth aren't always realized. The higher education experience can differ for students based on their race (Arday & Mirza, 2018).

This unequal higher education experience results in students of color facing challenges that their White peers do not (Bourdieu & Passeron, 1979, 1990). These challenges can result in academic outcomes for students of color that are far lower than their White peers. The National Student Clearinghouse Research Center (2017) reported findings that showed a postsecondary

graduation rate of 62 percent for White students, 45.8 percent for LatinX students, and 38 percent for African-American students. Put simply, students of color persist and graduate at lower rates than their White peers in American universities (Arcidiacono & Koedel, 2014).

These graduation differentials are particularly troubling given the enrollment increases experienced by African-American and LatinX student populations. From 2000 to 2018, university enrollment rates among 18 to 24-year-old students increased from 31 to 37 percent for those who were African-American and from 22 to 36 percent for LatinX students (U.S. Department of Commerce, 2019). Given the increasing representation of students of color, institutions must critically evaluate their administrative, pedagogical, and curricular priorities and processes.

Adopting desegregation didn't (and won't) fix the inequality for students of color. W. E. B. Dubois (1935) forewarned of equal, segregated schooling versus unequal, integrated schooling when he stated, "There is no magic, either in mixed schools or in segregated schools. A mixed school with poor and unsympathetic teachers with hostile public opinion, and no teaching of truth concerning black folk, is bad. A segregated school with ignorant placeholders, inadequate equipment, poor salaries, and wretched housing is equally bad."

Universities, cognizant of the academic achievement disparities experienced by students of color, are intently focused on improving enrollment, retention, and graduation outcomes (Talbert, 2012). Utah State University, as an example, is not immune to these difficulties and pressures. 27,810 students enrolled in 2019. Of that total, just over 18 percent (5,053) are non-White. (USU AAA, 2019). Utah State, in publishing its institutional graduation rates that comprised the 2009-2019 academic years, reported an aggregate graduation rate of 53.7 percent (USU AAA, 2020). Narrowing the graduation scope down to 2019, 45 percent of all

undergraduate students graduated. Graduation rate disparities, based on race, are significant with the graduation rate for White students being 43.2 percent, 33.3 percent for Latin X students, and 27.3 percent for African-American students (Scholarships, 2020).

What universities, including Utah State University, might not be as aware of are departmental graduation differentials (e.g., College of Business). These departmental rates can vary widely. Southern Louisiana University in 1999, for example, recorded a 46.7 percent graduation rate for its Department of Communication, Sciences, and Disorders. For the same period, the Department of Sociology and Criminal Justice recorded a 12.8 percent graduation rate (Southeastern Louisiana University, 2006).

Utah State University's desire to understand and improve the academic outcomes of its students is made more challenging by its use of satellite campuses. Utah State University has one main campus and 39 other instructional locations which include statewide campuses, regional campuses, and extension offices. (Utah State University Quick Facts, 2019). Main and satellite campuses operate in different environments. As a result, the institutional structures of these different campus types may differ significantly (Fraser & Stott, 2015). Understanding and improving the academic outcomes of students accessing different campus types can be challenging.

In spite of the challenges associated with understanding race's impact in higher education, the deficits observed in graduation rates for students of color, the lack of published departmental achievement data, and the complexity associated with different campus types, academia should not be deterred from undertaking a thoughtful and thorough analysis of these phenomena. Higher education institutions, and the colleges within these institutions, will benefit

from understanding more completely how race affects graduation for students of color at both main and satellite campuses.

Theoretical Basis for this Study

Two mainstream approaches have been used to examine college student persistence: an economic approach and a student integration or student fit approach (John, Cabrera, Nora, & Asker, 2000; Perna, 1998). For the purpose of this study, the student integration approach will be used. The approach predicts college student persistence based on factors related to students' social and academic integration (Tinto, 1975).

The economic approach asserts that student persistence is contingent on price-response theories and the associated theory of targeted economic subsidies (Manski & Wise, 1983; St. John 1990; St. John, Kirshstein, & Noell, 1991; Stampen & Cabrera, 1986, 1988). Price-response theories focus on economic factors whereby and economic benefits of attending college outweigh any costs and benefits associated with alternative activities (e.g., working full-time). Naturally, an important component in these cost/benefit analyses is the student's perception of their ability to pay for college (Becker 1964). While the price-response theory provides a conceptual foundation for examining academic persistence, the theory of targeted subsidies involves the idea of influencing academic persistence behavior through subsidies targeted at specific groups based on their ability to pay. Grants, reduced tuition, work study programs, and low-interest loans all seek to equalize students on their ability to pay for college and to equally provide the benefits derived from attending college to all who desire a college degree (Bowen, 1977; Cabrera, Stampen, & Hansen, 1990). This economics-based line of research has typically focused on the overall effect of financial aid on persistence (Astin, 1975; Murdock, 1987; Stampen & Cabrera, 1986, 1988); the relationship of academic persistence decisions to charges

along with reduced tuition, grants, loans, and work-study awards (Astin, 1975; Nora, 1990; St. John, 1990, 1994; St. John, Kirshstein, & Noell, 1991; Voorhees, 1985); and the effectiveness of particular student aid offerings and their associated impact on the retention of minorities (Astin, 1975; Olivas, 1985; Nora, 1990; Nora & Horvath, 1989; St. John, 1990).

Providing an alternative to the economic approach, the student integration approach views persistence decisions as the end result of a successful match between a student and their academic and social environment in collegiate education settings (Bean, 1980; Spady, 1970, 1971; Tinto, 1987, 1993). Student experiences with the academic and social components of an institution are believed to play an important role in the development of the student. In turn, the development achieved by a student is presumed to affect a student's commitments to an institution and to persisting through to graduation. The stronger these bonds and commitments are, the greater the probability that a student will remain persist in college (Tinto 1987, 1993).

In Tinto's Student Integration Model of Attrition, various types of individual characteristic affected the student's commitment degree completion. The characteristics that Tinto highlighted as being important in influencing a students' persistence and institutional commitment are their individual attributes, pre-college experiences, and family background. Individual attributes include variables such as race, sex and academic ability. Pre-college experiences covers academic and social developmental experiences like school grade point average as well as academic and social attainments. Family background addresses elements like social status, culture and values (McCubbin, 2003).

Race is an important individual attribute element in Tinto's Student Integration Model of Attrition. It is also important evaluative demographic element for universities, as students of color make up an increasing percentage of student body populations (Fischer, 2007; Flores &

Park, 2013). Evidence shows that minority students, including Blacks/African Americans, Hispanics/Latinos, and Native Americans/American Indians are less likely to graduate from college (Richardson Jr. & de los Santos Jr., 1988; Wagner, 2015), and their graduation rates are substantially lower than white students (Zwick & Sklar, 2005). Similarly, students of color take longer to graduate than White students (Tracey & Sedlacek, 1986). Different processes are required to achieve academic success for students of color and White students. In order to succeed in predominately white universities, different skills are needed for students of color than white students because the academic environment is not the same for each (Fleming, 1984; Loo & Rolison, 1986).

Problem Significance – The Colorblind Myth

Colorblind ideology is generally described as the belief that racism no longer matters, or no longer exists, and those who provide counter narratives about the continued persistence of racism are troublemakers that “play the race card” (Feagin & O’Brien, 2003). The colorblind philosophy evolved in response to the Civil Rights Movement of the 1960s (Brown et al., 2003; Carr, 1997; Steinberg, 1995).

The foundational tenet of the colorblind ideology was based on the idea that skin color should not matter. Beeman (2015) argues that this, then, becomes the principal dilemma in dealing with contemporary racism. “How can one propose specific policies or programs to deal with what cannot be seen or what one refuses to see or acknowledge even when it is seen” (Smith, 1995). Consequently, systemic racism is passively permitted to persist because there is a denial that it even exists and an avoidance of discussing it (Beeman, 2015).

The larger ideology of colorblindness leads to color evasiveness (Risman & Banerjee, 2013). It is manifest in individuals refusing to see how color matters and in refusing to see

racism or talk about its effects. This belief asserts that if we do not see color, then there is nothing to talk about with regard to a system of color- or “race”-based oppression. What people are ultimately avoiding when they say they do not see color, when they overlook power differentials, or avoid race-related discourse, is racism (Beeman, 2015).

Following the election of Barack Obama in 2008, individuals with different political ideologies argued that Americans now live in a post-racial society that no longer requires race-conscious acknowledgement (Nguyen & Ward, 2017). This color-blind approach, characterized in statements like ‘pulling yourself up by your bootstraps’, has influenced educational institutions and policies. (Tate, 1997). These misguided principles disadvantage students of color, who are forced to navigate their way through educational programs which have been developed and adopted due to their alignment with prevailing ideological positions (Shulman, 1986).

Colorblindness protects white privilege and justifies racial inequality, enabling white people to distance themselves from responsibility related to that racism. The blame or responsibility is placed squarely on the shoulders of people of color (Bonilla-Silva, 2010). Some believe that if people of color would stop focusing on the past, complain less, and work hard then all Americans would coexist harmoniously (Ryan, Hunt, Weible, Peterson, & Casas, 2007). The illogicality of this fictional reality, however, is captured in some striking statistics. People of color are three times more likely to be poor than whites, earn approximately 40 percent less than whites, have an eighth of the net worth of whites, and receive an inferior education, even if the institutions they attend are integrated (Bonilla-Silva, 2009). Colorblindness is, at its core, a manifestation of White supremacy. It frustrates the realities of people of color as they seek achievement in higher education environments (Nguyen & Ward, 2017).

Over 100 years ago, Émile Durkheim (1915) understood the challenge confronting those who seek to overcome disproven and dangerous beliefs. He asserted that scholarly concepts, even when founded on the principles of science, sometimes do not get their authority from their objective value. It is not necessary for them to be true to be acknowledged as such. Even if they are objectively true, if they are not aligned with the predominant beliefs, they will be rejected. In other words, for a theory to be accepted, it must be aligned, or converge as Derrick Bell (1987) asserted, with a people's prevailing belief systems. Supporting Durkheim's beliefs, Marable (1983), Small and Winship (2007), and Takai (1993) declare that predominant educational belief systems are premised on racial characterizations and stereotypes about students of color.

Belief systems that motivate specific behaviors are not necessarily grounded in truth (Wynter, 1995). Achieving positive change in these challenging environments can be daunting. An individual in America has few rights or opportunities that are not supported by the political and social power of those in power (Cruse, 1984).

Colorblind perspectives and belief systems continue to meaningfully influence our understandings of race and racism in educational settings (Knowles & Hawkman, 2019). Compared to the overt racism of the Jim Crow era, the pernicious ideology of colorblind racism is more subtle. In place of the heavy-handed oppression, the colorblind ideology 'otherizes' softly. This deliberately careful approach may serve to assuage any misgivings related to inequities that could be experienced by oppressors. What results is an intimidating political tool that is effectively wielded to perpetuate the current racial order (Bonilla-Silva, 2009).

One tool that has been leveraged to address the subordination of students of color is affirmative action. Politically conservative proponents challenge the idea of affirmative action, asserting that 'colorblind' policies ensure meritocratic access to higher education. In contrast,

those espousing liberal beliefs argue that affirmative action brings underrepresented students of color into historically white educational institutions, believing that this structured diversity enhances the learning for all students (Yosso, Parker, Solorzano, & Lynn, 2004).

Those who oppose affirmative action are not against special treatment based on race, as long as the race that is benefitting from the affirmative action policy is White (Yosso, Parker, Solorzano, & Lynn, 2004). The colorblind reasoning used by those against affirmative action mutes the history of racism and dismisses the ongoing experiences of people of color (Yosso, Parker, Solorzano, & Lynn, 2004).

Despite colorblind resistance to affirmative action, advances in the social position of communities of color do occur. The reason behind these advances, though, is due more to the idea of interest convergence, than an altruistic desire to right inequities. This principle of interest convergence, a term coined by Derrick Bell, declares that meaningful progress for communities of color is oftentimes only achieved when the goals of groups of color are aligned with the goals of Whites (Tate, 1997). This principle also affirms that White populations are unlikely to support causes that appear to threaten their superior social status (Bell, 1979, 1993). Civil rights victories are more likely to be achieved when the interests of Whites and communities of color converge. The example commonly used to illustrate the idea of interest convergence is *Brown v. Board of Education*. Derrick Bell Jr. argued that this decision occurred because it advanced White interests. Desegregation augmented the nation's standing in world politics during the Cold War period. This enhanced standing on the world stage fostered White support and facilitated the unanimous Supreme Court decision that prohibited racial segregation of children in public schools. As time passed and interests diverged, civil rights enforcement was curtailed. Brown

was undercut, further, by later legal cases that authorized segregation for decades to come (Bell Jr., 1980).

Notwithstanding the post *Brown v. Board of Education* setbacks, those engaged in social justice efforts recognize that “the goal for us, as it was for all those going back to the slavery era who labored and sacrificed for freedom, was not to guarantee an end to racism, but to work forcefully toward that end (Bell, 1984). Barnes (1990), supporting Bell’s assertion, articulated the need for sustained and forceful work when he stated that the “minority perspective make explicit the need for fundamental change in the ways we think and construct knowledge. Distinguishing the consciousness of racial minorities requires acknowledgement of the feelings and intangible modes of perception unique to those who have ... been socially, structurally, and intellectually marginalized in the United States.”

Applying this colorblind ideology to education, predominantly white institutions can appear to embrace equality while preserving their belief in the inferiority of individuals of color (Tarca, 2005). It is incumbent, then, on universities and researchers to examine racism embedded in ‘colorblind’ schooling policies. They must work to better understand how educational institutions can enhance racial policies and eliminate the malignant effects of colorblindness in educational settings (Lopez, 2003). While admittedly a daunting endeavor, this challenge should not deter efforts made by institutions, advocates, and researchers. The “practical work in education and research is done by fits and starts; but we plead for regular work, not sporadic” (Shaxby, 1905).

Juxtaposed with this idea and existence of colorblindness are universities and their desire to foster academic achievement for all students. Universities should be places of respite where all are welcome, where all are invited to learn, and where all are given an equal opportunity to

succeed. This aspiration has gone largely unachieved in the world of higher education, with students of color enrolled in higher education programs achieving at levels well below their White peers (French, Immekus, & Oakes, 2005; May & Chubin, 2003; Reichert & Absher, 1997; Rios-Aguilar & Deil-Amen, 2012). This failing represents a critical issue for many universities (Pope, Mueller, & Reynolds, 2009).

Academic leaders are working to improve institutional enrollment and graduation metrics by creating inclusive environments of academic excellence and developing policies and programs to assist all students in achieving academic success (Keels, 2013). These efforts are leading schools to evaluate how attributes, like race, affect degree completion. Higher-education institutions need to develop a deep understanding of the demographic characteristics of their students. Understanding the socio-demographic composition of an institution's student body will position the school to recognize what modifications need to be made to curricula, instructional practices, and institutional policies (Espino, 2012; Solorzano & Bernal, 2001). With that recognition and understanding in place, scarce institutional resources can then be allocated in an equitable manner that will improve educational outcomes for students of color.

Improving educational outcomes, like graduation, is challenging. Many factors can affect academic outcomes, including an institution's size, available resources per student, job demands, student demographics, personal reasons, and incongruence with the academic environment (Kuh & Associates, 2005). Universities, however, have good reason to be aware of, and concerned with, academic achievement levels. Low graduation rates can result in universities ineffectively using scarce resources, it can weaken institutional ability to meet educational objectives and, perhaps most troubling, and it is an indication of an institution's inability to meet the educational, social, and emotional needs of students (Mangold, et al., 2002).

Problem Significance - Satellite Campuses and a Different Type of Student

Complicating an already challenging, White-centric educational model is the dramatic emergence of regional campuses. The National Center for Education Statistics (2018) reported that, in the fall of 2018, more than 6.9 million students, or 35.3 percent of students in the United States, were enrolled in distance education courses at degree-granting postsecondary institutions. One example that illustrates this growth is the postsecondary environment is found in the state of Ohio. Regional campus and community college enrollment increased over 340% in Ohio, growing from 74,000 to 252,000, during a 10 year period from 2000 to 2010 (Magan, 2011).

The learning environments and service offerings of satellite campuses can vary significantly from their main campuses. Universities provide a wide variety of support services for students. These services can include faculty access, library resource access, tutoring resource access, disability services, academic advising, campus housing, campus dining, and campus employment. On campus support services can be diminished, or entirely absent, for students that attend satellite campuses (Forrester et al., 2005; La Padula, 2003; Simpson, 2002).

Distance education student demographics are also typically different from main campus students. Students enrolled at regional campuses differ by age, gender, family responsibilities, and employment when compared with their main campus counterparts (Brewer, 2010). While distance education students are not a strictly homogeneous group (Deka & McMurry, 2006), the typical student in 2016 was 37 years old, 55 percent male, and over a third had their tuition paid by their employers (Moore & Kearsley, 2012).

Academic and social challenges, unique to regional campuses, have often resulted in attrition rates that are higher than students enrolled at main campuses (Barefoot, 2004; Dray et al., 2011), with some studies estimating a dropout rate of up to 40% (Angelino, Williams, &

Natvig, 2007; Liu, Gomez, Khan, & Yen, 2007). While both main and remote students can experience similar academic pressures and difficulties, remote-based students are more likely to experience social isolation than their main campus-based peers (Dearnley, 2003; Kwon, Han, Bang, & Armstrong, 2010). University support services, however, are often designed to support younger, main campus-based students. Budgen et al. (2011) provided insight into how one facet of student services, food, is impacting student outcomes. They demonstrated that providing a wide variety of food options is an important satisfier for students. While the preceding example may seem minor, dozens of these service differentials might be additive and, ultimately, impact academic outcomes. As a result of these service differentials, graduation rates for students of color at satellite campuses should be more deeply interrogated.

Race and Academic Achievement.

The concept that students of color encounter more challenges than their White peers is well established. Many studies have examined learner graduation rates for students of color in higher education environments (Arcidiacono & Koedel, 2014; Guiffrida & Douthit, 2010; McGraw, 2006; Nguyen, Bibo, & Engle, 2012a, Nguyen, Bibo, & Engle, 2012b, Rios-Aguilar & Deil-Amen, 2012). In 2002, the overall average graduation rates in colleges and university in the United States was 55 percent with 42 percent and 39 percent for LatinX and African-American students, respectively (McGraw, 2006). A similar study conducted in 2004 found that over 61% of white students graduated, while 40% of African-American students graduated (Guiffrida & Douthit, 2010).

In 2004, Carey (2004) found that almost one out of five four-year institutions graduate fewer than 33% of its full-time degree-seeking first-year students. While these findings reflect a

troubling level of achievement for all collegiate students, underrepresented students are disproportionately disadvantaged (Rios-Aguilar & Deil-Amen, 2012).

Demetriou and Schmitz-Sciborksi (2011) identified many different variables that have been shown to influence undergraduate student persistence. Some of the more commonly referenced variables include: financial conditions, academic engagement, social engagement, secondary preparation, and demographic characteristics.

In addition to these variables, a student and family's financial considerations influence student retention. Retention suffers if students are financing their education using loans or if they are financially dependent. Students with significant financial needs sometimes share other attrition-exacerbating characteristics, such as less secondary preparation or being a first generation college student (Retention Study Group, 2004). Students of color or students from low-income families would be more likely to persist if their financial aid was more grant-based and less loan-based (Swail, 2004). If a student's financial needs are not being met, they may exhibit certain behavior that negatively impacts persistence like part-time academic engagement or prioritizing professional responsibilities over academic goals (Tinto, 2004). Distance-based students are particularly susceptible to unique financial pressures. Graduation rates can suffer if students are employed professionally. These students are sometimes placed in positions where they must prioritize their time and efforts, with work often winning out. In a study conducted by Coates and Ransom (2011), approximately 37% of distance education students work more than 30 hours each week.

Many first-generation students and families have limited financial resources (Thayer, 2000). The median parental income among dependent students is \$41,000 for first-generation students and \$91,000 for continuing-generation students (NASPA, 2016). This disadvantage can

have a detrimental impact on persistence. The U. S. Department of Education (2015) found that just 9 percent of students from the lowest income quartile graduate with a bachelor's degree by age 24, compared to 77 percent for the top income quartile. First-generation students are also more likely to be deeply engaged in a professional capacity. The hours they work make success with in the academic and social structures of the university more difficult to achieve (Cuccaro-Alamin & Choy, 1998; Demetriou & Schmitz-Sciborski, 2011).

In addition to a student's financial position, academic success is a key predictor of persistence. Poor academic achievement (i.e., low grades) is an important indicator of student attrition (Retention Working Group, 2004). Academic success is contingent on a student understanding and using institutional resources that foster productive faculty-student relationships (Wyckoff, 1998). Encouraging the faculty-student interaction and linking academic support services to classroom learning facilitates an increase in usage of services and improved retention (Tinto, 2004). As one might expect, students that take time off from their studies and students who participate academically on a part-time basis are less likely to persist than students who enroll in a full-time and uninterrupted capacity (Adelman, 1999).

It may seem counter-intuitive, but students who focus solely on academic activities, to the exclusion of non-academic activities, experience higher attrition. Students that incorporate social activities with their academics endeavors are more likely to persist and graduate. Ideally, students should make many important social connections early on in their college experience (Demetriou & Schmitz-Sciborski, 2011). Students that connect in meaningful ways to faculty, mentors, and student peers are more likely to achieve academic success (Pascarella & Terenzini, 1991; Swail, 2004). While important for all students, social integration is especially important for students of color. Institutions that actively work on building institutional cultures of

inclusivity can increase the likelihood in which students of color connect with the campus community and persist in their studies (Tinto, 2004).

Secondary school preparation is also an important predictor of post-secondary success (Bean, 1980). The quality of a student's secondary school education is related to the likelihood that they enter college and succeed; a strong secondary curriculum is a good predictor for postsecondary success (Retention Study Group, 2004; Warburton, Bugarin, & Nuzez, 2001). Students that enter college unprepared, or underprepared, are often required to complete remedial coursework. This lengthens the educational process and can increase student attrition (Swail, 2004).

One final factor to consider when evaluation student persistence is the demographic characteristics of the student. These characteristics are important indicators of academic success. Socio-economic status, gender, race, and parent's level of education are some of the factors that are used to predict academic achievement (Demetriou & Schmitz-Sciborski, 2011). Of all these characteristics, race is a strong predictor of student persistence when the academic institution has homogeneous faculty, student, and administration populations (Swail, 2004).

Being a first-generation, post-secondary student, which many students of color are, comes with daunting challenges (Sarcedo, Matias, Montoya, & Nishi, 2015). According to NASPA, Student Affairs Administrators in Higher Education, in 2016, 18 percent of African-American students were a first-generation college student. For LatinX students that percentage was 25. Parents of first-generation students are often unfamiliar with the procedures necessary to navigate the higher education process (Retention Study Group, 2004). A student's likelihood of enrolling in college is correlated with the higher education achievement of the student's parent(s). 93 percent of students with a parent who earned a bachelor's degree enrolled in

college, while 72 percent of students with parents who never attended college enrolled. (BLS, 2016).

The result of this amalgamation of diverse demographic factors underscores the need for institutions to proactively understand student body compositions and work to ensure that the academic environment supports not only White students but also disadvantaged student groups.

Campus-type variation.

There are different types of campuses that students can attend when pursuing higher education studies. The three most common being main campuses, satellite/regional campuses, and online campuses. Distance learning, which typically comprises the regional and online segments, has experienced remarkable growth. As of 2010, distance-based, higher-education enrollment was growing at a rate of 17 percent as compared with one percent of higher education overall (Allen & Seaman, 2010). Regional campuses are increasingly common in higher-education settings and their use is expected to grow as they serve growing, non-traditional student populations (Fonseca & Bird, 2007; National Center for Education Statistics, 2002). Satellite campuses play an important role in providing students with high-quality, low-cost undergraduate degree programs and as well as some graduate programs at locations that might be more conveniently located than the main campus (Indiana Commission for Higher Education, 2019).

Satellite campuses, though, come with their own set of challenges. There can be, at times, brand confusion which may complicate academic operations. Potential candidates are sometimes confused by campuses offering different types of degrees (e.g., associate, undergraduate, graduate). Similarly, main campuses might endeavor to recruit more out of state

students, while regional campuses look to recruit from local communities, which adds complexity as institutions seek to meet all students' needs (Journal-News, 2014).

Graduation rates of main campuses and satellite campuses can vary, with main campuses typically graduating students at rates much higher than their regional campus counterparts. In 2017, 64 percent of students enrolled at Indiana University's main campus in Bloomington in 2012 had graduated. Five of the six regional Indiana University campuses had graduation rates for the same period of under 25 percent (Associated Press, 2017). This nearly 40 percent disparity is striking and warrants further evaluation.

Significant variation can exist amongst the different universities that have multiple location types. Differences can exist in location, funding, and size. Satellite campuses are also developed for different reasons. Some are created to provide a certain level of education. Others are created to focus on specialized institutional programs. Others are tailored to specific student populations (Fonseca & Bird, 2007).

Out of all the reasons for developing regional campuses, the most commonly observed reason is the desire for institutions to grow their educational reach by offering services to students that are remote from a university's main campus. This expansion can be within their own region/state, into different states, as well as into different countries (Hanover Research, 2014). Utah State University and its College of Business, as an example, has satellite campuses within the state of Utah as well as a partnerships with two universities in China; one partnership is with the Beijing Institute of Technology and the other is with Northeast Dianli University (China Cooperative Academic Programs, 2020).

This trend of universities expanding their footprint outside of their main campuses is expected to continue (Poling, LoSchiavo, & Schatz, 2009). However, despite this increase in

regional campus popularity, issues relating to their administration remain largely ignored in academic research (Fonseca & Bird, 2007).

The structure of multi-campus universities can vary widely. Aimes McGuinness (2009) recommended a naming system in the early 1990's that was predicated on the complexity of the overarching university's structure and the level of centralization to which satellite campus were subject. McGuinness asserted that universities with multiple locations are grouped into one of three categories:

- **Multi-Site Universities.** These institutions have a common set of programs and administrative systems. Satellite campuses are, essentially, extensions of the main campus.
- **Multi-Campus Universities.** These institutions have campuses that act as their own independent academic unit. These regional campuses are unmistakably differentiated from the main campus.
- **University Systems.** These institutions have a loose collective structure. Individual campuses have missions and academic operations that can vary widely.

Each of the three different organizational categories utilizes different balances of autonomy and centralization, with each configuration presenting benefits and challenges. Timberlake (2004) captured elements associated with autonomy and centralization and their associated benefits and challenges in a simple matrix:

	Autonomy	Centralization
Benefit	<ul style="list-style-type: none"> • Faster Decision Making • Greater Responsiveness to Local Community • More Frequent Opportunities for Staff Participation 	<ul style="list-style-type: none"> • Improved Efficiency • Limited Duplication of Services • Increased Student Access and Transfer Opportunities • Less Opportunity for Misuse of Institutional Resources at Local Level
Challenge	<ul style="list-style-type: none"> • Inadequate Alignment of Goals Between Campuses • Student Difficulties in Transferring Credits 	<ul style="list-style-type: none"> • Slower Decision-Making/Increased Red Tape • Employees at the Center Too Far Removed from Important Stakeholders • Difficulty in Maintaining Relations Between Center and Campuses • Problem Resolution Takes Longer

Figure 1. Collegiate Autonomy and Centralization Matrix (Timberlake, 2004).

Utah State University Campus-type variation.

In 2019, Utah State University's undergraduate enrollment totaled 27,810. 10,531 (41%) of the enrolled students attended regional campuses (Utah State University Quick Facts, 2019).

Utah State University has one main campus located in Logan, four statewide campuses (Brigham City, Moab, Tooele, Uintah Basin), two comprehensive regional campuses (USU Eastern, USU Blanding), and 33 extension offices (located in 28 of Utah's 29 counties) (Utah State University Quick Facts, 2019). From Tremonton in the North, to Wendover in the West, from Vernal in the East to Monument Valley in the South, USU has embraced the regional campus philosophy (See Appendix A).

Students have the option to choose between attending the main campus in Logan or one of the satellite campuses located around the state. Students must be careful, however, in determining which campus to attend, as not all degrees are offered at all locations. College of

Business Management degrees, for example, are offered at the main campus but not at all regional campuses (Utah State University: Campuses, 2019).

Differences in the demographic composition of main and satellite campuses at Utah State University can be striking. As an example, over a 9 year period, comprising the academic years from 2010-2011 through 2019-2020, enrollment totals for American Indian students at USU's main campus were 1,960. During that same period, at regional campuses, American Indian student enrollment was nearly double that of the main campus, with an enrollment total of 2,591 (USU Enrollment, 2019). In other words, 57% of American Indian enrollment occurred at satellite campuses. For additional details on American Indian enrollment, please refer to Table 1.

Table 1

USU's American Indian Enrollment by Academic Year and Campus Type

Campus Type	Academic Year									Total
	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	
Reg Camp (Incl. USU East)	417	332	361	328	309	276	215	177	176	2,591
Main Campus	179	163	168	163	193	215	295	276	308	1,960
Total American Indian Enrollment	596	495	529	491	502	491	510	453	484	4,551

In addition to different satellite campus program offerings, USU's availability and levels of student support services can also vary depending on whether a student is enrolled at the main campus in Logan or attends a satellite campus. Current student support offering differentials are outlined in Figure 2.

<u>Student Service Type</u>	<u>Satellite and Main Campus Differences</u>
Syllabus	Main and satellite students have equivalent access to course syllabi.
Textbook Access	Satellite students must procure textbooks without the benefit of a campus bookstore.
Campus Testing Facility Access	Testings services are not offered at 7 (out of the 32) of the satellite campuses.
Instructor Access (outside of class)	Satellite students are relegated to virtual (non-in person) contact, decreasing the efficacy of the interaction.
Instructor/Class Peer Access (during class)	Satellite students are required to use IVC software in order to engage with instructor classmates. Some find that intimidating.
Academic Tutoring Access	Online tutoring is available to all students, but in-person tutoring is only available for math and writing at only at 6 of the regional campuses.
Campus Hours of Access	Many regional campuses are only accessible M-F from 8-5. USU's main campus has facilities that are open 7 days a week and for extended hours.
Library Resources	Satellite students typically can only access electronic library resources on demand. Non-electronic resources must be requested and shipped out from the Main campus.
Campus Veterans/Military Services	Satellite students are relegated to virtual (non-in person) contact, decreasing the efficacy of the interaction.
Campus Disability Services	While main and satellite students have equivalent access to disability accommodations, only the Main Campus and Price Regional campus have disability offices.
Campus Counseling and Psychological Services	While all students have access to Counseling and Pyschological Services, wellness support varies by location.
Campus Physical Wellness	Only 4 of the regional locations have physical wellness facilities.
Campus Academic Advising Services	While all campuses have advising resources, USU's main campus have dedicated/specialized advising resources, with regional campuses advisors often advising on a myriad of academic departments.
Campus Career Services	USU's main campus has a career services office. Satellite campuses, typically, do not. Distance students work with a success coordinator who will often refer students to USU Career Services (at the Main Campus).
Campus Life Opportunities	USU's main campus has a richer offering of campus life experiences, including arts & culture and student clubs/organizations.
Campus Employment Services	Student employment opportunities, while available for both Main and Satellite students, are much more available for main campus students.
Campus Housing Services	USU offers housing services only to students attending at the Main campus.
Campus Dining Services	USU offers dining services only to students attending at the Main campus.

Figure 2. Main Campus / Distance Campus Service Level Differentials

Problem Statement

Research Question

1. What is the relationship between the racial background and persistence of students in satellite campus-based, higher-education business programs as measured by business school graduation rates?

Hypotheses

H₁: White students, enrolled in USU's business school, will experience higher graduation percentages than students of color.

H₂: Students of color who are enrolled at USU's main campus will graduate from the college of business at lower rates than students of color who enrolled at USU's satellite campuses.

Methodology Summary

Using secondary data, historical student records data from Utah State University's College of Business were used to assess student graduation rates. Undergraduate, business student cohorts comprising the 2009-2010 academic year through the 2019-2020 academic year were used for the data sample. The anonymized student data was provided by Utah State University's Office of Analysis, Assessment and Accreditation. For these College of Business students, enrollment, re-matriculation, and graduation patterns were evaluated through the 2019-2020 academic year and correlated with race and campus type.

Using a Cox Regression, or survival analysis, the research identified the time students took to complete their undergraduate business degree. A Cox Regression is an analysis that predicts the likelihood of survival (Cox, 1972). This regression evaluated graduation amongst USU's College of Business students. Survival analyses allow various factors, such as demographic characteristics, to model student graduation rates over time. They provide a methodologically sound means for modeling the length of time it takes for an event (i.e., graduation) to occur, even when many of the participants in the sample have not experienced the event being evaluated. By using survival methods, educational researchers can look at when an event is likely to occur (Adams, 1996). The event of interest is graduation. The result of this

analysis is an assessment of whether the variables of race and campus type had a statistically significant effect on graduation rates.

An important characteristic of this analysis will be its quantitative underpinnings. Given the relevancy of racial inequity in education, the use of quantitative methods to address issues relating to access, equity, and achievement is appropriate (Sablan, 2019). Historically, much of the research on inequities in education has relied on qualitative methodologies. Critical evaluation of this phenomenon rarely uses statistical analysis (Carbado & Roithmayr, 2014). The use of quantitative methods in evaluating race-based phenomena is not intended to supplant the use of qualitative methodologies. Rather, quantitative methods can be used to complement the qualitative storytelling that is typically found in research endeavors involving race (Parker & Castro, 2013).

Limitations Summary

One limitation of this study is that the research data will originate from only one university's college of business. The ability to generalize study findings to other schools might be impacted. This limitation should be considered when interpreting the findings of this study.

Another important limitation to consider in this study relates to the racial selection made by prospective students when applying for college. This study assumes that students will make their best, good-faith effort to select the race with which they best identify.

A third limitation would focus on the possibility that a correlational association may exist between the independent and dependent variables. That association might not be causal (Johnson & Christensen, 2014). It is possible that a confounding variable might be causing the association.

Summary

This research study intends to provide campus-type specific insight into the graduation rates of students of color at a departmental (i.e., School of Business) level. With underrepresented student populations comprising up to a third of business school enrollment (Allen, 2017), there is institutional and departmental value in understanding how, and at what levels, undergraduate business students of color persist and graduate at satellite campuses.

Findings from this study could be used to inform institutional and departmental administrators and program managers on different strategies to foster not only a more diverse matriculation, but also to improve graduation outcomes for underrepresented student populations. Study results could also provide insight into how campus differences (i.e., main, satellite) impact graduation rates.

Chapter 2 Literature Review

Introduction

Obtaining a collegiate degree is increasingly important in determining the likelihood of earning middle-class wages and in preparing individuals for life in a competitive society (Kezar, Chambers, & Burkhardt, 2005; U.S. Department of Education, National Center for Education Statistics, Institute for Higher Education Policy, 1998).

One of the ways in which universities measure success is through graduation rates and their resultant economic and social benefits. Society often measures success in relation to financial achievement; and financial achievement is commonly associated with educational accomplishments (Pidgeon, 2008). Higher education achievement is associated with the empowerment of the individual and the community (Battiste, Bell, & Findlay, 2002).

Relevant Literature

Colorblindness

Colorblindness refers to individual and societal reluctance and avoidance of race and the role race plays in our everyday lives (Bonilla-Silva, 2010; Delgado & Stefancic, 2017; Frankenberg, 1993; Gotanda, 1995; Haney-Lopez, 2007; Pollock, 2004).

Nearly three decades ago, bell hooks contended that among white Americans the myth of sameness persists. Gender, race, and class are perceived to be add-ons to an essential human sameness, rather than as inextricably intertwined with their individuality (Warren & Kleisath, 2019). Ruth Frankenberg asserted that this humanist “notion of humans as composed of a core or essence to which other qualities are later added (...) makes it possible (...) to claim that they do not see the color, or race, of those with whom they interact, but rather see ‘under the skin’ to the ‘real’ person” (Frankenberg, 1993).

Supporting Frankenberg's concern regarding colorblindness, hooks describes how this idea of individuality and self is so precious to Whites that they sometimes react poorly when it is questioned. Anger surfaces because they believe that all ways of looking that identify differences in personhood undermine the liberal belief that "we are all just people". They have an abiding belief in the myth of colorblindness, even as their actions reflect the superiority of whiteness as a sign informing who they are and how they think. (hooks, 1992).

Whiteness produces multiple inequities, including dramatic inequalities in schools (Kozol, 1992), persistent and problematic achievement gaps, and growing educational financial obligations (Ladson-Billings, 2006) in this country. Whiteness shapes the evolution of multicultural education observed in schools. Specifically, educators' constructions of multicultural education protect whiteness by normalizing dominant perspectives and epistemologies; ignoring or concealing race and inequity; and failing to pursue social change (Castagno, 2013).

Schofield (1986) found that White teachers ignored institutionalized patterns of racism and adopted a colorblind perspective. Sleeter (1992) found that even after intensive professional training on multicultural education, White teachers continued to embrace a colorblind stance, denying the impact of race, and favoring assimilation-based goals for their students. Johnson (2002), in her work with White teachers, found that moving beyond colorblindness in order to better understand race was principally the result of developing meaningful relationships with people of color, working in interracial organizations for social justice, as well as experiencing marginalization in their own lives.

An education-centric colorblind ideology ignores race and posits that race and racism do not matter in the lives of students and within our educational institutions. The way in which

colorblindness allows teachers to avoid race is particularly important given the persistent racial achievement gaps. Race clearly matters in higher education settings, but even though educators make efforts to address the achievement gaps, they sometimes fail to consider how race matters in the very problems they are attempting to solve (Castagno, 2013).

Many higher-education studies have evaluated demographic components of groups and attempt to correlate those attributes with rates of degree completion (Berkner, He, & Cataldi, 2002; Museus & Quaye, 2009; Tinto, 1993). The data from these studies is clear- students of color have achieved at lower levels than their White peers (Banks & Dohy, 2019). Similarly, students of color continue to be significantly underrepresented in historically white universities, and, of those that are granted admission to these schools, they often suffer racial discrimination (Lawrence & Matsuda, 1997; Smith, Altbach, & Lomotey, 2002; Solorzano, Ceja, & Yosso, 2000). This discrimination sometimes requires students to discard their cultural identity in order to achieve academic success (Tierney & Jun, 2001).

It is important for higher-education organizations to better understand what unique demographic attributes underrepresented student groups possess. It is also vital to understand if these attributes affect degree completion. These studies can provide information on the unique needs of these populations and result in recommendations on how institutions can better meet the needs of these unique student populations.

Institutions that are committed to partnering with underserved student populations recognize that students of color face challenges that their White counterparts do not. Many White stakeholder in higher education (e.g., students, administrators, instructors) may not recognize the racism that permeates higher education environments. Delgado (1988) stated that, “White people rarely see the acts of blatant or subtle racism, while minority people experience

them all the time.” Most populations of color live in a world dominated by race. Delgado and Stefancic (1992) expressed the idea that individuals are bound by their own preconceptions from which escape is difficult. The social world is constructed in such a way that racism seems normal, part of the status quo, and in little need of correction.

One reason that some believe there is no need for correction is that twenty-first century racism is subtle. It is more challenging to prove intentional racial discrimination today. As a result, its existence is commonly disputed. Nearly two-thirds of Whites are content with society’s treatment of people of color, while nearly two-thirds of people of color are dissatisfied with their treatment (Brown, 2004).

Undergraduate Student Persistence and Degree Completion

Undergraduate persistence (i.e., retention) is a measure of a university’s ability to retain a student from initial matriculation through graduation (Berger & Lyon, 2005). Studies that evaluated retention rates began in the 1930’s and referred to ‘student mortality’, or the failure of undergraduate students to complete their programs of study (Berger & Lyon, 2005). It wasn’t, however, until the 1960’s that structured inquiry into retention in higher education environments commenced (Feldman & Newcomb, 1969; Gekoski & Schwartz, 1961; Panos & Astin, 1968).

There are many reasons for the increased focus on retention in the 1950’s and 1960’s. University enrollment increased by more than 2,000,000 as a result of World War II veterans enrolling in higher education institutions using the Servicemen’s Readjustment Act of 1944. This is commonly known as the GI Bill (Thelin, 2004). At the beginning of the 1960’s, rapid enrollment placed significant pressures on universities. The Higher Education Act of 1965 provided students with financial support. That same act also created on-campus support services

to help students succeed (McDonough & Fann, 2007). By the end of the 1960's, student retention was a common institutional concern (Demetriou & Schmitz, 2011).

The 1970's was defined by sociological studies on college student retention. Spady (1970) is credited with developing the first model that analyzed higher education student retention and attrition. Spady (1970) stated that student attrition could be attributed to two macro components: academic experience and social integration. Spady's model proposed five variables that could be linked to a student's decision to drop out. These factors include: grade performance, academic potential, normative congruence, intellectual development, and friendship support. Evaluating those five factors further, Spady (1971) identified grade/academic performance to be the dominant factor that contributed to student attrition.

In the 1980's, as collegiate enrollments declined, schools developed enrollment management strategies (Berger & Lyon, 2005). Enrollment management emerged as a field of study, taking an institution-wide approach to student recruitment and retention (Hossler, 1984).

In presenting a theory that has direct implications for satellite campus-based students, Bean (1980) declared that demographic characteristics like socio-economic status, distance from home, prior academic performance, and student satisfaction all impact the likelihood of non-persistence. Supporting Bean's theory on student persistence, Panos and Astin (1968) posited that a student's persistence involves three elements: student demographics and prior experiences, academic and social environment experienced by the student, and individual student characteristics (e.g., knowledge, attitudes, and beliefs) (Pascarella & Terenzini, 2005).

Student retention in the 1990's was marked by a focus on improving persistence for students of color and other underrepresented student populations (Demetriou & Schmitz-Sciborski, 2011). Swail (2004) noted that many of the retention studies during this period

focused on how universities can incorporate diversity and multiculturalism into their campus cultures as a tool to foster improved student persistence. Tinto (1993) was also influential in this period, identifying that different student groups require group-specific strategies and policies. The prevalence of satellite campuses, and the diverse student groups they support, make Tinto's assertions particularly relevant today.

This period of the 1990's was also characterized by an acknowledgement of the need for interdisciplinary collaboration among recruitment/admissions, financial aid, academic services, curriculum and instruction, and student services departments (Swail, 2004). Anderson (1997) and Tinto (1999) supported Swail's (1995) findings when stating that academic advising (i.e., student services) is a key tool in motivating students and keeping them focused on achieving their academic goals. Wyckoff (1998), similarly, proposed that student interactions with different university community members (e.g., students, faculty, staff, and administrators) affect a student's commitment to persist.

In the early 2000's, universities continued to focus on broad, inclusive strategies designed to support all students. Particular emphasis was placed on understanding inter-departmental retention-related responsibilities (Keels, 2004; Thayer, 2000; Tinto, 2000; White, 2005). In 2004, Tinto acknowledged the important role that academic and social support services play in undergraduate persistence. Similarly, Habley's (2004) research confirmed that students interactions with other campus members (e.g., students/peers, staff, administration, faculty) have a direct influence on retention. Universities that incorporate frequent and substantive interactions into student learning reap the benefit of environments where student are more likely to persist in their studies (Demetriou & Schmits-Sciborski, 2011).

Students of Color & Persistence

In order to achieve academically, students of color must overcome the effects of predominant educational policies (Barnes, 1990; Bell, 1995; Calmore, 1992; Crenshaw, Gotanda, Peller, & Thomas, 1995; Delgado, 1989, 1995a, 1995b; Espinoza, 1990; Lawson, 1995; Matsuda, 1989; Matsuda, Lawrence, Delgado, & Crenshaw, 1993; Montoya, 1994; Olivas, 1990).

Low graduation rates for students of color is an indication of an incongruence between students' beliefs and the policies of the institution. It illustrates that universities are not meeting the cultural, economic, academic, or social needs of students of color (Malatest & Associates Ltd., 2004). As universities increasingly acknowledge that prevailing powers structures perpetuate dominant values and epistemologies, they must modify their retention models to consider those that are not accessing higher education (Rendón, Jalomo, & Nora, 2000). If the cultural identity of students of color is to be considered and incorporated into institutional retention plans, then these same institutions need to be spaces that validate diverse epistemologies and different forms of capital (Pidgeon, 2008).

The term 'capital' represents a variety of resources and powers. Different types of capital can include social, cultural, and economic (Pidgeon, 2008). Capital can be used to improve educational, social, and financial outcomes (Bourdieu & Passeron, 1990).

White students possess cultural capital that is often 'gifted' to them by their family. Familial knowledge of the institutionalized norms, and their effect on educational systems, positions the student to be better prepared for the rigors of collegiate life than their student of color peers (Andres, 1994). Students of color are oftentimes forced to relinquish their traditional

knowledge and culture in an effort to compete for capital that exists within existing power structures (Pidgeon, 2008).

These prevailing power structures codify and legitimize their ideologies in curriculum. Evidence of the influence of ideology in curriculum abound. For example, it was only in 2018 that the Texas Board of Education voted to make a change to the state's social studies standards. The change was to identify slavery as the central issue of the Civil War, as opposed states' rights and sectionalism (French-Folsom & Rolfson, 2020). Curriculum that professes to be objective, in actuality, perpetuates the status quo and sustains the normalized system of racism from inside the classroom (Yosso, 2002).

Educational curricula are complicit in defining knowledge based on prevailing thoughts and beliefs. This idea was examined by Apple (1993) who concluded that there is a selective, traditional process in which certain groups' knowledge becomes canonized as official knowledge. Consequently, the autonomy to define a school's body of knowledge is governed in a manner that is not representative of the whole. Ladson-Billings (1998) asserted that teachers commonly use racially-neutral (i.e., colorblind) approaches to curricular design, assuming that this is suitable for all students. When this strategy fails to produce satisfactory learning outcomes, it is believed that the student, not the teacher or curriculum are to blame. In condemning this abdication of curricular responsibility, researchers have affirmed that a pedagogy where all perspectives are included can position students of color to increasingly succeed (Iseke-Barnes, 2000; Ladson-Billings & Tate, 1995; Solorzano & Yosso, 2000).

Yosso (2002) asserted that educational resources must be used to challenge traditional curricula as well as learn from the blind sports that exist in more established critical curricular approaches. Yosso (2002) argues, further, that a curriculum that is egalitarian in nature should

challenge stereotypes, acknowledge oppression with the curriculum, develop a critical consciousness, and endeavor to apply various interdisciplinary approaches to make clear the connections between education and inequality.

In addition to overt curriculum, the hidden curriculum has an effect on the persistence of students of color. This curriculum is developed in order to maintain the cultural and social divisions with society. This hegemonic oversight is manifest in the norms, values, and beliefs of the dominant culture. These values permeate the rules and classroom practices in universities, which serve to indoctrinate students (Apple, 2003; Battiste, 2000; Bourdieu, 1990). The imposition of these values perpetuates inequality (RCAP, 1996).

The prevailing culture has a profound influence on the hidden curriculum. Students that aren't affiliated with that culture may not be able effectively synthesize what is being taught (Apple, 1995). Looking beyond curriculum to pedagogy, instructors incorrectly assume that students have an understanding of the hidden curriculum, having had it passed down, as cultural capital, through their family. Educational institutions also assume that students begin their higher education journey already possessing the cultural capital to academically achieve (Andres, 1994; Driessen, 2001; Dumais, 2002).

Some believe that simply increasing higher education access for students of color will result in improved graduation rates (Harvill, Maynard, Nguyen, Roberston-Kraft, & Tongnatta, 2012; Long, Saenz, & Tienda, 2010). Increasing educational access and diversifying student enrollment, alone, are not sufficient to improve persistence (Engle & Tinto, 2008). Some institutions evaluate persistence and its factors exclusively through the lens of experiences that occur only during the collegiate experience. Increased consideration needs to be given to what

transpires pre-enrollment and post-enrollment. An understanding of these factors can inform higher education practices, leading to improved graduation rates (Keels, 2013).

One important pre-enrollment consideration is the idea of generational inequities. Generational inequities are perpetuated when gender, racial, and class disparities exist in access, enrollment, persistence, and completion in higher education environments (Bowen, Chingos, & McPherson, 2009). These inequities existed long before a student of color enrolls in college and their effects will persist long after they graduate.

The likelihood of students of color succeeding both inside their community and outside their community (e.g., at school) is associated with how they are able to preserve their cultural identity (Pidgeon, 2008). These students are often transitioning from racially segregated communities and secondary schools. This transition to higher-education environments that students of color are forced to make influences their collegiate success (Massey & Fischer, 2006). Universities, committed to facilitating successful transitions, must take care to implement meaningful modifications to its diversity and inclusion policies and practices. It is not sufficient to assemble oral histories and other documents that describe cultures and identities. Features of all cultures must be identified and incorporated in the creation of an integrated system of education. Otherwise, institutions will only achieve a system of educational tokenism. The school will be bereft of the benefits associated with cultural integration (Wildcat, 2001b). School must move beyond token gestures and engage in real partnerships (Pidgeon, 2008).

One tool that can assist schools in more effectively partnering with students of color is Atkinson's Racial/Cultural Identity Model. This model provides an understanding of students of color's beliefs and behaviors as they attempt to understand the differences and similarities between their own culture and those of the dominant culture found on campus (Sue & Sue,

2003). Atkinson's model identified five stages: conformity, dissonance/appreciating, resistance/immersion, introspection, and integrative awareness (Atkinson et al., 1997). The conformity stage is represented by a general cultural unawareness on the part of the student of color. In this stage, students often identify with the dominant culture and reject their own culture. In the dissonance stage, confusion and conflict arise as cultural beliefs, both dominant and non-dominant, are challenged (Estrada & Rutter, 2006).

Following the dissonance stage in Atkinson's Racial/Cultural Identify model is resistance. In this stage, the non-dominant cultural values are embraced and dominant values are eschewed by the student. In the introspection stage, students evaluate and question the conflict between loyalty to the student's values and their culture. In the fifth stage of awareness, dominant and non-dominant cultural values are either accepted or rejected based on the individual's personal experiences (Estrada & Rutter, 2006).

The problem of persistence is not an affliction suffered only by students of color. Approximately 50% of all undergraduate students drop out without obtaining a degree (King, 2000). In a study conducted by King (2000), after a period of 4 years, nearly 70% of Black and Latino men did not persist in their collegiate programs of study.

One challenge, of many, that affects persistence for students of color face is the fact that most students of color attend primarily white institutions (PWI's). Approximately 83% of all Black students attend PWI's (Knapp, Kely-Reid, Whitmore, & Miller, 2006). Many studies support the idea that students of color experience significant levels of racial-ethnic conflict on campus, pressure to conform to stereotypes; as well as less equitable treatment by faculty and staff (Ancis, Sedlacek, & Mohr, 2000; Hinderlie & Kenny, 2002). Graduation is, consequently,

likely to be affected. As a result, in order to better understand graduation factors for students of color, a thorough examination of the PWI environment must be conducted (Keels, 2013).

Sedlacek and Brooks (1976) identified eight variables that are correlated with African-American academic success in predominately white colleges. These variables are: positive self-concept, realistic self-appraisal, understanding of and ability to deal with racism, preference of long-range goals over more immediate, short-term needs, availability of a strong support person, successful leadership experience, demonstrated community service, and academic familiarity.

Sustained academic achievement of non-White student populations is not just an American problem. College degree completion for indigenous students in Canada is less than half of other Canadians of the same age group (Statistics Canada, 2003a, 2003b). The low rate of graduation has a profound influence on the indigenous societies' wealth, health, and development (Hampton, 1995, 2000; RCAP, 1996).

Student Integration Model.

Vincent Tinto's (1975) student integration model (SIM) asserts that the social integration of students, which includes activities like developing meaningful relationships with faculty and their peers/students, developing and maintaining suitable learning environments, and engaging socially in academic and non-academic activities, increases their institutional commitments. This commitment reduces the likelihood of student attrition (Tinto, 1975). Put simply, students who are able to socially integrate into the university community, both academically and non-academically, increase their commitment to the school and are more likely to graduate.

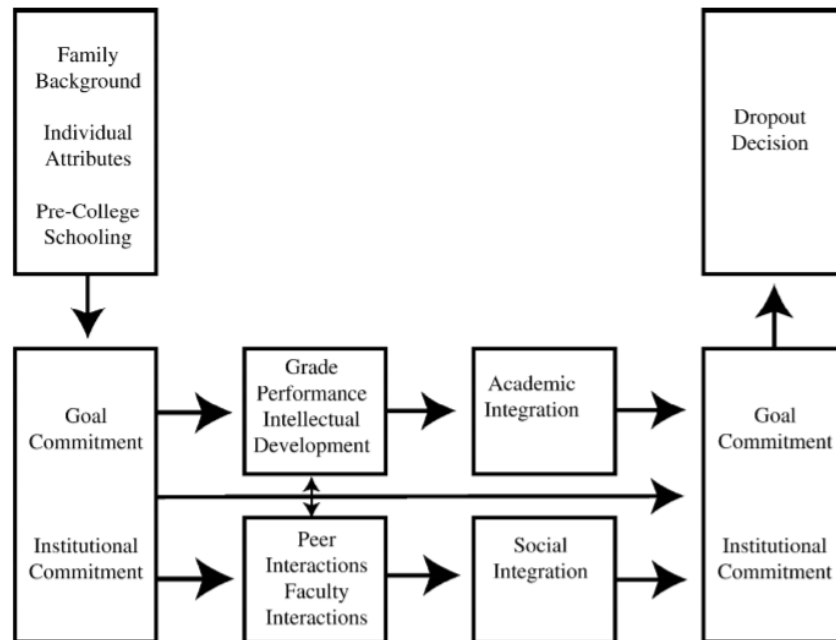


Figure 3. Tinto's Student Integration Model (Rovai, 2003).

Tinto's student integration model was based, in part, on Durkheim's suicide model (Demetriu & Schmitz-Sciborkski, 2011). According to Durkheim (1961), the likelihood of suicide increases when individuals are not effectively integrated into society. He asserted, further, that suicide likelihood increases when two types of integration are absent: inadequate moral (value) integration and inadequate collective affiliation.

Spady (1970), in recognizing the portability of Durkheim's suicide model, posited that universities can be considered a type of social system (i.e., a collective affiliation), with its own system of values and its own social structures. He affirmed that one could treat university attrition in similar manner to that of suicide. Consequently, the social conditions that affect suicide in the wider society could resemble those social conditions that result in college student attrition (Tinto, 1975). Tinto (1975) predicted that a student's lack of integration into a

university's social system will lead to an insufficient level of student commitment, increasing the likelihood that the student will not persist in their academic endeavors.

Tinto (1975) acknowledged that Durkheim's argument was not sufficient to wholly explain the occurrence of suicide within society. He, rightly, recognizes that there are other factors that need to be considered. These factors include intra-society variations that consider an individual's psychological characteristics (e.g., a predisposition of an individual toward suicidal behavior). Similarly, in developing a model of student non-persistence, one must consider the individual attributes and characteristics of the student. As a result, in addition to demographic characteristics (e.g., economic class, gender, race) one must also consider the motivational attributes (e.g., educational expectations, career goals) of the student (Tinto, 1975).

Tinto (1987) theorized, further, that, "it is the interplay between the individual's commitment to the goal of college completion and his commitment to the institution that determines whether or not the individual decides to drop out." The goal, then, is for institutions to create strategies to enhance the institutional and completion commitment of students from all backgrounds and support them as they progress through the collegiate experience (Talbert, 2012).

These institutional strategies must facilitate the development of constructive and meaningful relationships with their peers, professors, and institution as a whole. These relationships give students a sense of connectedness, affiliation, and belonging, while simultaneously offering rewarding opportunities for learning and social development (Harper & Quaye, 2009). When all of these elements are in place, students have increased opportunity to be successful in their academic programs (Talbert, 2012). Institutions working vigorously to develop and implement student integration strategies and practices are likely to see an increase in

student engagement. An increase in student engagement "correlate[s] highly with positive educational outcomes" (Harper & Quaye, 2009).

In the 45 years since the introduction of Tinto's seminal student integration model, it has been attacked, supported, and revised (Swail, 2004). Tinto's model echoes the assertion of W. E. B. Dubois (1903b), who believed that "education is that whole system of human training within and without the school house walls, which molds and develops" students. It remains an important foundational theory upon which many other studies are predicated (Berger & Lyon, 2005; Tinto, 2007).

One such study, grounded in Tinto's student integration model, is Bean and Metzner's student attrition model which states that traditional and non-traditional students have different academic persistence perspectives. Bean and Metzner (1985) argue that non-traditional students are often older and, as a result, have different support structures than traditional students. They assert that they have more limited interactions with other groups within the university community, requiring them to draw more support from outside the college environment primarily due to the fact that "their reference group of peers, friends, family, and employers exists outside the institution." Also paralleling Tinto, Bean and Metzner emphasize that student-institution 'fit' is an important element influencing persistence (Rovai, 2003). Bean and Metzner (1985) posited, further that environmental (e.g., finances, employment, family responsibilities) and background variables (e.g., age, race, educational goals) are largely out of the control of schools.

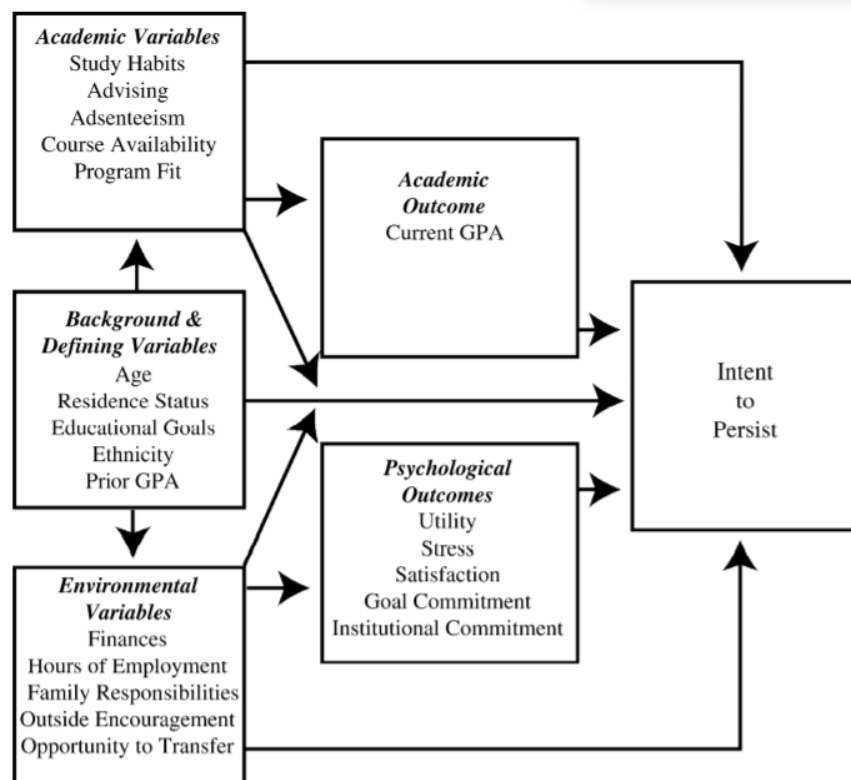


Figure 4. Bean and Metzner's student attrition model (Bean & Metzner, 1985).

Distance Learning, Persistence, & Educational Outcomes

Different campus types add another layer of complexity to student achievement. Distance-based learning began in the late 19th century to enable students to receive instruction when they were unable to attend traditional classes (Spooner, Jordan, Algozzine, & Spooner, 1999). Distance learning is traditionally defined as any instructional arrangement in which the learner and instructor are geographically separated, requiring communication through media (Moore & Thompson, 1997).

Keegan (1980) identified six unique characteristics of distance learning. These characteristics include:

1. The student and the teacher are physically separated.

2. The educational institution influences the planning, preparation, and delivery of curricula.
3. Use of technical media, with substantial reliance on technology.
4. Provisions in place for two-way communication.
5. The possibility of asynchronous learning
6. Division of labor is evidenced, with faculty, curriculum delivery preparation, graphic illustrators, and other performing defined roles in providing a distance-based learning experience

Puzziferro and Shelton (2009) asserted that learning in higher education environments is no longer a product that is delivered, but one that is experienced by the learner. Distance-based learning is no exception, with Chickering and Ehrmann (1996) enumerating the foundational elements required for effective distance education: high levels of student-faculty contact; meaningful cooperation among students, a focus on active learning, prompt feedback, and time on task; as well as respect for diverse talent and different ways of learning.

Hanna (2007) described the evolving culture of higher education, noting a shift from institutional rigidity to a more student-centric, responsive, integrated and collaborative culture which aligns neatly with the values and ideals found in the global information age and distance learning. Hanna graphically depiction of this shift is shown in Figure 5.

Characteristics of Traditional Higher Education	Characteristics of Emerging Higher Education
Linear Learning Structure and Regulation of Ideas	Connective Learning Reciprocal Exchange of Ideas
Learning Hierarchy Transmission of Knowledge	Learning Equality Exchange & Creation of Knowledge
Learning as a Product Learning is Delivered	Learning as a Process Learning is Experienced
Value on Knowledge Authority by Position and Title	Value on Experience Authority Based on Impact/Inspiration
Competition Decisions Made by Few	Collaboration Decisions Made with Diverse Inputs
Tradition The Past Provides the Foundation	Innovation The Future Provides the Foundation
Faculty Centric Faculty Satisfaction Drives Quality	Student Centric Student Learning Outcomes

Figure 5. The Evolving Culture of Higher Education.

The learning environment of online teaching continues to evolve. These changes are not only a product of innovation in technology, but also a result of re-conceptualized higher education values. Student values, as well as their beliefs and expectations about the nature and purpose of higher education, have changed. Whereas the traditional educational paradigm was faculty-centric, the new paradigm is student-centric. Students see themselves as the customer, or consumer, of higher education and expect to be considered equal partners in the learning process (Puzziferro & Shelton, 2009).

Academic achievement rates of main campus and distance-based students is mixed. A meta-analysis that compared distance education with traditional classroom-based instruction found a wide range of academic performance, persistence, and attitudes. Some of the studies

demonstrated that distance education students outperformed main campus students, by up to 50%, while other studies demonstrated that main campus students outperformed distance-based students by a similar margin (Bernard et al., 2004).

Spooner, Jordan, Algozzine, and Spooner (1999) conducted a similar meta-analysis, which reviewed the findings of 15 different studies that evaluated the efficacy of distance versus traditional learning. The result of this analysis was that the amount of learning, academic performance, achievement, and assignment and examination grades reflected no differences between distance and traditional classes. While cognitive factors don't appear to be influenced by campus type, other factors like course satisfaction, comfort, level of instructor communication, and convenience yielded mixed results (Kuramoto, 1984; Pirron & Lathen, 1990; Ritchie & Newby, 1989). In studies involving instructional factors, opportunities for student/instructor interaction were negatively affected in distance-based campus settings (Davis, 1984, Pirron & Lathen, 1990). Yet, Weingand (1984) found instructional factors to be unaffected. Other studies found that interdependence and collaboration amongst students, as well as support for independent learning activities, improved in distance-based settings (Jaeger, 1995).

The disparate academic outcomes make efforts to generalize results difficult. Complicating matters further, is the fact that relatively few studies have examined the stresses and strains with which distance-based students must cope (Beccaria, Rogers, Burton, & Beccaria, 2016).

In spite of the paucity of research relating to distance-based persistence, some factors have been identified that could be associated with improved graduation rates for these unique student populations. Distance-based students that are able to develop constructive online

relationships with faculty, staff, and administrators, students that have a well-developed sense of identity and belonging, and students that have a firm belief in their abilities and aptitudes have been shown to have improved educational resilience over distance students that do not possess these attributes (Baxter, 2013; Nichols, 2010; Willems, 2012).

McGivney's (2004) research provided insight into satellite campus persistence that aligned closely with the findings of Baxter, Nichols, and Willems. She identified accurate pre-enrollment information, a supportive family environment, adequate financial support, sufficient student motivation, effective academic mentoring/tutoring, and prompt administrative intervention as effective remedies for students who show preliminary indications of attrition (McGivney, 2004).

The reasons that distance education students persist can differ from their main campus counterparts. For example, many female students that attend satellite campuses possess a motivation to persist in order to apply their acquired knowledge to provide new, or enhanced, career opportunities for their family as well as to enhance their family life (Di Paolo, Hills, & Mahrra, 2009). Distance education students, being typically older than main campus students, are more likely to enroll and persist in an effort to prove their self-worth. As opposed to studying simply for academic performance, they are interested in learning new skills that can make a difference (Bennett, Evans, & Riedle, 2007; Di Paolo, Hills, & Mahrra, 2009).

The ideas of student integration, colorblindness, student achievement, and distance learning are each substantial in their own regard. Theories and methods developed to improve outcomes in each of these topics are complex and subject to interaction with many other elements. Consequently, there is merit in evaluating these elements and their potential interactions together and not solely in isolation.

Chapter 3 Methodology

Introduction

This study evaluates one overarching question: Do satellite-based, students of color persist to graduation in their undergraduate business programs of study at levels lower than their White peers? This study will focus, exclusively, on Utah State University's College of Business students. This study will identify the probability degree completion for undergraduate, College of Business students attending classes at both the main campus as well as satellite campuses and determine if that probability changes based on students' race.

USU's Business School Context

USU's Huntsman School of Business is undergirded by four foundational pillars: analytical rigor, entrepreneurial spirit, ethical leadership, and global vision (USU Huntsman: Four Pillars, 2021). USU's School of Business' mission is to develop leaders of distinction in commerce and public affairs (USU Huntsman: Our Purpose, 2021).

Analytical thinking is an important component of decision making. Consequently, analytical rigor is integrated into program curricula. From the use of data analytics and business intelligence to financial and economic analysis to analyzing business trends, USU's business students are expected to develop mastery in critical thinking skills (USU Huntsman: Analytical Thinking, 2021).

Innovation and initiative are necessary components of for success in today's business world. Entrepreneurship at USU presented as the preeminent leadership model for the 21st century. All organizations can benefit from entrepreneurial leadership skills. These skills include innovative thinking, opportunity identification, new product creation, effective team building, and managing growth and development (USU Huntsman: Entrepreneurial Spirit, 2021).

USU's business students come to campus with deeply held values, and USU supports those values and prepares students to lead ethical lives of meaning in their professions and their communities. In classroom, business students are presented with case studies dealing with ethical dilemmas. Students are subsequently required to analyze these dilemmas and development outcomes where values and ethics are not sacrificed (USU Huntsman: Ethical Leadership, 2021).

Globalization means different things to different people. At its core, however, globalization means that regardless of where we live and work, we interact with people and cultures from around the world. USU's business students develop the ability to understand economic, social, cultural, and political trends. This is the essence of global vision that USU imparts to its business students (USU Huntsman: Global Vision, 2021).

USU's Huntsman School consists of five academic departments and offers seven undergraduate majors, fifteen minors and six graduate degrees (USU Huntsman: Academics, 2021). These academic offerings are delivered at USU's main campus in Logan, as well as locations throughout the state of Utah and across the globe. Students that elect to participate via distance learning centers located throughout Utah do so, primarily, via Interactive Video Conferencing (IVC). IVC is a web conferencing platform for USU classes and meetings in which business lecturers present materials primarily from the main campus in Logan. These presentations are transmitted to distance learning centers. IVC allows specific classrooms and conference rooms to be connected to each other for live video interaction (USU: CIDI, 2021).

Problem Statement

Underrepresented student populations enrolled in higher education institutions graduate at lower rates than their White peers (Arcidiacono & Koedel, 2014; Guiffrida & Douthit, 2010; McGraw, 2006; Nguyen, Bibo, & Engle, 2012a, Nguyen, Bibo, & Engle, 2012b, Rios-Aguilar & Deil-Amen, 2012). This graduation rate disparity exists not only at the institutional level, but also at the departmental level (e.g., College of Business, College of Education). In the United States, for example, approximately 50 percent of all students who matriculate into science, technology, engineering, and mathematics (STEM) undergraduate programs will graduate with a STEM-related degree. The graduation rates of STEM students from underrepresented populations, however, is only 25 percent (Wilson et al., 2011).

In the 2013–14 academic year, a higher percentage of bachelor’s degrees were awarded in business disciplines than in any other academic discipline across all racial groups (Musu-Gillette et al., 2017). It is important to better understand if a race-based, graduation rate gap, similar to the differential that exists at the institutional and national level, occurs within Utah State University’s Jon M. Huntsman School of Business. It is similarly important to know if campus type (i.e., main campus, satellite campus) affects the graduation rates of White students and students of color.

This study, therefore, examined whether a relationship exists between higher education students of color and their graduation from the Jon M. Huntsman School of Business at Utah State University’s main and satellite campuses.

Rationale

Graduation is an important accomplishment that can have far-reaching positive impacts for an individual including: socioeconomic position, physical and mental health, social skill

development, family stability, community cohesion, and civic responsibility (Brandão, Bolsoni-Silva, & Loureiro, S., 2017; Landrum & McCarthy, 2018; Souberbielle, 2015).

While it is well understood that educational research can be a ‘messy construct’ (Labaree, 2003; Pajares, 1992), one should not be deterred by the challenge. There is value in undertaking an analysis to see if correlations exist between race and graduation rates at Utah State University’s Jon M. Huntsman School of Business. USU’s School of Business administrators can then better refine, expand, or curtail their programs and institutional offerings to help both White student and students of color prepare for lives of achievement and purpose (McClellan & Stringer, 2016).

Racial Research & Quantitative Methods.

Qualitative stories are the primary tool used by researchers the analyze race (Ladson-Billings, 1998). These stories detail the educational issues including, microaggressions, affirmative action challenges, racial climate on campus, and experiences of students of color (DeCuir & Dixon, 2004; Solorzano, 1998; Solorzano, Ceja, & Yosso, 2000; Yosso et al., 2004). While the traditional use of qualitative inquiry is an effective tool to advance the efforts of race theorists, there is utility in considering the complementary value of quantitative methods as a practical research tool. Quantitative methods can articulate the need to modify educational policy. It can also be a mechanism to increase public access to information on educational policies and outcomes (Covarrubias & Velez, 2013).

Zuberi and Bonilla-Silva (2008) urge scholars to leverage racial statistics to achieve racial justice. They argue, further, that, “statistical models that present race as a cause are really statements of association between the racial classification and a predictor or explanatory variable across individuals in a population. To treat these models as causal or inferential is a form of

racial reasoning ... Before the data can be deracialized we must deracialize the social circumstances that created race. Statistical research can go beyond racial reasoning if we dare to apply the methods to the data appropriately.”

Research on race involves principles that serve to guide research and inquiry. The theories underpinning this research can be considered a methodology (McCoy & Roddicks, 2015). As a result, understanding the needs and experiences of communities of color is not simply a framework, but also a tool to be used to collect and gather data (Sablan, 2019). Solorzano and Yosso (2002) define critical race methodology as an approach, grounded in theory which focuses on race and intersectionality. It challenges the paradigms of traditional research, while offering frameworks designed expressly to liberate students of color.

Qualitative research purists have long argued that quantitative methods are not able to capture the nuance of experiences encountered by people of color. Gilborn, Warmington, and Demack (2018) refute this absolutist position, asserting that different evaluative methods are appropriate for different elements of social research and critique. It is indisputable that quantitative methods cannot match qualitative methodologies' suitability in understanding the intricacies of the social processes that influence racial inequity. Quantitative methods, however, are well suited to provide insight into broader structures, identifying experiential trends and outcomes across large segments of populations of color. These tools can serve to identify the structural barriers and inequalities confronting groups of color.

Supporting Gilborn, Warmington, and Demack's assertion, scholars have explored different racial perspectives using quantitative methods (Covarrubias, 2011; Covarrubias & Velez, 2013; Teranishi, 2007). Researchers have quantitatively examined topics such as academic achievement disparities amongst different student groups (Covarrubias & Velez, 2013;

Franklin, Smith, & Hung, 2014; Teranishi, 2007). Much like the research endeavor undertaken in this dissertation, Teranishi (2007) disaggregated certain populations using race and used a racial framework to analyze demographic and achievement data. Similarly, Covarrubias (2011) used quantitative methods to examine how LatinX students progress through the educational pipeline. Educational statistics can bring out perspectives of students of color, highlighting their successes and challenges as they participate in the higher education system.

Researchers can use quantitative methods to represent educational processes and outcomes. This process can be used to reveal inequities and their perpetuation as well as to question models, measures, and analytical practices in order to advance equality (Stage & Wells, 2014). Descriptive and inferential statistics can be derived from quantitative methods grounded in race-centric theories.

Quantitative research can prove to be a useful tool to add new findings and perspectives related to the promotion of an anti-racist and anti-oppression mindsets in education (Knowles & Hawkman, 2019). Some of the faulty logic undergirding statistical analysis can be alleviated if race is placed in a social context and if scholars understand that the history of race relations is not benign. It is representative of dominant, oppressive forces (Zuberi & Bonilla-Silva, 2008).

It is important, however, to note that quantitative analyses can contain bias. Computer software and the calculations that are performed are the product of humans. Quantitative analyses, in fact, can represent an added risk due to the presumption of quantitative impartiality and objectivity. Numbers are not impartial and statistics are not colorblind (Garcia et al., 2018; Gilborn, Warmington, & Demack, 2018).

Statistical analyses involving race should be viewed through historical and social context lenses. Rather than asking how race causes discrimination and disadvantage, the real issue to be

contemplated is the way society responds to an individual's race (Zuberi, 2001). In the context of this research endeavor, one anticipated outcome is to better understand how race impacts satellite campus persistence for students of color. Equipped with a better understanding of this phenomenon, Utah State University would be able evaluate and implement administrative, curricular, and pedagogical modifications that align with Critical Race Theory and provide an enhanced level of support for students of color.

Scholars have identified the ways in which curricular practices and structures have a tendency to omit and distort the stories of people of color and constrain students of color from entering and succeeding in higher education environments (Jay, 2003; Yosso, 2002). Covarrubias (2011) provided insight into better understanding the way in which various elements of race, class, gender, and citizenship may be related to different educational outcomes. One gender-based study, as an example, evaluated the educational outcomes of LatinX students. Covarrubias (2011) found that non-citizen, Latina students were twice as likely to graduate relative to non-citizen Latino students.

This study being undertaken is similar in nature; it evaluates the graduation rates of undergraduate students of color enrolled in USU's College of Business at main and satellite campuses. This study can provide Utah State University's College of Business with an enhanced understanding of their student body's demographic composition and its potential effects on program of study completion at both main and satellite campuses.

Significance

Many studies have been undertaken that evaluate graduation rates at an institutional level (Cadenas, Bernstein, & Tracey, 2018; Heredia Jr., Castillo, Ojeda, Piña-Watson, & Cano, 2018; Iverson, 2007; Padgett & Reid Jr., 2002). Far fewer studies consider the graduation rates of

specific colleges, or schools, within an institution. This study intends to provide additional insight into graduation rates for students of color at a departmental (i.e., School of Business) level. Findings from this study could be used to inform departmental administrators and program managers on different ways to foster a more diverse matriculation as well as improve graduation outcomes for underrepresented student populations.

Objectives

This study will use Utah State University's College of Business as a sample case. The study will examine an undergraduate business student phenomena: the probability of degree completion for students, using racial self-identification as a variable. This study will be exploratory. Due to the study focusing on a single college of business, it is possible that the results will not be generalizable to larger populations. In spite of the results potentially not being generalizable, exploratory data is still valuable (Komorowski, 2016), providing previously unknown insights to the target student population. These insights can encourage future research.

The objective of quantitative research is to gather numerical data to explain a particular phenomenon (Babbie, 2010). The intent of this quantitative study is to better understand if a relationship exists between students of color populations (i.e., African-American, LatinX) enrolled in main and satellite campus-based undergraduate business programs and their graduation. Graduation is defined as the conferring of a four-year, undergraduate School of Business degree from Utah State University on the student.

Hypotheses

H₁: White students, enrolled in USU's business school, will experience higher graduation percentages than students of color.

H₂: Students of color who are enrolled at USU's main campus will graduate from the college of business at lower rates than students of color who enrolled at USU's satellite campuses.

Population and Sampling Plan

USU's Registrar and the Office of Analysis, Assessment and Accreditation ("AAA") maintains longitudinal data that tracks both enrollment and graduation data. Undergraduate College of Business enrollment figures provided for this study included the 2009-2010 academic year through the 2019-2020 academic year. Undergraduate College of Business graduation data provided for this study included the 2005-2006 academic year through the 2018-2019 academic year.

The study will use a time to event analysis, also known as a survival analysis, to determine the probability of students persisting in, and completing, their undergraduate business degree. Survival analysis is an appropriate method to be used due to its ability to increase the predictive nature of quantitative results as well as augment data-based decision making (Murphy, Gaughan, Hume, & Moore, 2010). Survival analysis is a commonly used statistical method for not only describing the timing of an event, but also modelling the risk of an event's occurrence and the influence of predictors over time (Singer & Willett, 2003).

Variables in the study include the following:

- Independent Variable 1
 - Race (e.g., African-American, LatinX, White): identified by the School of Business student and reported by USU's Registrar and Office of Analysis, Assessment and Accreditation.
 - Categorical Variable, Coded as: 0=Student of Color, 1=White
- Independent Variable 2

- Campus Type (i.e., main campus, satellite campus): as reported by USU's Registrar and Office of Analysis, Assessment and Accreditation.
- Categorical Variable, Coded as: 0=Satellite Campus, 1=Main Campus
- Dependent Variable 1
 - Completion of academic program of study as measured by the conferring of an undergraduate degree from the College of Business at Utah State University
 - Categorical Variable, Coded as: 0= Did Not Graduate, 1= Graduated

Regarding the coding of the categorical variable of race, the two designations (0=Student of Color, 1=White) were established by using the race identification component of the college application process. Student selections were divided into the two groups, with all non-White selections aggregated into one group and all White selections aggregated into the other group. Students that did not have a selection identified were excluded from analysis.

One important limitation to this study is that students are faced with a difficult decision when asked about their racial identity. Once the selections are made, college have no means to confirm their selections. College counselors are routinely encounter questions from students and their parents that include the following: Does partial heritage count? If a parent is Cuban, but the student doesn't speak Spanish, should they check Hispanic? Is it to students' advantage to declare themselves African-American even if they are not? (Belkin, 2019). This study relies on student students to accurately, and to the best of their ability, respond to this question.

Procedures

A Cox regression model is the most commonly used hazard model. They are used to describe the timing of an event (e.g., dropout), they model the risk of an event's occurrence, and

they model the influence of predictors over time (Singer & Willett, 2003). A Cox regression discrete-time survival analysis was performed using demographic variables to predict dropout rates (UCLA Institute for Digital Research & Education, 2019). In addition to Cox regression, logistic regression will be used to predict the probability that graduation will occur (Bulso, Marsili, & Roudi, 2019).

Gerald Adams (1996) identified several terms that are pertinent to survival analysis and are important in order to under a Cox regression model:

- **Event.** An event is a fundamental change or incident. In this study, the relevant events is graduation from USU's College of Business with a baccalaureate degree.
- **Event Time.** An event time is the time at which the fundamental change occurred. In this study, there will be one event time observed:
 - When a student graduates from Utah State University's College of Business with a baccalaureate degree.
- **Survival Probability.** The survival probability predicts the probability that a student remain enrolled in USU's College of Business and graduate. It provides the probability that a student will not withdraw from the program, either by transferring to another department or dropping out entirely.
- **Survivor Function.** The survivor function defines the probabilities of survival over time. This function will describe the proportion of students that graduate.
- **Hazard Rate.** The hazard rate is the rate of change in the survivor function. In this case, this would be the rate at which undergraduate students are ceasing their studies within USU's College of Business.

Data Analysis

The objective of the data analysis activities will be to produce a study that is quantifiable, easy to interpret, and objective. In this manner, the data will be presented in a way that allows for generalizations to other School of Business populations (Grand Canyon University, 2019). Scales of measurement will be identified (i.e., nominal, ordinal, interval, and ratio) (Johnson & Christensen, 2014). Descriptive statistics will then be used to describe the data (e.g., mean, median, mode, frequencies, and percentages) (Bottia, Stearns, Mickelson, Moller, & Parker, 2015; Harris, Tanner, & Knouse, 1996; McGraw, 2006).

Chapter 4 Findings

Introduction

This chapter reports on whether undergraduate, college of business-enrolled, students of color graduate at rates similar to their White peers at Utah State University's satellite campuses. Given the significant gaps in degree completion rates between White students and students of color (National Student Clearinghouse Research Center, 2017), this study focuses on the relationship between race, campus type, and degree completion. The objective of this research was to answer the following question:

Research Question 1: What is the relationship between racial background and graduation of students in satellite campus-based, higher-education business programs as measured by student business school graduation rates?

In order to answer these questions, a proportional hazards regression (or Cox regression) was used to evaluate the effect that different independent variables (e.g., race campus type) have on the time needed for an event to occur (i.e., graduation). A logistic regression was also used to predict the probability of an outcome (i.e., graduation) based on a set of independent variables (e.g., race, campus type).

Sampling and Data Collection

The student sampling data for this longitudinal research study was provided by Utah State University's Office of Analysis, Assessment, and Accreditation (AAA). After Institutional Review Board approval, AAA provided a dataset that provided enrollment and graduation data for Utah State University's College of Business students. Student records provided by AAA were anonymized, resulting in records that were not identifiable by the researcher. An example

of the demographic and enrollment data provided by AAA is found in Appendix B. An example of the graduation data provided by AAA is found in Appendix C.

AAA's enrollment data comprised the 2009-2010 through the 2019-2020 academic years. AAA's graduation data comprised the 2005-2006 through the 2018-2019 academic years.

Demographic Profile of the Enrollment Data Sample

USU's AAA office identified 8,345 college of business students that met the enrollment selection criteria. Records that provided unspecified data relating to race and campus type were identified as cases with missing values and were excluded from the analysis. The population was stratified using different demographic variables, including cohort, race, campus type, gender, age, and grade point average (GPA). Each of the pertinent demographic variables will be described and then presented in a summarized table (See Table 2). These descriptive statistics are presented in order to provide an understanding of the sample composition.

Cohort. The 12 academic years represented in the dataset provide insight into college of business enrollment. The annual enrollment range has a low in 2020 of 149 and a high in 2015 of 1,085. The 2020 figures, it should be noted, represent only a portion of expected 2020 college of business enrollment. The timing of the dataset provided by USU's AAA Office was such that the college was still enrolling students for the 2020 academic year at the time the data was provided.

Race. As a part of the collegiate application process, students are asked to self-identify their race. Options available to students are American Indian / Alaska Native, Asian, Black / African American, Hispanic, Native Hawaiian / Pacific Islander, Non-Resident Alien, Other / Unknown / Unspecified, Two or More Races, and White.

For this study, USU's AAA Office consolidated race selections into three categories: White, Student of Color, and Unspecified. The reason that the AAA Office consolidated all non-White students into one category is due to the possibility of student identification. With this study focusing on only college of business students, spread out over all of the different campuses, there was a possibility that a small number of business students could be enrolled at a satellite campus. By providing specific, non-White race data, there was a possibility that the student records would no longer remain anonymized.

In the dataset provided by the AAA office, of the 8,345 business students, 5,003 (59.95%) were White and 873 (10.46%) were students of color. The remaining 2,469 (29.59%) did not race specification.

Campus Type. USU's College of Business programs are commonly offered at all three campus types including the main campus, its satellite campuses, and its international campuses. Similar to the justification provided above regarding race, USU's AAA Office, in an effort to maintain student record anonymity, consolidated all of USU's regional campuses under one classification named statewide campus. The AAA determined that, due to the limited number of students of color enrolled in business programs at satellite campuses, providing anything beyond 'statewide campus' as a designation would introduce a significant risk of student record identification.

Of the 8,345 college of business students in the dataset, 4,836 (57.95%) attended USU's main campus, 3,428 (41.08%) attended one of USU's statewide campuses, and 81 (.97%) did not specify a campus type.

Gender. In addition to asking students to self-identify race in the college application process, prospective students are also asked to identify their gender. Students are limited to a

binary option when making this selection: female or male. In this college of business data set, female students are far outnumbered by male students, with 3,386 (40.58%) female student records supplied and 4,959 (59.42%) male records provided.

Age. For the purpose of this study, 11 discrete age categories were used to provide insight in the age makeup of USU's college of business students. 224 (2.68%) students were under the age of 18. 4,230 (50.69%) students were 18 to 19 years of age. 1,960 (23.49%) students were 20 to 21 years of age. 923 (11.06%) students were 22 to 24 years of age. 430 (5.15%) students were 25 to 29 years of age. 255 (3.06%) students were 30 to 34 years of age. 168 (2.01%) students were 35 to 39 years of age. 122 (1.46%) students were 40 to 49 years old. 29 (0.35%) students were 50 to 64 years of age. One (0.01%) student was 65 years old or greater. Three (.04%) students did not have an age specified. Students under the age of 25 made up the majority ($N=7,337$, 87.92%) of college of business enrollments.

The average age at the time of college of business entrance for all students in the study was 21.20 years, 20.51 for main campus students, 21.97 years for distance students, and 29.76 for students that did not have a campus type specified. These figures reflect that students sometimes complete two years of collegiate study outside of the college of business. Students are required to complete 35 credits of University Study Requirements, commonly known as 'generals' (Jon M. Huntsman, University Study Requirements, 2020). Student can then apply for business school admission then occurring at the beginning of a student's junior year. During the final two years of their undergraduate studies, they complete business acumen courses along with requirements associated with their chosen major (Jon M. Huntsman Department of Management, 2020).

Grade Point Average. Grade point averages were measured on a 0.00 to 4.00 scale. Grade point averages provided by USU's AAA office were cumulative, inclusive of a student's entire academic performance while enrolled at USU. Across all campus types, the average cumulative GPA for White students was 3.28 and was 3.03 for students of color. When considering campus type, White students at main campus had an average GPA of 3.29, with students of color at the main campus achieving an average GPA of 3.13. White students at distance campuses had an average GPA of 3.23, with students of color at distance campuses achieving an average GPA of 3.00.

Table 2

Summary Demographic Statistics of Sample

Variables	Business School Enrollment Cohorts																Total										
	2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		N	Percent	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent					
Students	310	3.71%	503	6.03%	641	7.68%	781	9.36%	955	11.44%	668	8.00%	1,085	13.00%	804	9.63%	885	10.61%	905	10.84%	659	7.90%	149	1.79%	8,345	100.00%	
Gender																											
Female	148	47.74%	200	39.76%	275	42.90%	323	41.36%	385	40.31%	243	36.38%	433	39.91%	323	40.17%	370	41.81%	377	41.66%	256	38.85%	53	35.57%	3,386	40.58%	
Male	162	52.26%	303	60.24%	366	57.10%	458	58.64%	570	59.69%	425	63.62%	652	60.09%	481	59.83%	515	58.19%	528	58.34%	403	61.15%	96	64.43%	4,959	59.42%	
Race																											
Students of Color	140	45.16%	44	8.75%	73	11.39%	81	10.37%	64	6.70%	69	10.33%	88	8.11%	74	9.20%	79	8.93%	82	9.06%	68	10.32%	11	7.38%	873	10.46%	
White	159	51.29%	264	52.49%	337	52.57%	392	50.19%	423	44.29%	472	70.66%	574	52.90%	597	74.25%	516	58.31%	547	60.44%	584	88.62%	138	92.62%	5,003	59.95%	
Unspecified	11	3.55%	195	38.77%	231	36.04%	308	39.44%	468	49.01%	127	19.01%	423	38.99%	133	16.54%	290	32.77%	276	30.50%	7	1.06%	0	0.00%	2,469	29.59%	
Campus Type																											
Main Campus	132	42.58%	220	43.74%	283	44.15%	380	48.66%	421	44.08%	443	66.317%	544	50.14%	580	72.14%	522	58.983%	578	63.9%	597	90.59%	136	91.28%	4,836	57.95%	
Distance Campus	175	56.45%	276	54.87%	350	54.60%	398	50.96%	524	54.87%	216	32.335%	529	48.76%	215	26.74%	356	40.226%	323	35.7%	54	8.19%	12	8.05%	3,428	41.08%	
Unspecified	3	0.97%	7	1.39%	8	1.25%	3	0.38%	10	1.05%	9	0.1347%	12	1.11%	9	1.12%	7	0.00791%	4	0.4%	8	1.21%	1	0.67%	81	0.97%	
Age																											
<18	11	3.55%	13	2.58%	13	2.03%	12	1.54%	37	3.87%	17	2.54%	36	3.32%	23	2.86%	22	2.49%	18	1.99%	14	2.12%	8	5.37%	224	2.68%	
18-19	125	40.32%	160	31.81%	229	35.73%	397	50.83%	532	55.71%	317	47.46%	635	58.53%	420	52.24%	495	55.93%	519	57.35%	334	50.68%	67	44.97%	4,230	50.69%	
20-21	71	22.90%	141	28.03%	151	23.56%	153	19.59%	177	18.53%	127	19.01%	198	18.25%	202	25.12%	233	26.33%	250	27.62%	208	31.56%	49	32.89%	1,960	23.49%	
22-24	50	16.13%	93	18.49%	110	17.16%	95	12.16%	97	10.16%	77	11.53%	100	9.22%	87	10.82%	66	7.46%	69	7.62%	64	9.71%	15	10.07%	923	11.06%	
25-29	23	7.42%	39	7.75%	60	9.36%	56	7.17%	49	5.13%	56	8.38%	56	5.16%	27	3.36%	26	2.94%	18	1.99%	16	2.43%	4	2.68%	430	5.15%	
30-34	16	5.16%	23	4.57%	32	4.99%	27	3.46%	28	2.93%	44	6.59%	28	2.58%	19	2.36%	10	1.13%	14	1.55%	11	1.67%	3	2.01%	255	3.06%	
35-39	6	1.94%	16	3.18%	28	4.37%	20	2.56%	14	1.47%	17	2.54%	17	1.57%	16	1.99%	20	2.26%	9	0.99%	4	0.61%	1	0.67%	168	2.01%	
40-49	7	2.26%	16	3.18%	13	2.03%	14	1.79%	16	1.68%	10	1.50%	11	1.01%	8	1.00%	10	1.13%	7	0.77%	8	1.21%	2	1.34%	122	1.46%	
50-64	1	0.32%	1	0.20%	5	0.78%	7	0.90%	5	0.52%	2	0.30%	4	0.37%	1	0.12%	2	0.23%	1	0.11%	0	0.00%	0	0.00%	29	0.35%	
65+	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	0.15%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	0.01%	
Unspecified	0	0.00%	1	0.20%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	0.12%	1	0.11%	0	0.00%	0	0.00%	0	0.00%	3	0.04%	

Descriptive Statistics

Graduation. Graduation is defined as a student satisfying all baccalaureate degree requirements within USU as well as USU's Huntsman School of Business. Students that enroll in the school of business but transfer to another school within USU and graduate from a non-business program are considered as ungraduated for this study. Refer to Table 3 for a summarized view of graduation by campus type and race.

Table 3

Descriptive Statistics for Graduation by Campus Type

Graduation by Campus Type	<i>N</i>	Percent
Graduated		
Distance Campus		
Student of Color	135	5.41%
White	392	15.71%
Total	527	21.12%
Main Campus		
Student of Color	250	10.02%
White	1,718	68.86%
Total	1,968	78.88%
Total	2,495	100.00%
Non-Graduated		
Distance Campus		
Student of Color	98	2.97%
White	406	12.28%
Total	504	15.25%
Main Campus		
Student of Color	379	11.47%
White	2,422	73.28%
Total	2,801	84.75%
Total	3,305	100.00%

Age. Age was evaluated to determine if there was a difference in average student age between main campus and distance-based students. Ages reported below are as of the students' first term enrolled in the College of Business. The average age of distance-based college of business students was 21.97 years. The average age of main campus-based college of business students was 20.51 years.

Age distribution for distance campus-based students is detailed in Table 4. Age distribution for main campus-based students is detailed in Table 5.

Table 4

Distance Campus Age Distribution

<u>Age by Campus Type</u>	<u>N</u>	<u>Percent</u>
Distance Campus Age Bands		
Less Than 18	130	3.79%
18 to 19	1,836	53.56%
20 to 21	578	16.86%
22 to 24	225	6.56%
25 to 29	258	7.53%
30 to 34	179	5.22%
35 to 39	114	3.33%
40 to 49	85	2.48%
50 to 64	21	0.61%
65 or Greater	1	0.03%
Unspecified	1	0.03%
Total	3,428	100.00%

Note: The student counts above include cases available as well as cases dropped.

Table 5

Main Campus Age Distribution

Age by Campus Type	<i>N</i>	Percent
Main Campus Age Bands		
Less Than 18	91	1.88%
18 to 19	2,389	49.40%
20 to 21	1,373	28.39%
22 to 24	687	14.21%
25 to 29	153	3.16%
30 to 34	64	1.32%
35 to 39	46	0.95%
40 to 49	26	0.54%
50 to 64	6	0.12%
65 or Greater	0	0.00%
Unspecified	1	0.02%
Total	4,836	100.00%

Note: The student counts above include cases available as well as cases dropped.

Gender. Females comprised 40.58 percent of total undergraduate college of business enrollment. Females comprised 35.71 percent of main campus college of business enrollment and 47.61 percent of distance campus, college of business enrollment. A detailed view of female participation in college of business programs by campus type is found in Table 6.

Table 6

Gender Participation by Campus Type

Gender by Campus	N	Percent
Male		
Distance	1,796	21.52%
Main Campus	3,109	37.26%
Unspecified	54	0.65%
Total	4,959	
Female		
Distance	1,632	19.56%
Main Campus	1,727	20.70%
Unspecified	27	0.32%
Total	3,386	
Total	8,345	100.00%

Statistical Analysis**Cox Regression / Survival Analysis**

A Cox regression was used to determine the relationship between college of business students and graduation. In this study, this proportional hazards model is an analysis that predicts the likelihood that students will persist in their studies to graduation. This regression analysis considers how demographic factors can impact student graduation rates over time. This tool is particularly effective in modeling the length of time it will take for an event, in this case graduation, to occur, even if this event hasn't occurred for some of the participants.

One attribute of the Cox regression is that, if requisite data is missing, records can be censored, or dropped. The case processing of the AAA dataset is listed in Table 7. Case processing of the sample resulted in 2,545 student records that were missing values and resulted

in the cases being dropped. These dropped cases represent 30.50 percent of the total sample. This exclusion resulted in 5,800 records remaining available for evaluation. Of those 5,800 student records, 2,708 experienced the event of graduation, with the remaining 3,092 being right-censored. Right censoring indicates that the event being observed (i.e., graduation) has not yet occurred.

Table 7

Case Processing Summary

	<i>N</i>	Percent
Cases available in analysis		
Event ^a	2,708	32.45%
Censored	3,092	37.05%
Total	5,800	
Cases Dropped		
Cases with missing values	2,545	30.50%
Cases with negative time	0	0.00%
Censored cases before the earliest event in a stratum	0	0.00%
Total	2,545	
Total	8,345	100.00%

a. Dependent Variable: College of Business Admission Year

In following Cox Regression table (Table 8), the beta-coefficient (B) describes the change in the log-hazard per unit change in the independent variable (graduation).

Table 8

Cox Regression Models

Results of Cox Regression Analysis

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
	B (SE)	Exp(B)	B (SE)	Exp(B)	B (SE)	Exp(B)	B (SE)	Exp(B)	B (SE)	Exp(B)
Campus Type	-0.59* (0.02)	0.56	-0.52* (0.05)	0.59	-1.06* (0.11)	0.35	-0.87* (0.16)	0.42	-0.79* (0.17)	0.45
Race			-0.21* (0.05)	0.81	-0.70* (0.10)	0.50	-0.65* (0.16)	0.52	-0.79* (0.16)	0.46
Interaction					0.67* (0.12)	1.94	0.73* (0.18)	2.08	0.88* (0.19)	2.40
Gender							0.31* (0.06)	1.36	0.27* (0.06)	1.31
GPA							0.35* (0.03)	1.42	0.35* (0.03)	1.41
Age									0.13* (0.03)	1.14

Note. $N=5,800$. Campus type is coded as Distance (0) and Main Campus (1). Race is coded as Student of Color (0) and White (1). Gender is coded as Female (0) and Male (1). The interaction term is configured as Campus Type x Race. *Results are statistically significant ($p<.005$).

In the Cox regression represented in Table 8, Model 1, the independent variable of campus type was used to evaluate its effect on graduation rates. The negative beta signifies that main campus-based students are less likely to graduate than students that are based out of a distance campus.

In Model 2, the variables of campus type and race were used to evaluate their effect on graduation rates. The negative beta value for the race variable indicates that the survival of White students is not as good as the survival of students of color. The negative beta value associated with the campus type variable indicates that the survival of main campus students is not as good as the survival of distance-based students.

In the regression represented in Table 8, Model 3, an interaction term is introduced into the regression. Statistical interaction terms can be included in a variety of models in order to express different relations between independent variables (Ahlbom & Alfredsson, 2005). The interaction effect is represented as the product of two independent variables. In this Model 3 regression, the interaction term is the product of campus type and race. Along with campus type and race, this Cox regression provided negative beta coefficients for both campus type and race, indicating that these White students and main campus-based students are negatively associated with the length of survival. A positive interaction value, identified in this regression, indicates that an increase in either the campus type or race variables will increase the significance effect of the other variable (either campus type or race). This tests whether the relationship between race and persistence is equal across campus type. The Model 3 coefficients are similar in effect to those found in Model 2, which correlate students of color with better survival than White students, and correlate distance campus-based students as more likely to graduate than main campus-based students.

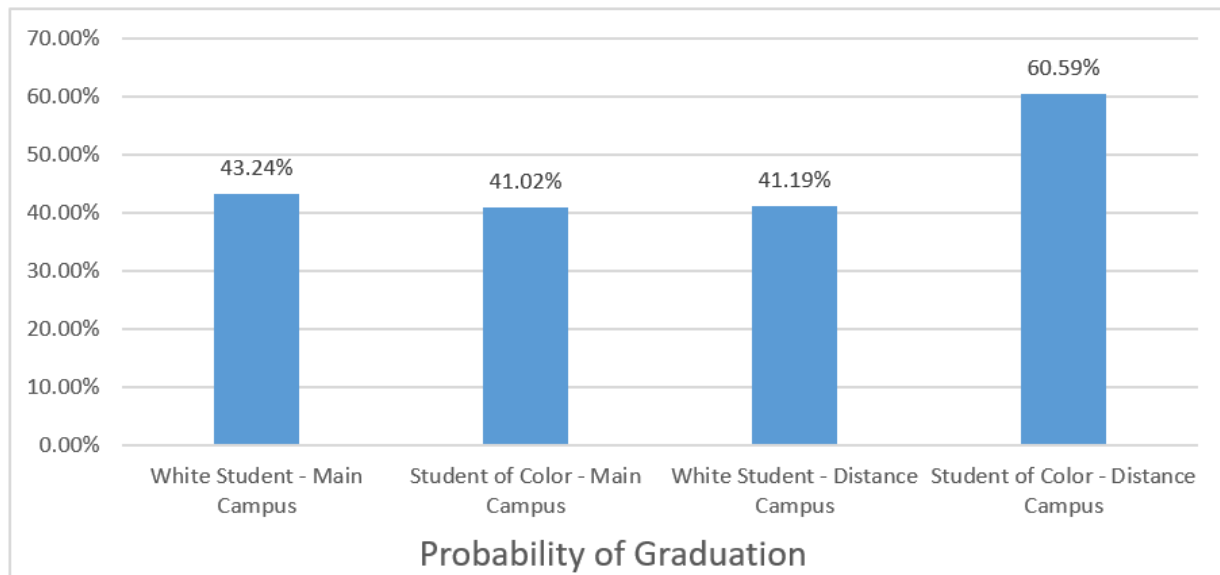
In the regression represented in Table 8, Model 4, two additional independent variables are added: gender and GPA. Similar to the regression findings illustrated in Model 1, 2, and 3, the beta coefficient of the variables of campus type and race remain negative, again indicating that these White students and main campus-based students are negatively associated with the length of survival. The positive interaction value, similar to the results identified in Model 3, identified in this regression, indicates that an increase in either the campus type or race variables will increase the significance effect of the other variable. The beta coefficient of gender is positive, which indicates that male students are positively associated with the length of survival. Female business students at USU are less likely to graduate than their male peers. The beta coefficient associated with GPA is positive, signifying that when GPA increases, the probability of a student persisting to graduation increases.

In the regression represented in Table 8, Model 5, one additional variable was added: the age at which a student is admitted to the college of business. Consistent with the regression findings illustrated in Model 1, 2, 3, and 4, the beta coefficient of the variables of campus type and race remain negative, again indicating that White students and main campus-based students are less likely to graduate. The interaction value, similar to the results identified in Model 3 and 4, was positive. The beta coefficients of gender remains positive, which again indicates that male students are positively associated with the length of survival. The beta coefficient associated with GPA remains positive, indicating a positive relationship with survival. The age coefficient is positive, indicating that, the older the student, the more likely they are to graduate.

Logistic Regression

In many studies and across different fields of research, researchers commonly evaluate different sets of explanatory variables and set up models in an effort to predict the probability that an event will occur (Bulso, Marsili, & Roudi, 2019). When the event to be predicted is binary, such as whether or not a student graduates, a widely used statistical method is logistic regression (Cox, 1958).

In this study that included 135 distance-based, students of color, logistic regression was used to predict the probability graduation occurring. Three variables, campus type ($B=-0.79$), race ($B=-0.79$), and the interaction term ($B=0.88$) as well as a constant term ($B=0.43$) were used in this regression. The results of the logistic regression are represented in Figure 6.



Note. The variables of gender, age, and GPA have been held constant in the probabilities above.
 Figure 6. College of Business Graduation Probabilities by Race and Campus Type.

Results

The results of the Cox Regressions and logistic regression, that evaluated undergraduate college of business students at USU, resulted in significant findings. With many studies evaluating the degree completion rates for students of color, but few studies considering possible effects that campus type and a departmental focus could have on graduation rates, this study provides a more nuanced look into degree completion for students of color.

In the series of Cox Regressions that were completed in Table 8, beta coefficients, standard errors, significance and hazard ratios are reported. Variables that have significance values under 0.05 ($p < 0.005$) are considered statistically significant. In the completed regressions, race, campus type, gender, GPA, and age produced statistically significant results.

Statistically Significant Results

As identified in Table 8, Model 5, the independent variables of race, campus type, gender, GPA, and age produced statistically significant results in the completed regression analysis. Each of these variables and their associated beta coefficient and significance, as well as a brief interpretation of the findings will be now be discussed.

Race. Race had a statistical significance of 0.00 and a beta coefficient of -0.79. These findings indicate that undergraduate, White, college of business students are less likely to graduate than students of color.

Campus Type. Campus type had a statistical significance of 0.00 and a beta coefficient of -0.79. These findings indicate that undergraduate college of business students are less likely to graduate from the main campus than from distance campuses.

Gender. Gender had a statistical significance of 0.00 and a beta coefficient of 1.31. These findings indicate that a male college of business student is more likely than his female counterpart to graduate.

GPA. GPA had a statistical significance of 0.00 and a beta coefficient of 1.41. This coefficient signifies that when GPA increases by a standard deviation, the probability of a student surviving increases by 0.41 of a standard deviation. As GPA increases, the likelihood of graduation increases.

Age. Age had a statistical significance of 0.00 and a beta coefficient of 1.14. This coefficient signifies that when age increases by a standard deviation, the probability of a student surviving increases by 0.14 of a standard deviation. The older a student is, the more likely they are to graduate.

Research Question Answer

Research Question: What is the relationship between the racial background and academic persistence of students in satellite campus-based, higher-education business programs as measured by student business school graduation rates?

Students of color enrolled in undergraduate business programs are more likely to graduate when attending satellite campuses than Utah State University's main campus. Students of color enrolled in business programs graduate are more likely to graduate than their White peers in satellite campus settings. These predicted graduation likelihoods for students of color disappear when one evaluates their predicted persistence at Utah State University's main campus. Students of color are less likely to graduate from the main campus than a satellite campus. Students of color are also less likely to graduate than their White peers when attending the main campus. Female students enrolled in the college of business are less likely to graduate than their male

peers. The higher the GPA achieved by a student, the more likely they are to graduate.

Similarly, the older a student is, the more likely they are to graduate.

Summary

In order to better understand the rates at which students of color enrolled in undergraduate business programs graduate, a series of quantitative assessments were completed. These assessments tested whether different variables impacted the likelihood of college of business graduation. The variables included in these tests were race, campus type, gender, GPA, and age. Students who enrolled in Utah State University's College of Business, at both the main campus as well as satellite campuses, during the years comprising the 2009-2010 academic year through the 2019-2020 academic year constituted the sample evaluated in this study. This sampling of students was then used to evaluate the relationship between race and campus type and their effect on graduation.

The Cox Proportional Hazards Model provided insight into the likelihood of degree completion amongst the study population's subgroups. Students of color, enrolled in college of business programs, were more likely to graduate from satellite campuses than from main campuses. White students were more likely to graduate from USU's main campus than from a satellite campus. Students of color were more likely to graduate from satellite campuses than their White peers. Conversely, White students were more likely to graduate from the main campus than students of color. Female students were less likely to graduate than males. GPA is positively correlated increased survival rates. The older a student is, the more likely they are to graduate. It is important to note that a student's progression towards degree completion can be influenced by more than campus type and race. Progression towards graduation is highly individualized and dependent on a student's unique circumstances.

Chapter 5 Discussion

Introduction

This longitudinal research study was designed to further scholarly efforts to better understand the likelihood of graduation for students in specific, higher education settings. With graduation rates being an important academic metric, many studies have interrogated ways to drive institutional improvement (Chatterjee, Marachi, Natekar, Rai, & Yeung, 2018). Similarly, the use of logistic regression to predict the graduation rates has precedent (Koker & Hendel, 2003). Existing research, however, was unable to answer a specific question into whether race and campus type affect graduation rates at the departmental level within a university (i.e., college of business). Consequently, a proportional hazard regression analysis was conducted to determine if there is a relationship between campus type and race variables and associated graduation rates for students enrolled in a university's college of business. The analysis found statistically significant differences in persistence based on race and campus type. The findings of this study also identified that statistical differences in persistence were influenced by a student's gender, GPA, and age.

This study's ability to address the research gap regarding the relationships between race, campus type, and graduation is important given the degree of importance associated with a college degree. The belief that credentials from colleges are crucial for success has deeply permeated American society (Espenshade & Radford, 2009). This belief is well-founded. A college degree yields meaningful economic advantages over those who do not possess a degree. Autor, Katz, and Kearney (2008) reported that college graduates earned 90 percent more than their peers who only completed high school. Economic advantages are not the only benefit bestowed on college graduates. Collegiate achievement is also related to improved health,

longer life, increased happiness, and a host of other non-economic outcomes (Attawell & Levin, 2007; Pallas, 2000; Ross & Mirowsky, 1999; Rowley & Hurtado, 2003; Stevens, Armstrong, & Arum, 2008). Given this deep-rooted belief, and the very real importance of a college degree, it is critical that all students be positioned in the best possible way to academically achieve.

Given the societal and economic importance associated with collegiate graduation, and the increasing number of distance learners in higher-education environments (Lenert & Janes, 2017), additional evaluation and research should be undertaken to better understand the distance learning environment and its effects on academic achievement. In 2013, an analysis of enrollment data from the Integrated Postsecondary Data System (IPEDS) by Poulin and Straut, showed more than 5.5 million students were enrolled in at least one fully, distance-based course in the U.S. Of all degree granting, higher-education institutions in the U.S., approximately 70 percent now have some form of distance offering, and university administrators (77 percent in 2013 and 74 percent 2014) now recognize that online learner outcomes can be the same, or better, than traditional, face-to-face class instruction (Allen & Seaman, 2015).

In addition to the type of campus students attend, race also influences degree completion rates. Over the last few decades, historically underrepresented groups have made meaningful gains in higher education (Krymkowski & Mintz, 2011). Women, for example, are now more likely than men to earn college degrees; and this is true among LatinX students as well as African American students (Bae et al., 2000; DiPrete & Buchmann, 2006; England et al., 2007). Additionally, increases in the collegiate completion rates of African-America men, White women, and LatinX women have outpaced those of White men (U.S. Bureau of the Census, 2010).

In spite of the encouraging graduation trends for students of color, their degree completion rates still lag behind their White peers (Small & Wiship, 2007). This phenomenon is illustrated in the following example involving students of color enrolled in collegiate engineering programs. In 2005, the National Action Council for Minorities in Engineering reported that students of color (defined as African American, LatinX, Native American, or mixed ethnicity) persisted to graduation at a rate of 39 percent, while 63 percent of their White peers graduated (Murphy, Gaughan, Hume, & Moore, Jr., 2010). Students of color, often, do not graduate at rates experienced by their white peers (French, Immekus, & Oakes, 2005; May & Chubin, 2003; Reichert & Absher, 1997; Talbert, 2012).

Having identified the gap in research literature that failed to address the relationship between campus type, race, and graduation rates within a university's college of business, the researcher completed a proportional hazard regression to determine if a relationship exists between these variables and desired outcome of graduation. Utah State University was used as a demonstration case. Statistically significant results identified in this study can inform departmental, campus-specific, as well as institutional policies to enhance acculturation and improve curricular and instructional practices.

Discussion of Results

The proportional hazards regressions resulted in statistically significant results, which will be reported based on each tested dependent variable. The Students of Color and Persistence section will address the race variable. The subsequent Distance Learning and Persistence section will address the campus type variable. The following Student Persistence section will address the age, gender, and GPA variables.

Students of Color and Persistence (Variable: Race). Race, and its influence on degree completion rates, has been extensively evaluated (Berger & Milem, 2000; Crisp, Doran, & Reyes, 2018; French, Immekus, & Oakes, 2005; May & Chubin, 2003; Reichert & Absher, 1997). AACSB International (2012) reported that, as of 2011, students of color comprised approximately 28.5 percent of undergraduate college of business enrollment. Utah State University's AAA Office, similarly, provides enrollment and graduation data by race. Races tracked by the this office include American Indian / Alaska Native, Asian, African-American, Hispanic, Native Hawaiian / Pacific Islander, Non-Resident Alien, Race / Ethnicity Unknown, Two or More Races, and White. Given the highly-specific segmentation of students in this study's sample size, and in order to maintain student record anonymity, USU's AAA office was unable to provide student enrollment and graduation data that identified the specific race of each student. They were able to provide anonymized student data using three specific race designations: students of color, White, and unspecified.

Using those students that identified as either students of color or White (students who did not specify a race were excluded), analysis showed that students of color, enrolled in college of business programs, were 0.46 more likely ($p=0.000$) to graduate than their White peers. Using logistic regression to predict the likelihood of graduation, main campus-based students of color were 2.22 percent less likely to graduate than their White counterparts. However, distance-based students of color were 19.40 percent more likely to graduate than distance-based White students.

The improved academic completion rate results for students of color were unexpected, given the many studies which indicate that the graduation rates for students of color lag behind their White peers (Adelman, 2004; Blankenship, 2010; Camara & Schmidt, 1999; Fischer, 2010; Harris & Herrington, 2006; Harvey & Anderson, 2005). Utah State University and the Jon M.

Huntsman School of Business, therefore, appear to be providing an educational experience that is meeting the needs of their students of color at a level that exceeds some schools.

One possible explanation of this enhanced achievement for students of color that was investigated was faculty and staff composition. A diverse faculty and staff can help students achieve academically. Many studies and longstanding research show that a diverse faculty and student body lead to great educational benefits for all students (Collins & Kritsonis, 2006). As faculty diversity increases, the diversity found in course content, curricular and instructional methods, and knowledge presented to students also increases (Brown, 1998). Faculty that have diverse backgrounds bring a wide range of their own experiences to the classroom. These different backgrounds and associated ideologies can improve the overall achievement of the school (Collins & Kritsonis, 2006). Generally speaking, different faculty perspectives will lead to a more effective school (Springer, 2004).

Within business schools, many racial groups are not proportionately represented among full-time faculty (Moshiri & Cardon, 2019). According to data published by the AACSB in 2018, African-Americans, LatinXs, and American Indians or Alaskan Natives constituted 7.0 percent of full-time faculty at business schools, while undergraduate business school enrollment of those races was 27.3 percent (AACSB, 2020a). An evaluation of USU's Huntsman School of Business produced findings that closely paralleled AACSB's results, with 9 percent of faculty and staff being people of color (Huntsman Faculty & Staff, 2020) (See Figure 7). Consequently, the lack of a diverse faculty and staff make it unlikely to be a significant source of the enhanced academic performance achieved by USU's students of color.

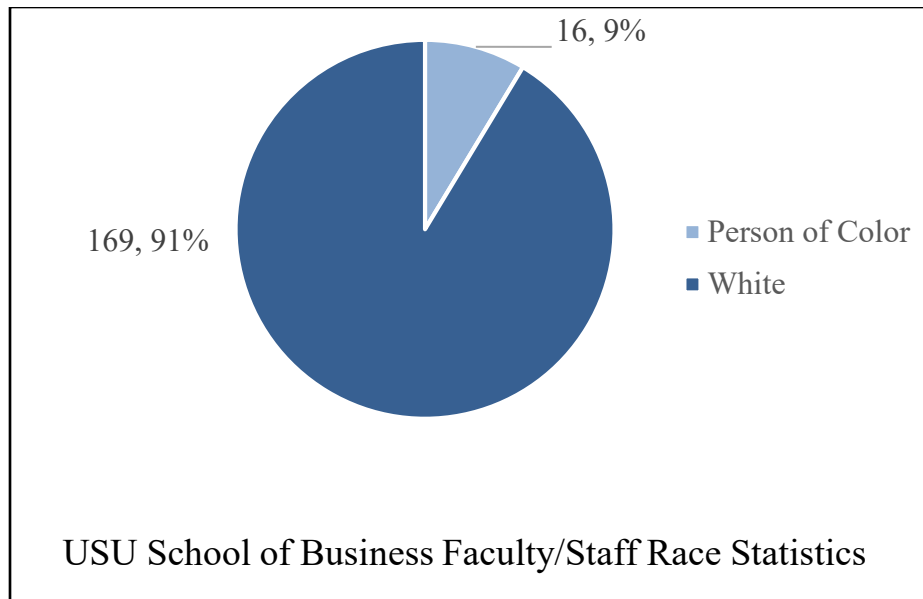


Figure 7. USU's Huntsman School of Business Faculty/Staff Racial Demographics (Huntsman Faculty & Staff, 2020).

With faculty/staff composition not sufficiently explaining the results in distance-based students of color persisting at higher levels than their distance-based White peers, the concept of family and cultural support may provide additional context. The family support that students of color need, and are able to get more readily, when they attend school in close proximity to their family may explain their improved persistence. The college experience is, after all, an experience for the entire family and not just the person in attendance (Swail, Redd, & Perna, 2003). Ngada, Gregerman, Jonides, von Hippel, and Lerner (1998) evaluated the relationship of student integration and retention. Their findings showed that learner integration is critical to the academic achievement of students of color. Ngada and his colleagues found that most Hispanic students that enrolled in out of state institutions may have experienced significant feelings of isolation as a result of the lack of immediate family support. Feelings of cultural and familial isolation could contribute to attrition rates for those students attending campuses that are

geographically distant from their family and community. USU's findings, therefore, may reflect the effect of close, in-person family support provided to students of color who enroll on distance campuses close to family. This support could help to explain why the graduation rates for distance-based students of color that are nearly 20 percent higher than main campus-based students of color.

This enhanced academic achievement of students of color is particularly meaningful given that "the 21st century will be marked by the struggles of people of color for position, credibility and respect within Western Societies ... the greatest battle will be for control over who educates minorities within Western societies and the nature of that education" (Gordon, 1990). Students of color endure various forms of oppression while enrolled at universities. Sources of oppression can include: physical, psychological, social, curricular, and pedagogical (Kumashiro, 2000). Rather than accept the traditional educational power structures, it is critical for universities to proactively understand the needs of their diverse students, develop programs that will empower them, and foster a spirit of achievement.

One element that can foster achievement is the campus culture. It is common for underrepresented students to struggle in the higher education acculturation process (Brown & Woods, 2005; Li & Liu, 2013). This difficulty is exacerbated when the institutional population does not have a sufficient diverse student body. Positive educational outcomes are promoted when student bodies are diverse (e.g., race, socioeconomic, religion, disability, sexual orientation, gender) (Antonio et al., 2004; Gurin, 1999; Hurtado, 2005). Universities should know the composition of their students and work to ensure that all groups have sufficient support and representation.

Another institutional element that can improve persistence is a diversity and inclusion program. Many campuses have programs designed to support diversity in their faculty and student populations (Clayton-Pedersen, Parker, Smith, Moreno, & Teraguchi, 2007; Milem, Chang, & Antonio, 2005). Diversity and inclusion program documents provide insight into how higher education institutions define conceptions of diversity (Allan, 2003) and establish the framework upon which an institution's culture of inclusion can be built and maintained.

Institutional culture is the heart and soul of organizational success (Bolman & Deal, 2013). If a university wants to increase the enrollment, persistence, and graduation rates of students of color, elements that foster this achievement must be found in an inclusive institutional culture.

Academic institutions are increasingly asked to respond to many different phenomena including sociopolitical issues (e.g., globalization), cultural considerations (e.g., human migration), and economic factors (e.g., recession) (Hajisoteriou, Karousiou, & Angelides, 2018; Sutton, 2005). These factors force institutional diversification. Rather than simply permitting these forces to act upon the institution, universities should proactively evaluate the phenomena and strategize ways to incorporate the positive effects of the phenomena into the institutional culture.

Distance Learning and Persistence (Variable: Campus Type). Utah State University's non-traditional students possess different attributes than their traditional peers. There are many different demographic factors that serve to distinguish between the characteristics of traditional collegiate students and non-traditional collegiate students. Examining nontraditional characteristics is important not only because a high percentage of postsecondary students possess them, but also because students' likelihood of persisting and

attaining a degree is affected by these characteristics (Berkner, Cuccaro-Alamin, & McCormick, 1996; Berkner, He, & Cataldi, 2002; Choy, 2002; Horn, 1996; Skomsvold, Radford, & Berkner, 2011).

Kim (2002) noted that the attributes that characterize non-traditional students do not follow a standardized pattern or definition. Non-traditional students are generally acknowledged as identifying with at least one of the following characteristics: have delayed collegiate enrollment (a postponement of university matriculation of at least one year, which results in an increase in age); have full-time employment; is a part-time student; is financially independent; and have dependent responsibilities (Brock, 2010; Choy, 2002; Horn, 1996; Taniguchi & Kaufman, 2005). 74 percent of 2011-2012 undergraduate students in the United States possessed at least one of the five non-traditional attributes described above (U.S. Department of Education (2015).

USU's commitment to non-traditional students has resulted in their comprising 42% of total university enrollment (USU About, 2020). Utah State University's AAA office publishes enrollment and graduation statistics by campus type. Utah State University has different campuses, which can be segmented broadly into two categories: main campus and distance campuses. USU's AAA office tracks enrollment at the following distance campuses designations: Brigham City, Distance, Independent Study, International, Kaysville, Moab, Orem, Price, Prison, Salt Lake City, San Juan, Special Programs, Southwest, and Tooele. Given the highly segmented student population in this study (i.e., college of business, students of color, distance campus), in order to maintain student record anonymity, USU's AAA office was unable to provide student enrollment and graduation data down to the specific campus. They were able,

however, to provide three specific campus type designations: main campus, distance campus, and unspecified.

Using these three data response possibilities (the campus type of unspecified was excluded from analysis), analysis showed that college of business, distance-based students were 0.45 more likely ($p=0.000$) to graduate than main campus-based students. White, main campus-based students are predicted to graduate at 43.24 percent and White students that are distance-based are predicted to graduate at a rate of 41.19 percent. In contrast to White students, students of color are predicted to graduate at a rate of 41.02 percent from USU's main campus as compared with a graduation probability of 60.59 percent from distance-based campuses.

These findings, which predict improved academic outcomes for distance campus-based students, are consistent with some research findings which reported distance-based completion rates in excess of 80 percent (Carr, 2010). Other studies, however, have reflected lower graduation rates for students enrolled in distance-based programs. Carr (2010) noted that distance education degree completion rates are often 10–20 percentage points lower than those found in traditional programs. Many meta-analyses have produced similarly inconsistent results, with some showing improved rates while others produced lower rates (Allen et al., 2004; Bernard, Abrami, Lou, & Borokhovski, 2004; Lou, Bernard, & Abrami, 2006; Sitzmann, Kraiger, Stewart, & Wisher, 2006).

The fact that distance-based students graduate at higher rates than their main campus peers may be attributed to certain demographic factors. One factor is the age of the student. In this study, distance-based students had an average age of 21.97 years old and main campus students had an average age of 20.51 years old. The Cox regression completed in this study confirmed that the older a student is, the more likely they are to graduate. For every increase in

one standard deviation of age, the odds of graduating increase by 0.14 standard deviations. This phenomenon which has been reproduced in other studies (Carr, 2010), may be contributing to the improved graduation rates of distance students at USU.

Another demographic element unique to non-traditional students that may also be a driving force in improved persistence is a student's employment status. Many distance-based students are employed in a full-time capacity while also attending college (Nesler, 1999; Wood, 1996). These students are commonly motivated to persist in their studies in order to improve their employment situation and earning ability. This motivation for career enhancement has been documented as the primary reason why adults seek to enroll in higher education programs (Cross, 1981; Kim, Collins, Stowe, & Chandler, 1995; Maehl, 1999; Nesler & Harmer, 1998). Utah State University distance-based students may be motivated in a similar manner.

Non-traditional students also have different social integration needs than traditional students. Academic and social integration within the university may be less influential for distance-based students (Bean & Metzner, 1985). For traditional students, on-campus student peers and faculty represent important support groups (Rovai, 2003). Bean and Metzner (1985) posited that traditional students have different support structures than non-traditional students. They have limited and different interactions with other groups within the college environment. They draw more support from sources found outside the academic environment simply because their group of peers, friends, family, and employers exists outside of the college environment. USU distance students may share some of the unique social support structure attributes described above. These attributes may contribute to enhanced rates of graduation.

One final component that can contribute to high levels of distance learning achievement is institutional commitment. Effective retention lies in the college's commitment to students

(Tinto, 1987). Institutions committed to achieving improvement in graduation rates for distance-based students must reconsider both their offerings and their delivery methods to ensure that these unique learners receive the educational options and the ancillary support they need to succeed (Worth & Stephens, 2011). USU, as an early adopter of distance education, recognized the importance of providing higher education opportunities in non-traditional settings. It has provided distance-based education for more than 115 years. USU's commitment to non-traditional students is reflected in it currently offering nearly 50 degrees statewide, including the only distance-delivered doctorate (USU-About, 2020).

USU's tenure in providing distance-based education has resulted in adult instructional expertise that likely exceeds other institutions that don't have USU's long-standing commitment to non-traditional student education. Developmentally, adult learners often approach education using the process of 'generativity', which is a process of the adult learner sharing accumulated knowledge for the betterment of others (Erikson 1980). Adult learners enhance basic course content with the introduction of personal anecdotes from the working world (Vella, 2002).

Institutions, like USU, that are committed to distance learner inclusion will leverage generativity in their curriculum and instruction. This study's author is a graduate of USU's baccalaureate program. I was employed in a full-time capacity and older than the typical undergraduate when enrolled and can attest to using generativity as a tool to enhance the learning experience for others in my undergraduate studies within the USU's College of Business. Some of my classes were structured to facilitate the sharing of professional anecdotes, while others were not. Classes that didn't foster generativity sacrificed an opportunity to legitimize theoretical, curricular theories with real-world applications. It is likely that some distance-based

students within this study possess the same inclination to share their professional learned experiences.

Student Persistence (Variables: Age, Gender, GPA)

Age. Distance-based students are typically older than traditional students (Gibson & Graff, 1992; Hazel & Dirr, 1991; Thompson, 1998). Consistent with this research, USU's College of Business students who are enrolled in distance campuses are, on average, 1.46 years older (distance-based average age: 21.97 years; main campus-based: 20.51 years) than main campus-based students. Although student age differences vary from study to study, most evidence indicates that distance-based students are within the 25-35 age category (Holmberg, 1995). It is common for distance-based students to be married, employment full-time and to have family responsibilities that traditional students do not. For these individuals, their ability to attend classes on campus may be limited. They are, therefore, more likely to complete their studies at a distance location and are likely to be older than main campus learners (Latanich, Nonis, & Hudson, 2001).

This study's results which identified that distance-based business students are older than main campus-based business students is consistent with other studies. In evaluating age differences between student types, Tucker (2001) compared age differentials of distance and main campus-based students using business communication course enrollment at a large urban university in North Carolina. She found that those enrolled in the traditional, face-to-face course had students' ages ranging from 19 to 33, with the average being 23. The distance-based class had ages ranging from 22 to 51, with the average age being 38.

A second study of 184 business students enrolled in a public university in the south reported the average age of distance learners to be 26.21 years old, with main campus students

averaging 23.45 years old (Latanich, Nonis, & Hudson, 2001). A third study ($N=12,840$) in 2010 evaluated enrollment ages using a large, multi-campus public university in the Midwest. Findings indicated that main campus students had an average age of 18.6 years and regional campuses had an average student age of 19.6 years (Wavle & Ozogul, 2019). Wavle and Ozogul's finding of a one year differential between distance and main campus learners is similar in magnitude to the age differential finding in this college of business-based study.

When considering reasons for graduation rate differentials between main and distance campus students, age is an important consideration. The research relating age to academic achievement and degree completion is mixed. Some research has indicated that older students achieved both higher grades and higher graduation rates than their younger classmates (McNeill, Long, Ohland, 2014). Eastmond (1995) and Willis (1994) asserted that this non-traditional student success is attributable, in part, to the fact that distance-based students have higher levels of achievement striving (a surrogate for motivation) and propensity to take more risks than non-distance learners.

In contrast to the studies associating age with higher degree completion, Markle (2015) found that nontraditional learners graduate at levels less than their younger counterparts. Supporting this finding, The National Center for Education Statistics (2011) reported that 64 percent of traditional, 18-year-old students enrolled in 2003-2004 graduated within 6 years compared to 20 percent of those aged 24 to 29 years, and 16 percent of non-traditional students aged 30 and older. In a similar study, Taniguchi and Kaufman (2005) found that age has a small negative effect on degree completion for men but not for women.

In this study that observed USU business school students, the survival analysis produced results indicating that the older a student is, the more likely they are to graduate. When age

increases by one standard deviation, the probability of a student surviving to graduation increases by 0.136 of a standard deviation. It is important to note, however, that the race and campus type findings were significant when controlling for age. Consequently, while the average age of a distance-based student is higher than their main campus peer, there are likely to be factors other than age that are influencing the persistence of distance-based students.

As introduced in Chapter 2's literature review, non-traditional students are typically older than traditional students, but they also have different support structures and values. (Bean & Metzner, 1985). With distance students limited in their abilities to interact with other groups in the university community, they draw more support from alternative sources outside of the college environment. These support resources can include peers, friends, family, and employers (Bean & Metzner, 1985). An institution's ability to provide an enriching educational experience for a student, while permitting them to maintain close geographic proximity to these alternative support sources may be the factor, as opposed to age, that drives improved academic performance. For these non-traditional students, the learner-institution 'fit', as described by Rovai (2003), involves environmental factors (e.g., geography, employment, family) that are largely out of the control of the school.

Utah State University may be perceptively acknowledging and capably addressing the needs of their distance-based students by saturating the state of Utah with 40 university learning centers, (Utah State University Quick Facts, 2019), enabling their distance-based students to effectively leverage their alternative support resources. This institutional structure positions students for enhanced academic achievement, as noted in this study's findings, with distance-based students of color having an increased probability of graduating of 19.57 percent over students of color enrolled on USU's main campus.

Gender and Persistence. Students are limited to a binary choice when identifying gender in the collegiate application process. Response options are limited to female or male. Students who identified as male were 0.313 more likely ($p=0.000$) to graduate from USU's College of Business.

Females make up 40.58 percent ($N=3,386$) of Utah State University's entire undergraduate College of Business enrollment. Female participation at USU's College of Business is within one percentage point of the female composition finding reported in 2013 by the Association to Advance Collegiate Schools of Business (USU COB Female Composition: 40.58%; AACSB COB Female Composition: 41.14%).

AACSB is the premier business school accreditation agency. AACSB's study was exhaustive, gathering gender statistics from 467 business schools. When comparing female enrollment results against male enrollment, one trend is particularly troubling. First, female representation has decreased by 7.87 percent from 2003 through 2011, while increasing by 6.35 percent for males. The female/male business school enrollment gap grew from 10.70 percent in 2003 to 17.72 percent in 2011 (AACSB, 2013).

Table 9

AACSB Business School Enrollment by Gender

	Year				Year			Growth Rate Change % (2003-2011)
	2003	2007	2011		2003	2007	2011	
Number of Schools	410	445	467					
Total Enrollment				Enrollment Percentage				
Female Students	316,069	337,704	314,324	Female Students	44.65%	42.87%	41.14%	-7.87%
Male Students	391,821	450,093	449,760	Male Students	55.35%	57.13%	58.86%	6.35%
Total Enrollment	707,890	787,797	764,084					

Source: AACSB Business School Questionnaire (AACSB, 2013)

Females comprising a minority portion of total college of business enrollment is not unusual. Davis and Geyfman (2012), interested in female enrollment trends in US business schools, looked at 1995 – 2008 enrollment trends at the University of Pennsylvania’s business school. What they found was that, while total female enrollment at the University of Pennsylvania was trending up, the enrollment of female students in the business program declined. The decline noted at the University of Pennsylvania was also manifest at other sampled Pennsylvania public universities (Davis & Geyfman, 2012).

Compounding the troubling downward trend in female representation in business schools, which has decreased 7.87 percent from 2003 to 2011, is an almost identical rate of decline in female business school degree completion. During the 8 year period from 2003 to 2011, female business school degree completion rates declined by 7.86 percent, while male business school degree completion increased by 6.83 percent (See Figure 10). The female/male business school graduation gap more than doubled from 7.00 percent in 2003 to 14.32 percent in 2011 (AACSB, 2013). The findings from this USU business school study corroborate the AACSB study results.

Table 10

*AACSB Business School Graduation by Gender**Business School Degrees Conferred*

	Year				Year			Growth Rate Change % (2003-2011)
	2003	2007	2011		2003	2007	2011	
Number of Schools	410	445	467					
Degree Completion				Degree Completion Percentage				
Female Students	76,900	70,509	77,058	Female Students	46.50%	44.23%	42.84%	-7.86%
Male Students	88,486	88,899	102,807	Male Students	53.50%	55.77%	57.16%	6.83%
Total Graduation	165,386	159,408	179,865					

Source: AACSB Business School Questionnaire (AACSB, 2013)

It is important for females to have a percentage of faculty and staff that is commensurate with their participation levels within the business school. With females comprising 40.58 percent of enrollment at USU's business school and comprising 41.14 percent of all AACSB-accredited schools, a similar level of female faculty and staff support should, at a minimum, exist. An audit of USU's business school faculty and staff resulted in the identification of a female composition rate of 40.54 percent (See Figure 8), virtually identical to the female student participation rate.

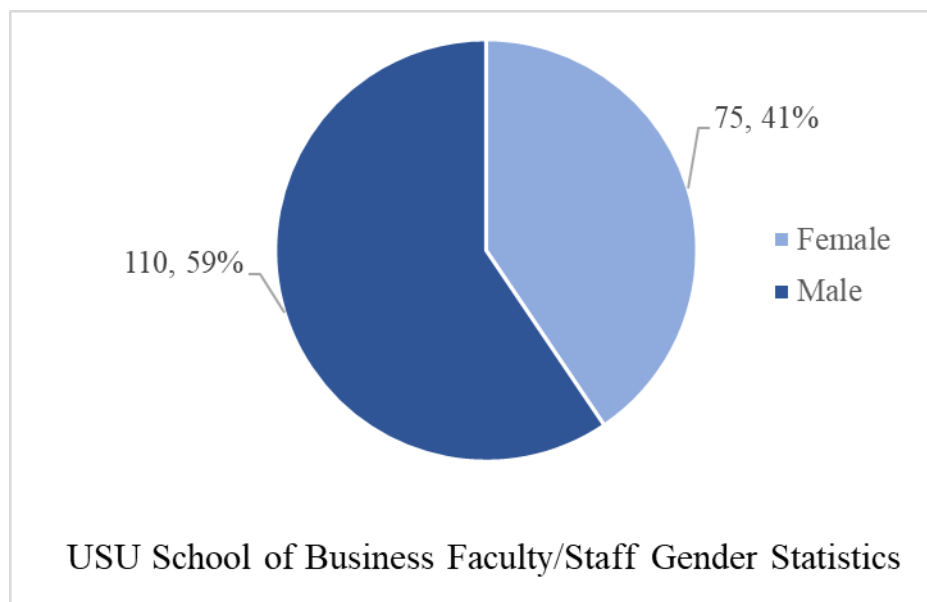


Figure 8. USU’s Huntsman School of Business Faculty/Staff Gender Demographics.

Female representation in USU’s business school programs is higher in distance-only locations, with females comprising 47.61 percent. Female representation declines to 35.71 percent of USU’s main campus-based business school enrollment. The findings support prior research which asserted that distance learners are more likely to be female (Latanich, Nonis, & Hudson, 2001).

GPA and Persistence. GPA is generally accepted as an important indicator of academic success (McAloon, 1994). GPA has been associated with critical thinking skills (Bowles, 2000; Cheung, Rudowicz, Kwan, & Yue, 2002; Spaulding & Kleiner, 1992), intellectual abilities (Meyers, 1987), general mental capabilities (Jensen, 1980), and is sometimes interpreted as an indicator of motivation (Brown & Campion, 1994) and thoroughness (Wolfe & Johnson, 1995).

In the USA, African-American, LatinX, and Native American students and they tend to obtain lower grade-point averages than do White students (Horn, Peter, & Rooney, 2002).

Evidence on the impact of GPA achievement on nontraditional student persistence, though, is inconsistent. Some researchers have found a positive relationship between persistence and grade point average (Gigliotti & Huff, 1995; Metzner & Bean, 1987), while other researchers have found no relationship (Bergman et al., 2014).

In this study, students of color that graduated from the USU's College of Business, achieved an average GPA of 3.03. In comparison, of the White counterparts that graduated, they achieved an average GPA of 3.29. When factoring campus type into the GPA averages, student of color, enrolled at USU's distance campuses achieved an average GPA of 3.00 and an average GPA of 3.13 at USU's main campus. White students achieved higher GPA's in both campus types, with White students enrolled at distance campuses, achieving an average GPA of 3.23 and an average GPA of 3.29 at USU's main campus.

It is interesting that students of color have lower GPA in distance learning environments, but graduate at much higher rates than main campus students of color (41.02 percent main campus graduation rate; 60.59 percent distance campus graduation rate). Given this significant contrast, the objective value of a GPA should be evaluated for USU's college of business students. GPA is often maligned for being inflated and overly subjective (Vickers, 2000). Yet the belief that cognitive skills and motivation are reflected in a GPA is commonly accepted by employers, who believe that these skills result in increased aptitudes on the job (Heinemann, 1996; Roth, BeVier, Switzer, & Schippmann, 1996; Wise, 1975). Ultimately, though, GPA is a metric largely bereft of meaning or value unless it is accompanied by degree completion.

Limitations

External, or generalizing, validity indicates the extent to which study results can be generalized across populations (Johnson & Christensen, 2014). The data used in this analysis originates from only one university, the Jon M. Huntsman School of Business. The generalizability of the data to other institutions or schools of business might be limited. Other institutions and their associated schools of business may not have the same demographic composition or campus configurations as USU's business school. This limitation should be taken into consideration when interpreting the findings of this study.

This study relied on students' college application responses in which they self-identified their race and gender. There are a number of reasons a student may or may not make a good-faith effort to self-identify. Given the advantages associated with obtaining a college degree, students may, in a misguided attempt to influence collegiate acceptance, select a race or gender with which they do not identify (Belkin, 2019). In addition to falsifying application demographics in order to enhance a student's chances of acceptance, another reason students might not accurately answer the question is related to their immigration status. Due to the politicized nature of race and immigration, students may believe it to be in their best interest to not accurately report the race with which they identify (Belkin, 2019).

Projections

There are many different ways in which business schools and universities might interpret the findings of this study. Institutions may intuit that that students of color rely more on familial and cultural ties in their academic endeavors than White students. These ties may have a more profound influence when the student enrolls in a distance-based business program and is able to maintain close geographical ties to their sources of support. What might then result are

graduation rates for distance-based students of color that exceed White students. White students may graduate at rates higher than their non-White peers in main campus settings due to the fact that the dominant power structures of universities are more evident and influential in traditional educational settings.

Distance-based students, on average, work full-time and are more likely to have family obligations. These factors may add to a student's motivation to graduate in order to reap the anticipated financial benefits associated with a college degree. This same non-traditional student is also typically older than their traditional peer. Older students may approach their education with an enthusiasm that their younger, traditional counterparts do not.

Implications

Results of this study provide a variety of insights including the acknowledgement of graduation differentials between both the idea of cultural mismatching, diversity and inclusion's role within an AACSB-accredited institution, and the important role that student affairs play in driving academic achievement.

Cultural Mismatch, and Non-Persistence. Systemic exclusion and disadvantaging of students of colors occurs in business schools in the United States (Limayem, 2020). This disadvantaging occurs, in part, due to a difference in values for students of color and White students. Although students of color enrolled in business schools share many goals and values similar to the White population, they differ in meaningful ways. African American and LatinX business students, like White students, regard their family, financial security, and career goals as very important. African American and LatinX students, however, are more likely to place a higher importance on community, religion, and volunteer work than their White peers (GMAC, 2018).

Through routine discriminatory practices, the dominant racial identity groups are maintained in academic environments. Averse racism is symptomatically made manifest as a result of these practices. Aversive racism refers to the propensity for people to view themselves as colorblind or progressive, while still exhibiting implicit bias as well as subtle, negative attitudes toward marginalized groups (Kovel, 1970; Gaertner & Dovidio, 1986). The micro aggressions that often accompany averse racism are characterized by commonplace daily behavioral, environmental, or verbal humiliations that communicate derogatory, negative, or even hostile racial insults toward members of oppressed groups (Nadal, 2008; Sue et al., 2007). Micro aggressions are a persistent threat to the psychological and professional well-being of students of color, and can result in anxiety, depression, and, ultimately, attrition (e.g., Nadal, 2008). Utah State University's business school students are not immune to these difficulties.

With students of color performing better in distance-based educational settings, it is possible that the factor driving academic underperformance in main campus settings is cultural in nature. USU business school leadership should evaluate Atkinson's Racial/Cultural Identity Model, which provides insight into how students of color reconcile the differences and similarities between their own culture and those of the dominant culture found on campus (Sue & Sue, 2003). School leadership, having developed familiarity of the 5 stages of the model, may be able to mitigate cultural incongruity on both their main campus as well as their distance based centers for students of color.

Students that attend university courses in distance-based environments may not be confronted with cultural conformity and dissonance pressures at levels as the students that attend main campuses of predominantly white institutions are. Lower levels of cultural incongruity may position distance-based students to persist at higher level than students of color enrolled in

main campus environments. This idea is supported by the work of Huang, Roche, Kennedy and Brocato (2017) who found that a student's home address plays a significant role in the likelihood of graduating from college. Students with in-state home addresses (i.e., those that are able to remain geographically proximate to their culture) are about two times more likely to graduate than students with out-of-state home addresses. Institutions, consequently, should consider targeting support and/or programs to out-of-state students in order to help them transition and connect to the university and persist to graduation.

Ideally, all students of color would be given the opportunity to persist beyond the initial cultural identity conformity and dissonance stages and progress through to the stage of awareness. It is likely, however, that students of color who attend main campuses and are geographically removed from sources of familiar cultural support and can become discouraged as they attempt to reconcile the institutional culture with their own culture. This discouragement may lead to academic non-persistence.

Business School Faculty, Staff and Administration Demographic Composition.

Diversity and inclusion are core values of AACSB (AACSB, 2020b). Business schools desiring to obtain or maintain accreditation must demonstrate a commitment to diversity and inclusion. Enhancing the recruitment and retention of business students of color should be a departmental, and institutional, imperative for Utah State University. Students of color comprise 13.2 percent of USU's distance-based business school enrollment and 15.2 percent of USU's main campus-based business school enrollment. USU's business school must commit to achieving a proportionate percentage of diverse enrollment.

One strategy USU should evaluate to drive improvement in recruitment and retention of students of color involves increasing faculty diversity. Milano (2005) asserted that a more

diverse faculty composition results in increased positive impacts in the educational outcomes of students of color. Oguntebi, Shcherbakova, and Wooten (2012) posited that faculty diversity may improve academic achievement for students of color through augmented opportunities for mentoring and social support. USU's Huntsman School of Business, with its current diverse faculty and staff comprising 9% of total employees, would likely recognize student recruitment, student retention, and faculty productivity benefits by increasing participation rates for faculty and staff of color.

Having a diverse faculty is a critical precursor to improving graduation rates of students of color. Students of color experience improved academic persistence when they have access to same race faculty (Davis & Fry, 2019). Egalite and Kisida's (2018) findings corroborate Davis and Fry, when they found that students of color who have educators of the same race are more likely to make greater efforts to succeed in higher education settings. A 2014 evaluation of community colleges found that academic achievement gaps of students of color can improve by 20 percent to 50 percent if demographic characteristics of faculty more closely resemble student demographics (Fairlie, Hoffmann, & Oreopoulos, 2014). Students of color who have a higher number of same race professors earned higher GPA's than their peers with no same race professors (Fisher, 2010). Given the reality that it is relatively rare for African-American and LatinX students to encounter same race professors, Fisher's (2010) finding provides additional support in the importance of diversifying faculty.

A more diverse faculty can also improve instruction in business schools (Hardy & Tolhurst, 2013), with teachers presenting a more comprehensive curriculum that includes the perspectives of the oppressed (Hurtado, 2004). The extent to which USU's business school provides sufficient commitment to increasing its faculty diversity participation will determine the

amount “personal, social, and moral growth” (Oguntebi, Shcherbakova, & Wooten, 2012) experienced by its students of color.

In addition to faculty diversification, USU, as well as other universities, should examine its prevailing institutional power structures. It is common to find a homogeneous group of administrators and academics that dominate all aspects of the business school (Murphy, 1988). This group is comprised of powerful decision-makers who directly control access to membership (Elliott & Smith, 2001; Karabel, 2006). In a university’s school of business, it is often the administrators, business school deans, departmental leaders, business faculty, as well as the AACSB who govern and perpetuate institutional racial disparities (Minefee, Rabelo, Stewart, & Young, 2018).

If enhanced participation and achievement for students of color is truly desired, an examination of the current power structures is warranted. A dismantling of prevailing ideologies should take place and the implementation of progressive solutions that reflect the input of all business school stakeholders, which must include those with diverse perspectives, should occur.

Diversity and Inclusion, and the Importance of Accreditation. Diversity, defined as “the varied perspectives and approaches to work that members of different identity groups bring” (Thomas & Ely, 1996) and inclusion, defined as the degree to which a person is accepted and treated as an insider by others (Roberson, 2006), are important values of academic and business communities. Research has shown that students of color and faculty of color feel isolation, tokenism, and prejudice in academic environments (Gutierrez y Muhs, Niemann, Gonzalez, & Harris, 2012; Leeming & Baruch, 1998; Turner, Gonzalez, & Wood, 2008).

USU’s College of Business, and business schools writ large, need to acknowledge that the long-term implications of underrepresentation of students of color, faculty of color and

females, amongst many other characteristics, is cause for concern (Ball, 2012). In a 2015 AACSB audit of U.S. colleges of businesses, African-American and LatinX students, respectively, accounted for 8.1 percent and 11.6 percent of undergraduate student populations. In contrast, White students accounted for 58 percent of the undergraduate population (Minefee, Rabelo, Stewart, & Young, 2018). If these enrollment and graduation trends continue, a dim future for undergraduate business schools can be predicted.

Addressing the gender gap specifically, the lack of female students in business schools will result in increasingly male-dominated classrooms which are devoid of the perspectives that females bring to the discussion. Females who elect to persevere, may be subjected to an inhospitable academic climate (Hall & Sandler, 1982, 1984). Business schools, like the one found at Utah State University, should proactively work to identify the systematic discrimination that is disadvantaging women in business school environments. Examples of such discriminatory behavior can include the use of sexist language, perpetuating stereotypical views of females, faculty being predominantly male, and instructors favoring male students (Crombie, Pyke, Silverthorn, Jones, & Piccinin, 2003). Such behavior may dissuade women from pursuing business degrees, and prolong the problem of sexism that has long plagued the corporate business world (Davis & Geyfman, 2012).

In addition to intrinsic aspirations to improve diverse representation in business schools, the Association to Advance Collegiate Schools of Business (AACSB) provides an important, extrinsic motivation. Many colleges of business use the AACSB for accreditation, including Utah State University (Jon M. Huntsman School of Business, 2019). The AACSB is, by far, the most widely recognized business education accreditation agency in the U.S. (Durand & McGuire, 2005). Trifts (2012) confirmed Durand and McGuire's assertion when he affirmed

that the AACSB is the gold standard for business school accreditation. AACSB has extended accreditation to 789 universities worldwide (AACSB International, 2017). AACSB accreditation provides assurance that a business school is meeting the highest standards in education, and positions universities to attract better students and faculty (Trapnell, 2007). Consequently, the AACSB organization wields enormous power over business schools and their associated universities. They have the power to influence accredited business schools, as well as those aspiring to achieve accreditation, pushing them engage in practices that can benefit students of color (Minefee, Rabelo, Stewart, & Young, 2018).

AACSB's mission is "to spread accreditation to advance the quality of management education" (Stepanovich, Mueller, & Benson, 2014). The AACSB accreditation process identifies basic guiding principles, provides standards, and a recommended process for continuous improvement. The guiding principles emphasized by AACSB are: ethics and integrity, societal impact, mission-driven focus, peer review, continuous improvement, collegiality, agility and change management, global mindset, diversity and inclusion, and adherence to principles and standards (AACSB, 2020b).

AACSB evaluates departmental diversity and inclusion as part of the institutional accrediting process (Misra & McMahon, 2006). Diversity can include the following identifying characteristics: gender, race, socio-economic status, sexual orientation, physical abilities, age, political beliefs, religious beliefs, or other ideologies (AACSB, 2020b; Judkins & LaHurd, 1999). The AACSB can exert influence on business schools and their associated institutions to engage in concrete, structural actions to address diversity and inclusion gaps more effectively (Minefee, Rabelo, Stewart, & Young, 2018).

With diversity such a critical factor considered by AACSB when making accrediting decisions, and realizing the institutional and departmental importance of AACSB accreditation, it is in the interest of Utah State University and the Jon M. Huntsman School of Business to support efforts that encourage a diverse matriculation as well as the recruitment of a diverse faculty and staff in order maintain their AACSB accreditation.

The Role of Student Affairs. Educators' values and ideologies can influence their instruction (Knowles, 2018). In order to achieve a more diverse student body, institutions must not only recruit business school faculty and staff, but the must recruit student affairs professionals that model the demographic makeup they aspire to achieve. Recruiting diverse student affairs educators will increase the likelihood that students are exposed to different perspectives, different cultural values, and different ways of learning (Clauss-Ehlers & Parham, 2013).

As universities shift to a multi-cultural, student-centered educational experience, there is a need for student affairs educators who are proficient not only in academic matters, but are also accomplished in many other facets of campus life that can affect a student's well-being (McClellan & Stringer, 2016). Student Affairs Administrators in Higher Education (NASPA) is the leading association dedicated to the student affairs profession (NASPA, 2019a). NASPA has identified key competencies in which effective student affairs educators should be proficient. Some of the competencies affecting students of color include: leadership, social justice and inclusion, advising and supporting, and student learning and development (NASPA, 2019b).

Student affairs educators have always played a key role in addressing diversity issues within higher education (Pope, Mueller, & Reynolds, 2009). Their expected expertise extends beyond the classroom, with counseling proficiency required in non-academic settings (Hood &

Arceneaux, 1990). Student affairs professionals must understand the meaning of diversity in terms of social justice. Diversity is not simply about recognizing and appreciating differences or providing academic access to a wider range of students. Diversity should embody a much deeper, social justice-based meaning, where bias is reduced, resources are apportioned fairly, decision-making influence is collaborative, and the dominant culture of social inequity is disrupted (Pope, Mueller, & Reynolds, 2009; Reason & Davis, 2005; Tierney, 1993).

Utah State University needs student affairs professionals who can not only sympathize with diverse groups on campus, but also be able to empathize with them, because they share similar characteristics with those students. Then can then, jointly, develop the student's ability to critically evaluate the environment in which they exist. This highly-individualized evaluation culminates when the student draws nearer to emancipation through the processes of questioning, deconstructing, and reconstructing knowledge (Leonardo, 2004).

Significance

This is the first known longitudinal study to quantitatively compare the graduation rates of White students and students of color enrolled at USU's College of Business at both the main campus and satellite campuses. Using data provided by USU's AAA office, this study evaluated whether race and campus type (i.e., main campus, distance campus) had an effect on a student's likelihood to persist in their studies and graduate. This study assessed enrollment and graduation data comprising a 10 year period, from the 2009-2010 academic year through the 2019-2020 academic year. This enrollment and graduation data was then associated with specific student demographic characteristics, which included race, campus type, gender, GPA, and age.

The findings of this research study showed that USU's distance students enrolled in business programs are more likely to graduate than their main campus peers. This contradicts

the findings of Barefoot (2004) and Dray et al., (2007) whose research indicated lower completion for distance-based students. This study's findings corroborate Carr's (2010) research which demonstrated enhanced academic outcomes for distance-based students.

The study also showed that students of color graduate at higher levels than their White peers in distance campus settings. This key finding may also add credibility to the findings of Antonio et al. (2004), Gurin (1999), and Hurtado (2005) who all asserted that academic outcomes are improved when student bodies are diverse. White undergraduate students, enrolled in business programs, graduate at modestly higher levels in main campus settings than students of color. This supports the research done by Bean and Metzner (1985) and Rovai (2003) who found that traditional students benefit from institutional support structures which were designed to provide support to traditional university students.

Future Research

This study evaluated how campus type affects relationships between business students of color and White business students and their predicted graduation rates. A myriad of other factors, beyond race and campus type, could have a correlational relationship with the graduation rates of business students. Future studies could explore demographic elements that weren't addressed in this study. These elements could include: gender, socio-economic status, sexual orientation, and religion (Heredia Jr., Castillo, Ojeda, Piña-Watson, & Cano, 2018).

This study grouped all of Utah State University's satellite campuses together and compared their academic outcomes against the outcomes of undergraduate business schools students enrolled at USU's main campus. There are, however, significant demographic differences between USU's distance campuses. As an example, USU Blanding campus' mission is to bring a quality education to Native Americans in Utah's remote southeast corner. (USU

Blanding, 2020). Student demographics at USU Blanding are likely quite different from students attending distance campuses in Brigham City, Utah or Kaysville, UT. Future research endeavors should consider the unique attributes of each distance campus and undertake studies to identify the campus-specific demographic composition and evaluate how those specific characteristics might impact the academic outcomes of business school undergraduates.

With the study focusing only on USU's business school, additional research should be undertaken to determine if this study's results are generalizable to broader populations, which could include other Utah-based universities, universities in the United States, private universities, and for-profit universities.

In addition to strengthening the generalizability of these findings, future research efforts to better understand graduation rates of students of color at satellite campuses could include the concept of intersectionality. Intersectionality involves examining race, gender, class, and sexual orientation and how combinations of these characteristics interact with each other (Delgado & Stefancic, 2017). Intersectional and quantitative approaches have been regularly employed in research efforts (Bowen, Chingo, & McPherson, 2009; Brown et al., 2016; Stone et al., 2017; Hoxby, 1997; Van Hattum, Ghiorse, & Villamil, 2017).

While conceptual studies have been completed using intersectional analysis (Griffin & Museus, 2011), scholarly efforts that have evaluated quantitative intersectionality and education are limited. Similarly, few studies exist that use intersectional methodologies in higher education settings (Lopez, Erwin, Binder, & Chavez, 2018). Even fewer intersectional quantitative studies have focused on race, gender, or class gaps in education (Bowleg, 2008; Hancock, 2013). The use of intersectionality to correlate educational inequalities with race, gender, or other demographic characteristics could be a worthwhile line of inquiry.

Summary

Results of this study confirm the importance of evaluating academic outcomes using specific and highly-refined segmentation methods. There is no shortage of reporting from universities providing consolidated, institutional graduation rates of their students and alumni by race, gender, and a variety of other characteristics. And, while high-level institutional data offers an important snapshot of university academic achievement, this study provides a compelling argument to look deeper into degree completion rates. Within a university, there can be a wide range of departmental academic achievement rates. Satellite and main campuses can also provide a wide range of graduation rates, which are dependent on a variety of different factors. Distance campuses, themselves, can have remarkably different student compositions, which can affect academic outcomes. This research project demonstrates the utility in evaluating academic achievement for increasingly segmented student populations. In better understanding student characteristics, and their associated achievements, campuses, departments, and institutions will be able to use this understanding to develop curricular, instructional, and administrative initiatives that will foster improvements in educational outcomes for all students.

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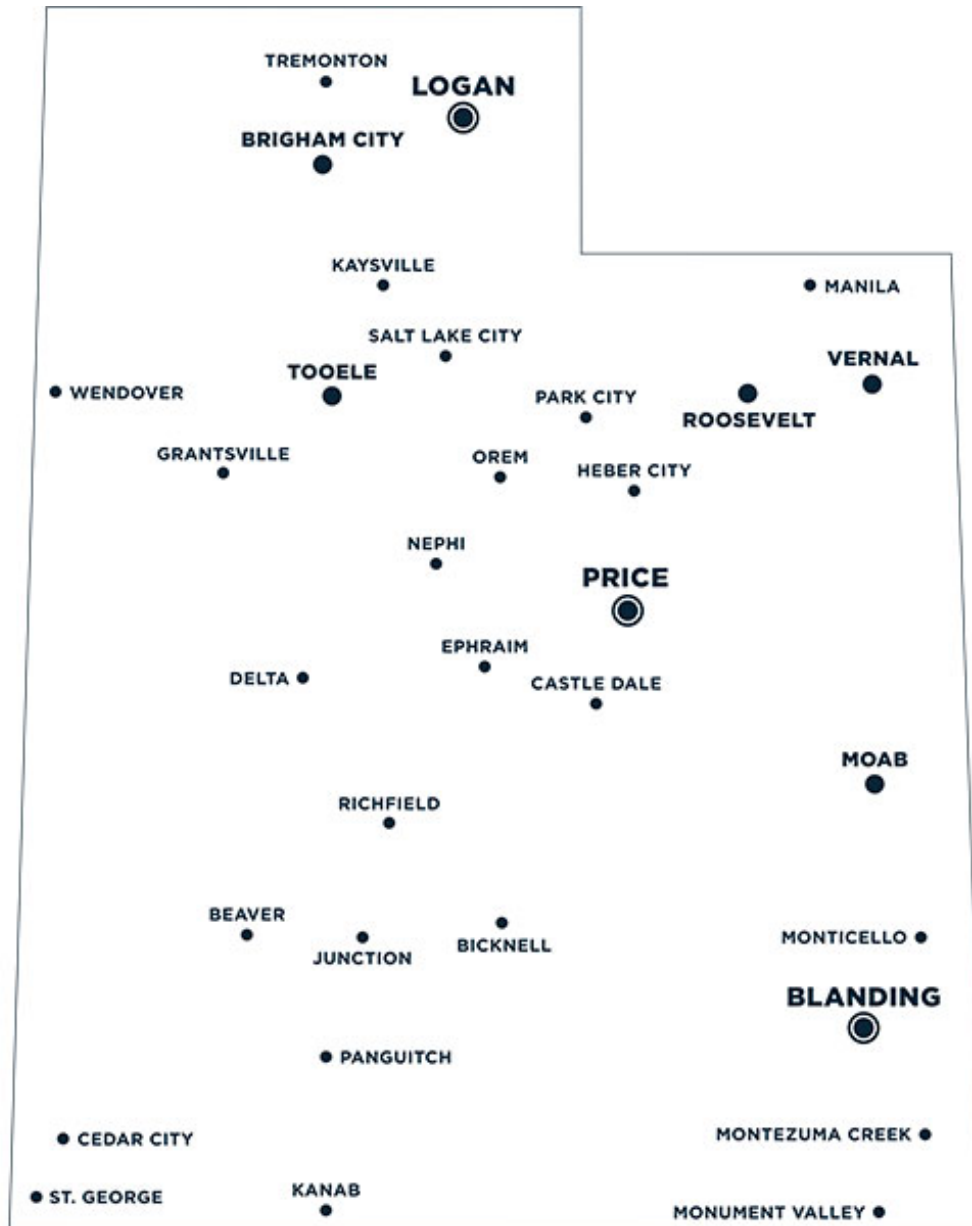
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Appendices

Appendix A. USU Campus Locations



(Utah State University: Campuses, 2019)

Appendix B. USU AAA Office: Example of Demographic/Enrollment Data

Stude	Campus Type	Gender	First Term in BU	Race	Age at First Enrolled Term	Cumulative GPA
130095	Logan	M	202020	White	18-19	3.10
106612	Logan	F	202020	White	18-19	3.10
10760	Logan	F	202020	White	18-19	3.08
37599	Logan	M	202020	White	18-19	3.08
23397	Logan	M	202020	White	<18	3.05
8400	Logan	F	202020	White	<18	3.05
110174	Logan	M	202020	White	20-21	3.05
107868	Distance	M	202020	White	25-29	3.05
68272	Logan	M	202020	White	<18	3.02
14716	Distance	M	202020	Student of Color	25-29	3.01
128428	Logan	F	202020	White	22-24	2.99
189482	Logan	M	202020	White	20-21	2.99
110070	Logan	F	202020	White	18-19	2.98
52437	Distance	M	202020	White	30-34	2.96
107654	Logan	M	202020	White	20-21	2.93
14211	Logan	M	202020	White	18-19	2.92
135979	Distance	M	202020	White	18-19	2.90
181986	Logan	F	202020	Student of Color	18-19	2.90
73991	Logan	F	202020	White	18-19	2.87

Appendix C. USU AAA Office: Example of Graduation Data

STUDENT ID	COLLEGE	Academic Year Graduation	DEGREE DESCRIPTION	DEPARTMENT
12	BU	2015-2016	Bachelor of Science	MGT
31	BU	2017-2018	Bachelor of Science	ECFN
68	BU	2012-2013	Bachelor of Arts	ECFN
68	HS	2012-2013	Bachelor of Arts	HIST
80	BU	2015-2016	Bachelor of Science	ECFN
81	ED	2018-2019	Bachelor of Science	KAHS
106	BU	2018-2019	Bachelor of Science	MIS
139	BU	2014-2015	Bachelor of Science	ECFN
152	AR	2012-2013	Bachelor of Fine Arts	THAR
346	BU	2016-2017	Bachelor of Science	ECFN
425	BU	2016-2017	Bachelor of Science	ECFN
584	BU	2016-2017	Bachelor of Science	ECFN
609	BU	2018-2019	Bachelor of Science	MSLE
610	BU	2017-2018	Bachelor of Science	ECFN
657	BU	2017-2018	Bachelor of Science	ACCT

Appendix D. Curriculum Vitae

John Jaggi

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Education

Utah State University PhD- Educational Leadership; Specialization in Curriculum and Instruction	Logan, UT Estimated Graduation 2021
Thunderbird, The American Graduate School of International Management MIM- Master of International Management ➤ Specialization in International Business Development and Management ➤ Certificate in International Mediation	Glendale, AZ Aug. 2003- Apr. 2004
Arizona State University MBA- Master of Business Administration	Phoenix, AZ Aug. 2002- Aug. 2003
Utah State University Bachelor of Science in Business Administration	Logan, Utah Aug. 1997- Apr. 2001

Professional Experience

AlSCO, Inc. <i>Departmental Director</i>	Salt Lake City, UT 2017-Present
<ul style="list-style-type: none"> ➤ Oversee departmental responsibilities including: Human Resources, Organizational Training, Learning Management, Leadership Development <ul style="list-style-type: none"> ▪ HR includes a P&L responsibility of \$10M and oversight of 15 employees <ul style="list-style-type: none"> • Achievements include creation of an HR Handbook for Managers, a Red Flag Reporting process, an EEOC/OFCCP management protocol, compensation reviews by market, job descriptions developed for each position, centralization of recruiting, the development of a relocation program ▪ Organizational Training includes a P&L responsibility of \$15M and 240 employees <ul style="list-style-type: none"> • Achievements include the creation of an onboarding and ongoing training schedule for each employee type. In 2019, all new Office Managers received corporate training within 2 weeks of their hire date. In 2019, 50% of branches with below average AP/AR, received in-person training. ▪ Learning Management includes a P&L responsibility of \$1.5M and 3 employees <ul style="list-style-type: none"> • Achievements include the creation (not 3rd party) of 140 training/learning modules. Employee testing has shown that these modules are effective enough to act as a proxy for actual in-person job training (although in-person training continues). 92% of employees that complete learning modules report high satisfaction with the content's learning objectives. ▪ Leadership Development includes a P&L responsibility of \$7.5M and 65 employees <ul style="list-style-type: none"> • Achievements include growing the management training pool from 14 to 60 employees, decreased attrition from near 100% to 6% annually, and have 	

decreased out of company GM hires from 60% in 2018 to 11% in 2019. All management trainees complete mandatory TRSA EMI leadership training.

AlSCO, Inc.

Salt Lake City, UT

Departmental Manager

2015-2017

- Administer training/education programs for management and employees
 - Worked with HR to implement 3 customized continuing education programs for employees
- Oversee fleet operations, consisting of over 5,500 drivers and 5,000 vehicles that service healthcare and hospitality customers
 - Responsibilities include FMCSA compliance (10% improvement in driver fitness and vehicle maintenance)
 - Oversee DOT audit performance
 - Maintain all driver qualification files (15% improvement in DQ compliance)
- Manage Procurement Efforts
 - Co-Managed vehicle procurement program, with annual capex spend of \$17,500,000. Established repair and maintenance parameters that maintained current expense levels while improving vehicle maintenance scores by 10%
- Manage company fuel card program with an annual P&L responsibility of \$24,000,000
- Negotiated and implemented a national vehicle rental agreement that realized savings of 8% over the prior year's expense
- Manage the company auto liability insurance program and manage/adjust all company auto claims

Brady Linen Services, LLC

North Las Vegas, NV

VP Operations

2011 - 2015

- Managed a total workforce 1,500 employees across six different facilities, processing 850,000 pounds of linen a day for 150 customers in the healthcare and hospitality industries
- Responsible for operational areas including Finance/Reporting, Plant Operations, Sourcing/Purchasing, Logistics, Fleet, Safety, and IT. Process maps were created for each business function and quarterly process improvement programs now exist to identify and improve departmental performance
- Built annual budgets and P&L's, forecasting revenue and expense functions, including the forecasting of raw material demand and customer occupancy demand. Ensured that procurement activities were aligned with financial targets. Actual annual demand was within 3% of approved forecast for 2013 that totaled \$105M.
- Created capex and opex evaluation tools incorporating advanced excel functionality to objectively prioritize projects.
 - One project identified a utility expense reduction plan that included a multi-plant (380,000+ sq ft) lighting retrofit. Electricity expenses were cut by 35% and the project achieved positive ROI in 16 months.
- Developed a quality management program that set dynamic quality targets, created automated reports that graphically communicated performance against those targets by plant and by product line. As a result of this program, the company now has a quality dashboard with three years of accurate data, which has led to a steady improvement in sustained quality.
- Created and deployed workplace safety program, consisting of 25 OSHA-compliant procedures for 6 facilities covering 620,000 sq ft,
- Oversaw DOT/Safety compliance for company with a fleet of 150 power units and 70 trailers
- Coordinated directly with OSHA during inspections/investigations, negotiated citation reduction (achieving a 35% reduction in inspections and a 45% reduction in fines), and led all abatement efforts to achieve compliance
- Created and published worker productivity dashboards that communicated performance against targets and against industry standards, resulting in an increase of worker performance/throughput of 17%
- Developed entire supply chains for chemicals and linens, sourcing materials directly in 9 countries (Asia, South America, Near East, USA) achieving 27% savings over existing distribution pricing.
- Created and managed a vendor bid process in critical business areas. Created bid documents as well as evaluation tools that provided objective vendor recommendations. The completion of two competitive linen bids resulted in annual operational savings of \$750,000

- Directed the sourcing and logistics of all chemicals, including chlorine, sulfuric acid, oxalic acid, surfactant, salt, detergent, alkali builder, and hydrogen peroxide.
- Directly managed key vendor relationships, including candidate vendor evaluation, RFP process, price negotiations, and contract creation, and inventory requirements (min/max)
- Oversaw risk management responsibilities that included hedging strategies on utilities and commodities (Natural Gas, Oil, Cotton). Efforts resulted in year over year cost decreases of 16%.
- Led efforts to research and implement new business opportunities including the identification and quantifying of a route sales strategy. Developed the segment value proposition, created marketing collateral, recruited personnel, and developed financial modeling tools, with the division achieving a profit margin of 25%.

Knightsbridge Holdings LLC

Missoula, MT / Las Vegas, NV

Divisional Director- Divisional Sales Operations Director

2010 - 2011

- Gathered and consolidated market research into an entrepreneurial business plan advocating establishment of a new category of operations based on sustainable building products, researched and established the entire supply chain, built automated reports that tracked profitability, drafted land management plans and obtained national sustainability certifications
- Created building supply company that provides sustainably harvested, timber products to a carefully segmented market targeting builders, home improvement stores, and general consumers. Company branding and marketing strategy was developed to specific clients segmented by needs and demographics
- Created Workplace Safety Program , tailoring it to the building products industry. During my time as divisional director, no safety-related accidents occurred.
- Oversaw efforts to develop new category/product ideas. Responsible for building and presenting financial modeling proposals utilizing the competitive landscape, revenue, EBITDA, and net income, and ROI/NPV scenarios based on capital requirements
- Created a set of standardized divisional efficiency and profitability reports that allow resort management to quickly view operational metrics by product line, by division, and by company

Mikohn Signs & Graphics

Las Vegas, NV

Director of Sales and Operations

2008 - 2009

- Created process maps for Supply Chain, Finance, Manufacturing, Design, and Sales, decreasing time to market by 25%
- Managed manufacturing-related strategies, including safety, materials sourcing, speed to market, quality, and profitability
- Aligned and implemented business objectives and strategies of company divisions, including Manufacturing, Finance, Design, Compliance, and Logistics, fostering greater collaboration and decreasing overhead costs by 10%
- Defined metrics and reported on departmental performance against profitability and productivity targets utilizing operating dashboards, advanced Excel modeling, accounting programs, Crystal reports, and databases
- Responsible for compiling and consolidating annual sales and operating budgets, tracking and reporting on performance against budgets that were presented directly to the CEO and private equity Board of Directors
- Compiled/published market research that provided competitive data by competitor and region. Research data showed competitor's disadvantages, allowing sales team to promote a solution-based product that addressed unmet client needs
- Created a management reporting system, whereby key continuous improvement initiatives were tracked and any impediments were identified and eliminated on a weekly basis, improving profitability by 10%

Aristocrat Technologies, Inc.

Las Vegas, NV

Divisional Controller- Marketing, Research & Development, Regulatory/Technical Compliance

2006 - 2008

- Performed analysis, and interpretation of statistical and accounting information in order to report on marketing and R&D results in terms of profitability/performance against budget for a team of 125 with an annual operating budget of \$90,000,000

- Coordinated and directed the preparation of annual budgets, reported on monthly operating expense performance, reviewed and approved all journal entries, and completed month end requirements for three departments (R&D, Marketing, Compliance), using accounting programs (M2K, IBM Cognos)
- Identified and quantitatively justified new segment opportunities. Researched and compiled market research on competitors along with financial forecasts to justify expansion. Proposed and established new operational categories in both Mexico and on Native American land. Both achieved profitability within one year.

JCM American Corporation

Las Vegas, NV

Category Market Manager

2004 - 2006

- Conducted market research and created the business plan that recommended the installation of lease-based products in Latin and South America with estimated annual recurring revenues starting at \$11,000,000 (10% of total company revenue)
- Identified state DMV facilities as a viable new category. Developed a product with R&D and completed bid proposals from the Nevada DMV. Nevada selected our bid and within 3 months of operation, the project accounted for 5% of monthly top-line revenue and 15% of bottom-line profit.
- Managed JCM's acquisition efforts. Segmented, researched, targeted, qualified, and presented ROI analyses related to 5 acquisitions. Upon review by company officers two particular vending-industry opportunities were approved for acquisition
- Consolidated departmental budgets into a company-wide annual budget with a total annual operating budget of \$40,000,000, delivering the final budget to the company CEO for approval

Additional Information

Languages: English (Native); Portuguese (Fluent); Spanish (Conversant)