ARE FEMALE BUSINESS STUDENTS HERE TO STAY?

UNDERSTANDING RETENTION VARIABLES THAT CONTRIBUTE TO FIRST-YEAR BUSINESS STUDENTS.

by

Elizabeth Grant Greenfield

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

of

Doctor of Education

in

Adult & Higher Education

MONTANA STATE UNIVERSITY
Bozeman, Montana

May 2024

©COPYRIGHT

by

Elizabeth Grant Greenfield

2024

All Rights Reserved

DEDICATION

To God – I can do all things through him who strengthens me – Philippians 4:13

To Nathan, who was supposed to say “no” to this idea.

To Lily-Bear and Hollyhock –
“There is a freedom waiting for you,
On the breezes of the sky,
And you ask, “What if I fall?”
Oh, but my darling,
what if you fly?”
– Erin Hanson

To my mom – who taught me the importance of strong female friendships.

ACKNOWLEDGEMENT

To Mom, Dad, and Boy – who gave me the foundation and love of being an educator.

To My Committee: Dr. Sweeney Windchief, Dr. Bryce Hughes, Dr. Alex Aylward, and Dr. Kandi Gresswell – I am extremely motivated, but will always lack discipline <3

To Dr. Betsy Palmer – The OG who helped me believe I belonged in higher education.

To Brenda Truman – My friend and mentor who reminded me I'm smart.

To Dr. Susan Dana – Who exemplifies the type of professional I aspire to be.

To My Colleagues who encouraged, listened to me whine, gave me wine, offered advice, read countless rough drafts, and inspired me to finish: Myleen Leary, Scott Bryant, Kregg Aytes, Dan Miller, Paul Swift, Josh Meyer, Casey Wolfe, Tracy Dougher, Eric Van Steenburg, Melis Edwards, Meg Konkel, Amber Raile, Jessica Fiedler, Chris Fiedler, Naomi Quinn, Sarah Wilson, Jennifer Thomson, Laura Wilson, Darrin Boss, Emily Williams, Laura Black, Ginny Bratton and the countless others who helped me on this journey. I am forever grateful.

TABLE OF CONTENTS

1. INTRODUCTION TO THE STUDY 1

Background 1
Statement of the Problem 6
Statement of Purpose 12
Research Questions 13
Significance of the Study 14
Theoretical Frameworks 15
Operational Definitions 19
Delimitations 22
Limitations 23
Chapter Summary 24

2. LITERATURE REVIEW 25

Introduction 25
Historical Significance of Women in the Workforce 25
War Time 26
1950s–1960s 27
Entering the 1970s 28
1980s–1990s 30
2000s and Beyond 31
Historical Significance of Women in Higher Education 33
Expansion and Reform Era 33
Civil War & Reconstruction Era 38
Industrial Era & Schools of Business Education 40
Progressive and World War II 41
1960–1980 44
1990s and 2000 46
Retention 47
Retention within Undergraduate Colleges of Business 57
Chapter Summary 60

3. METHODOLOGY 61

Introduction 61
Context 63
Research Design 69
Researcher Positionality 70
Sampling Procedure and Participants 72
Variables, Constructs, and Instrument 75
Reliability and Validity 83

TABLE OF CONTENTS CONTINUED

Chapter Summary 84

4. RESULTS 85

Introduction....85
Findings Research Question 1 85
Findings Research Question 2 87
Logistic Regression Analysis....92
M2: log(Retained/1-Retained) = X1GENDER + X2RACE + X3RESIDENCY + X4FIRSTGEN....96
M3: log(Retained/1-Retained) = X1GENDER + X2RACE + X3RESIDENCY + X4FIRSTGEN + X5GENDERxRACE + X6GENDERxRESIDENCY+ X7GENDERxFIRSTGEN 97
M4: log(Retained/1-Retained) = X1GENDER + X2RACE + X3RESIDENCY + X4FIRSTGEN + X5GENDERxFIRSTGEN +X6SAT/CURR/PROF + X7SENSEOFBELONGING + X8DIVERSITY1+ X9DIVERSITY2 + X10ADVISING 103
Chapter Summary 104

5. DISCUSSION....105
Introduction....105
Summary of Results....106
Theoretical Implications 112
Trends over Time....112
Regression and Theory 113
Practical Implications....116
Suggestions for Future Research 121
Chapter Summary 122

REFERENCES CITED....124

APPENDICES 144

APPENDIX: Jake Jabs College of Business Student Satisfaction Survey Fall 2021....145

LIST OF TABLES

Table Page

1. Table 3.1. Fall 2021 First Year Business Student Enrollment. 73

2. Table 3.2. Fall 2021 BGEN 104US Course Enrollment. 74

3. Table 3.3. Gender and Retention Reflect Overall Population of FA21 First Year Business Students. 78

4. Table 3.4. Gender Post Fall 2022 Census of Those Who Were Retained, Switched Majors, and Left MSU. 79

5. Table 4.1. Measure of Central Tendency and Dispersion for Male and Female First Year Business Student – 2001-2021. 86

6. Table 4.2. Exploratory Factor Analysis of the Student Satisfaction Survey Fall 2021 90

7. Table 4.3. Results from Logistic Regression Models. 95

8. Table 4.4. The Interaction Variable Gender:FirstGeneration Interpretations 99

9. Table 4.5. Mean Score for EFA Factors by Gender and First Generation Status. 102

LIST OF FIGURES

Figure Page

1. Figure 1.1. United States Undergraduate Fall Enrollment by Gender. 3
2. Figure 1.2 NCES Data of Degrees Conferred by Postsecondary Institutions by Gender 4
3. Figure 1.3 AACSB Average Percentage of Female Enrollment Over the Past 15 Years 5
4. Figure 1.4 Increase in Enrollment at Montana State University 10
5. Figure 1.5 MSU Versus Jabs Gender Enrollment Headcount 11
6. Figure 1.6 MSU and Jabs Gender Enrollment Ratio 11
7. Figure 1.7 First-Year to Second Year Retention Percentage 12
8. Figure 2.1 United States Labor Force Participation by Gender from 1970-2007 30
9. Figure 2.2 Montana State University 20 Year Enrollment Trend 48
10. Figure 2.3 Spady's Empirical Model of the Undergraduate Dropout Process 53
11. Figure 2.4 Vincent Tinto's Model of Institutional Departure 54
12. Figure 3.1 First Year To Second Year MSU and Jabs Retention Percentage 61
13. Figure 3.2 Jabs First Year Females Compared to MSU First Year Females 63
14. Figure 3.3 Montana State University Enrollment Headcount and Gender Ratio 64
15. Figure 3.4 Jabs College of Business Enrollment Headcount and Gender Ratio 64
16. Figure 3.5 Required Business Courses for a First Year Business Student 67
17. Figure 3.6 Seven Theorized Categories – Jabs First Year Student Satisfaction Survey 80
18. Figure 4.1 R-Studio Scree Plot Output 88

LIST OF FIGURES CONTINUED

Figure Page

19. Figure 4.2 Obtaining Simple Structure: EFA Model and Relational Factors 91

20. Figure 4.3 Heat Map Correlation Matrix Between Variables.....93

21. Figure 4.4 Predicted Probability based on the interaction variable Gender:FirstGen in Model 3. 101

LIST OF MODELS

Model Page

1. Model 1.1 Tinto's 1993 Model of Student Integration. 17

2. Model 1.2 Motivator and Hygiene Factors as It Relates to Business Majors Based off Herzberg's Motivation Hygiene Factor Theory 18

3. Model 1.3 Blending of Tinto and Herzberg Theory to Understand Persistence. 19

ABSTRACT

High-level decision-making for companies typically occurs in the boardroom. The ability to reach the upper echelon is riddled with levels of inequality for women. Yet there is evidence to suggest companies run by women have higher rates of employee retention, equitable policies, and a higher fiscal bottom line. One way to assist women to the corporate boardroom is through an undergraduate degree in business, but within a rural, land-grant, open-enrollment, flagship institution in the West, there is a clear disconnect with first-year female business students enrolling and being retained from year one to year two of their academic career. Using descriptive statistics and logistic regression models, this study aims to understand the trends associated with retention within the Jake Jabs College of Business & Entrepreneurship at Montana State University in Bozeman, Montana. Using data from an in-house survey from the fall of 2021, an exploratory factor analysis was run to uncover latent variables and reduce data reduction to create a simplified model. To further understand factors that assist or deter students from returning to their second year four logistic regression models were run through R-Studio. Results indicate the factor Gender (specifically female) was statistically significant in the 3rd model as well as the interaction variable Gender:FirstGeneration (specifically female first-generation) held moderate statistical significance. Females who also identify as first-generation students are having different lived first-year experiences than those who are male and first and continuing generation students. This study suggests administrators and policy makers look closely into female business students first-year experience within the Jabs College of Business, as well as investigate students who identify as first-generation with specific attention looked at through curriculum, professors, sense of belonging, diversity experiences, and levels of satisfaction.

CHAPTER ONE

INTRODUCTION TO THE STUDY

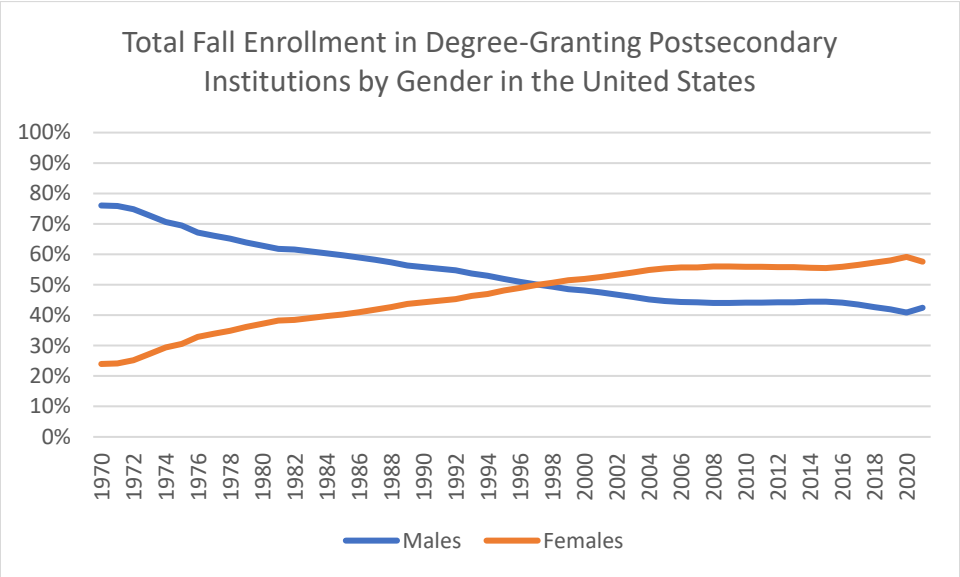
Background

Societies across the globe have long been plagued with the need to define gender roles and gender norms within the workplace. Revolutionary, groundbreaker, pioneer, and trailblazer are sayings used to describe how women have shattered 'glass ceilings' and strived for equity in the business world. Adages like this make for inspirational headlines; however, while these accomplishments for women are historic and remarkable, they serve as a reminder that women have had to break barriers within a system that was not built for them. By 2021, 56% of the workforce in the United States were women (U.S. Bureau of Labor Statistics, 2021). Women have been working alongside men for centuries, but illuminating women's potential within the workforce continues to evolve slowly and workplace gender diversity (WGD) continues to show numerous beneficial outcomes. The Women in Business and Management (ACT/EMP) reports that businesses that provide equitable pathways toward the corporate ladder not only increase their profit margins, but also foster growth in retention rates for women (ACT/EMP, 2019). Additional notable benefits of providing WGD include aiding in justice-based advancements, which help with brand boosting, and the creation of an environment rich with better ideation for the company (Fine, et al., 2020; Glass & Cook, 2018; McKinsey, 2021). ACT/EMP's 2019 report also stated companies didn't need to make drastic changes to see the benefits of WGD; rather, the report suggests benefits begin to emerge when as little as 30% of company leadership is made up of women (ACT/EMP, 2019).

While trends show an increase in female participation in higher-level management and executive positions, female representation continues to be low. Fortune magazine reported in 2022 that out of their Fortune 500 companies female CEOs (Chief Executive Officers) made up only 15% of company leadership (Young, 2022). In 2019, the ACT/EMP report also revealed that around the globe a hierarchy gender ladder exists that states the bigger and wealthier a company is, the less female presence is found at the top. In the past 20 years, numerous studies illuminate ongoing narratives of women having difficulties navigating their way to the upper echelon of the business world (Kolev et al., 2021; Mavin, 2009; Schlehofer et al., 2011). Fitzsimmons (2014) believed the gender disparity to the boardroom begins as early as childhood adolescence. The results of the studies continue to help provide a window of understanding into the inequality that exists at the top of the business world. Baker and Cangemi (2016) postulated the two major factors that continuously keep women out of the boardroom are the persistent lens of sexism and the belief women are not able to be a full-time worker and a full-time mother. Correll (2007) described biases as being extremely obvious within upper management with women continually being penalized for the choice to have children. There is a deep-rooted cultural belief within upper management leadership that women with children are less committed and unable to balance the roles of motherhood and work. Even with sound research revealing countless benefits to a company, the industry is slow to evolve. To help ensure equitable development continues by increasing the number of females in leadership positions, one pathway is to encourage young women to pursue and study undergraduate business and hence protect/develop/alter/the pathway to the corporate boardroom where decision-making occurs for companies.

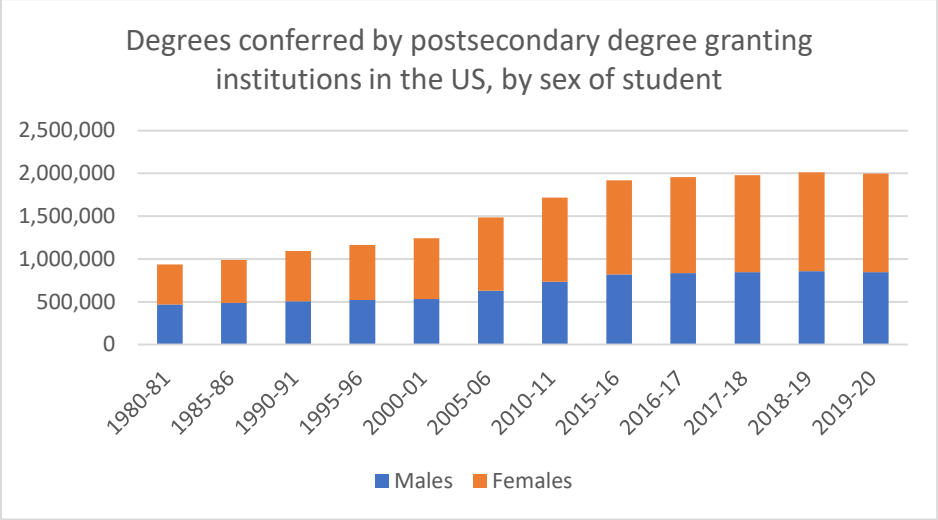
Throughout the history of higher education, the system has displayed similar examples of women overcoming barricades to partake in equal rights as men to study at universities and pursue the same major fields. Women have progressed so much that data from the National Center for Educational Statistics (NCES) indicate women have been enrolling and graduating in postsecondary education at a higher rate than men since 1970 (Figures 1.1 and 1.2). Nonetheless, schools of business have seen stagnation in females choosing business as an undergraduate major. The Association to Advance Collegiate Schools of Business (AACSB) was founded in 1916 and is considered the gold standard for ensuring schools of business are providing rigorous academic standards, verifiable research, and helping to create the next generation of business leaders worldwide (AACSB, n.d.). Over 900 universities around the world hold the AACSB accreditation and the research the company produces has helped businesses, students and universities thrive.

Figure 1.1. United States undergraduate fall enrollment by gender



Note: Women enrolling at a higher rate than males beginning in 1998.

Figure 1.2. NCES data of degrees conferred by postsecondary institutions by gender

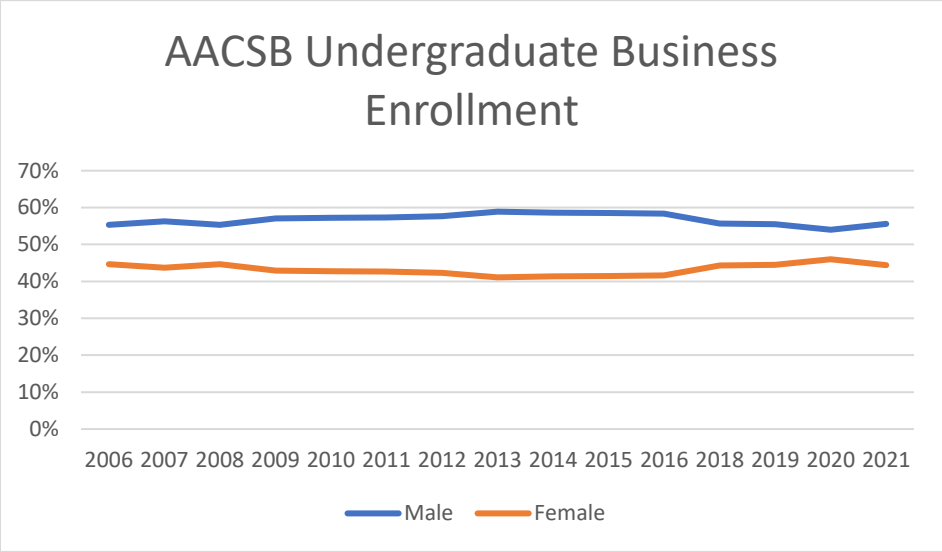


Note: Women began to graduate at a higher rate beginning in the early 1980s.

AACSB's DataDirect branch creates a yearly Business School Data Guide which reports on numerous trends that are happening within the undergraduate and graduate world of Business education. These guides also showcase yearly enrollment trends by gender. Scrolling through fifteen reports shows business education has seen an interesting wave of enrollment in the past fifteen years (Figure 1.3). The overall trend shows the percentage of male students dominated enrollment over female students and distribution from 2006 to 2008 remained reasonably steady. Starting in 2009, the figures show a variation with a gradual increase in the proportion of male students while female students showed a corresponding decrease. Starting in 2013, there is a visible shift within male and female enrollment with the percentage of male students continuously rising and peaking in 2014 while female students underwent a decrease, reaching a low of 41% in 2014. In recent years, the distribution continued to remain moderately stable, with

minor variations, but did show an increased enrollment for female students reaching a high of 46% in 2020.

Figure 1.3: AACSB average percentage of female enrollment over the past 15 years



Note: Trend line of female enrollment shows stagnation.

In the formative years, many universities in the United States did not have recruitment strategies, and companies that created systems to help with enrollment did not exist. Recruitment was highly frowned upon in the late 19th century due to the clientele that attended a university. Most students who enrolled in higher education were white males who came from prominent upper-class families and the tradition of higher education was passed down from father to son to feed the enrollment pipeline and keep the wealthy at the top (Renn & Reason, 2021). Today, recruiting students into colleges and universities has become a multi-million-dollar industry. Companies like EAB and College Board sell student names to universities based on a student's profile (pre-ACT/SAT scores, ACT/SAT scores, high school GPA, family income, gender, race,

etc.). Universities use these lists of student names to market and recruit them to attend their institutions through admissions offices.

Statement of the Problem

Although national female enrollment and graduation trends are rising, there is a clear disconnect with the stagnation of undergraduate females studying business as a major. The story is further exacerbated by data that is emerging from a rural, land-grant, open-enrollment, flagship institution in the West. Montana State University (MSU) is nestled in Bozeman within the state of Montana. The institution was founded as a land-grant college with the help and aid of the Morrill Act in February of 1893.

The earliest known courses that were taught at MSU were in business. H.G. Phelps was the first professor who taught the business curriculum in the spring of 1893. At the time, he only had eight students total and instructed students in shorthand, typing, and bookkeeping (History of the MSU School of Business, 1982). Enrollment has come a long way from the eight students who began at MSU. Today, the Jake Jabs College of Business & Entrepreneurship has a student body make-up of 1,755 students (Montana State University Census, 2021). With the rising cost of higher education, decrease in confidence within American higher education (Brennan, 2023) and prediction of lower high school graduates in the state (NCES, 2022) understanding enrollment trends is important to MSU and Jabs College of Business.

In 2018, Nathan Grawe introduced a more meaningful probability model to forecast enrollment trends in higher education for the next two decades. To predict the current and future demand for college, Grawe's (2018) Higher Education Demand Index (HEDI) uses the probability of student attendance multiplied by the current number of 18-year-olds. Grawe

(2018) postulates that four-year institutions will see a heavy drop in enrollment numbers toward the middle of the 2020s due to the lowering of birth rates through 2010 with a predicted 10% loss in higher education enrollment. Knowing this information, it is imperative to continue refining the marketing strategies for recruiting students.

While other universities are witnessing a decline in student matriculation, MSU has been riding a recruitment and enrollment wave with a continued healthy and robust student population for the past fifteen years (see Figure 1.4). In 2001 MSU invested resources with the company EAB (formally Education Advisory Board). Serving more than 2,500 schools, EAB is a multifaceted consulting company with one of their many goals to help universities create enrollment pipelines (*About Us.* EAB, 2024). The company used data analytics to help MSU make purposeful recruitment strategies to increase enrollment. The investment began to pay off with bumps in enrollment occurring at the beginning of 2005. The Office of Admissions at MSU employs five to six people to travel around the United States including yearly visits to every single Montana high school. Developing relationships and building the MSU brand was essential during the late 2000s (Ouert, M, personal communication, July 10, 2023). While other Montana universities and colleges focused on in-state students, MSU looked outward and slowly started to bring in out-of-state students. Out-of-state students help to subsidize in-state student tuition and an increase in out-of-state students was a welcomed strategy. In 2008 two significant events occurred to help boost the enrollment at MSU. First, MSU and the marketing arm of EAB pivoted and leveraged their focus to in-state Montana students (Ouert, M, personal communication, July 10, 2023). The roots of MSU are based on the land-grant mission and university leadership committed time and resources to “choosing promise.” Building the brand

and trust of the people of Montana was strengthened. The second enrollment boost came in the form of an economic recession. The year 2008 brought numerous layoffs around the United States and the recession brought people back to universities. By 2018, MSU saw a 26% increase in enrollment (see Figure 1.4). Knowing it was cheaper to retain a student than recruit one MSU split its focus on recruitment and began looking at strategies to retain freshmen to sophomore year and continued persistence toward graduation.

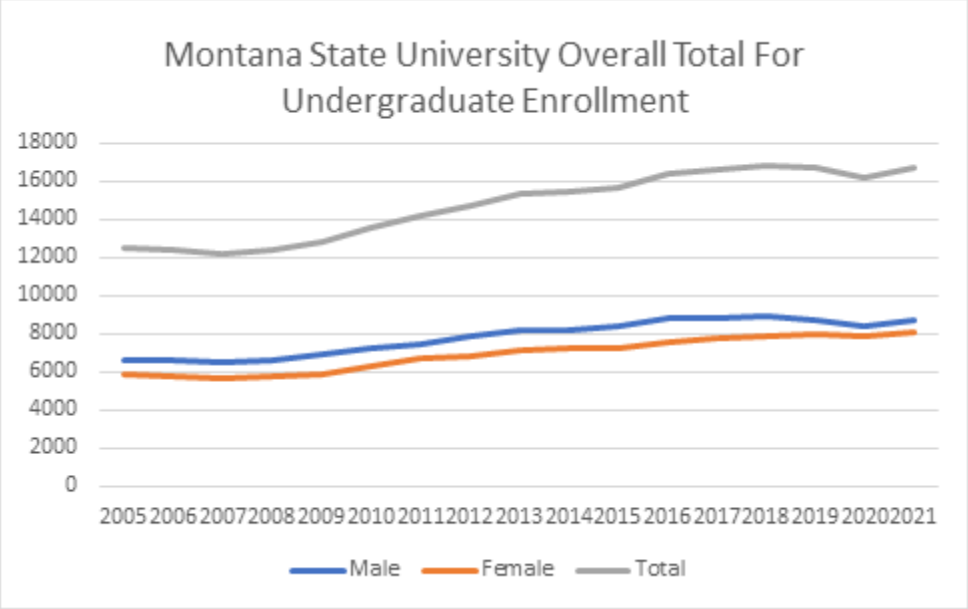
By the mid-2010s investment in campus infrastructure was underway at MSU. Specifically, in 2011 Jake Jabs, a business entrepreneur and graduate of MSU, donated $25 million to build a new business building on campus as well as fund scholarships for students. At the time, the donation was the largest amount to be donated within the Montana University System. The Jabs building was completed in the summer of 2015 and is a LEAD silver-certified building. The investment by Jake Jabs kicked off a domino effect of donations with Norm Asbjornson pledging $50 million to the College of Engineering in the spring of 2014 and 2021, MSU announced the College of Nursing was to be given the largest donation a college had ever received by Mark and Robyn Jones in the amount of $101 million. These donations are significant for so many reasons, but they also show the growth and wealth of opportunities others saw happening within the university. In 2016 and 2018, new state-of-the-art residence halls were built to add to the fleet of on-campus housing needed to accommodate the growing population of first-year students, and in the fall of 2018, MSU brought in the highest enrollment record to date with 16,902 students entering the fall semester. It was also during this time an increase in research expenditure dollars began to increase and for the fourth year in a row, MSU research expenditures hit $201 million in fiscal year 2022 (*About us: Red, n.d.*). Becoming the largest

research institution in Montana increases the MSU brand across the nation and the world and is currently ranked as “very high research activity” within the Carnegie Classification of Institutions. Lastly, MSU Bobcat athletics strengthened their program with winning streaks coming from football, basketball, track and field, and golf. Even a global pandemic could not keep MSU’s enrollment numbers down. When COVID-19 brought the United States to a standstill in March of 2020, MSU was able to accommodate a blended in-person/online classroom environment by Fall 2020, and by Fall 2021 MSU enrollment was at 16,843. A “golden era” emerged throughout Bozeman during the high-growth period.

However, as much as an institution welcomes increased enrollment, it can also create growing pains within campus systems. Enrollment management across colleges and departments faced issues with the need to increase course caps, add sections of classes, and hire faculty (non-tenure) to teach the courses. Student resources were also stretched thin across student and academic affairs. Professional academic advising caseloads vary across colleges, but within the Jabs College of Business in the fall of 2021, the student-to-professional academic advisor ratio rose to 600 to 1. Over a ten-year period, Counseling and Psychological Services increased the number of students they saw by 25% (B. Kasser, personal communication, August 23, 2023), as well as housing and residence life continuously started the fall semesters with overflow housing to accommodate record-breaking amounts of students. Exhaustion from a global pandemic, constant pivoting to create ways to accommodate the copious amounts of students, and low-paying jobs created a perfect storm for staff members to look elsewhere for employment. In 2015, MSU had difficulty hiring jobs within accounting and information technology jobs, which led to issues finding custodial, food workers, and administrative positions (L. Underkofler,

personal communication, August 24, 2023). The “Great Resignation,” a term coined in 2021 after mass amounts of people quit or retired from their jobs, made it more problematic to hire personnel to offset the growing enrollment of MSU. Even with increased wages, vacant positions were difficult to fill. The disbursement of duties fell to those who still worked at the institution causing strain and customer care to be more transactional than holistic.

Figure 1.4 . Increase in enrollment at Montana State University

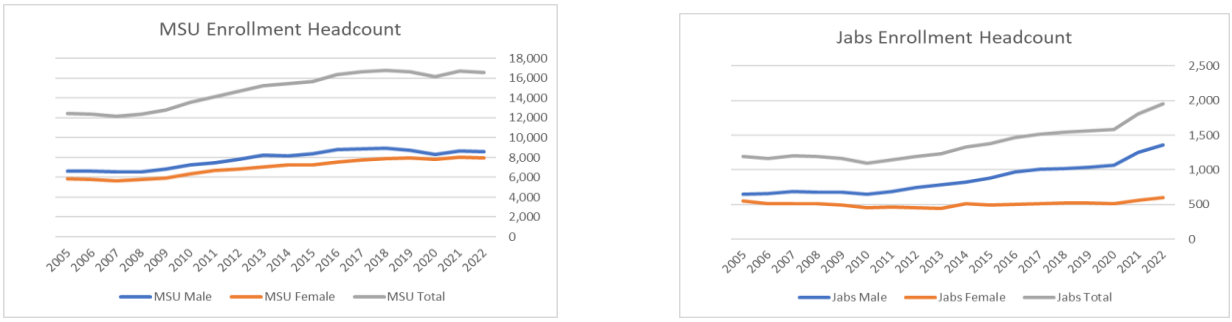


Note: Male and female enrollment numbers are trend upward

The Jabs College of Business has also benefitted from the enrollment wave; however, the college has seen a decline in first-year female enrollment compared to the overall MSU female enrollment. To fully understand the issue, the following data regarding Jabs College of Business’s male and female enrollment trends compared to MSU’s overall male and female enrollment trends from 2005 to 2021 are shown (see Figure 1.5). Much like MSU, Jabs College of Business has increased overall student numbers; however, the data does indicate female

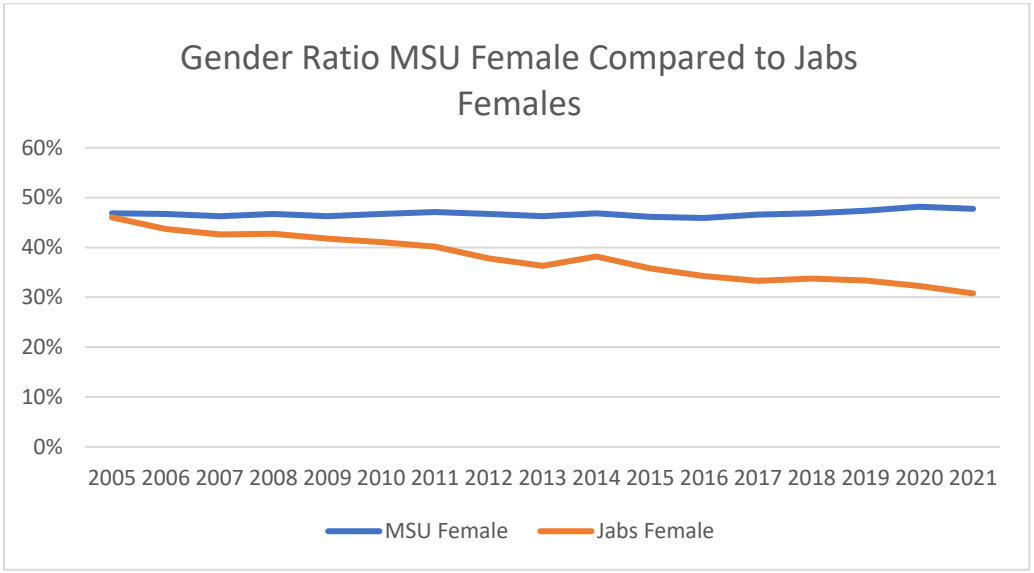
students in Jabs are not increasing at the same rate as MSU's overall female population (see Figure 1.6).

Figure 1.5. MSU versus Jabs College of Business Gender Enrollment Headcount



Note: Jabs male enrollment is on the rise compared to MSU male enrollment and MSU female enrollment increasing.

Figure 1.6. MSU and Jabs College of Business Gender Enrollment Ratio

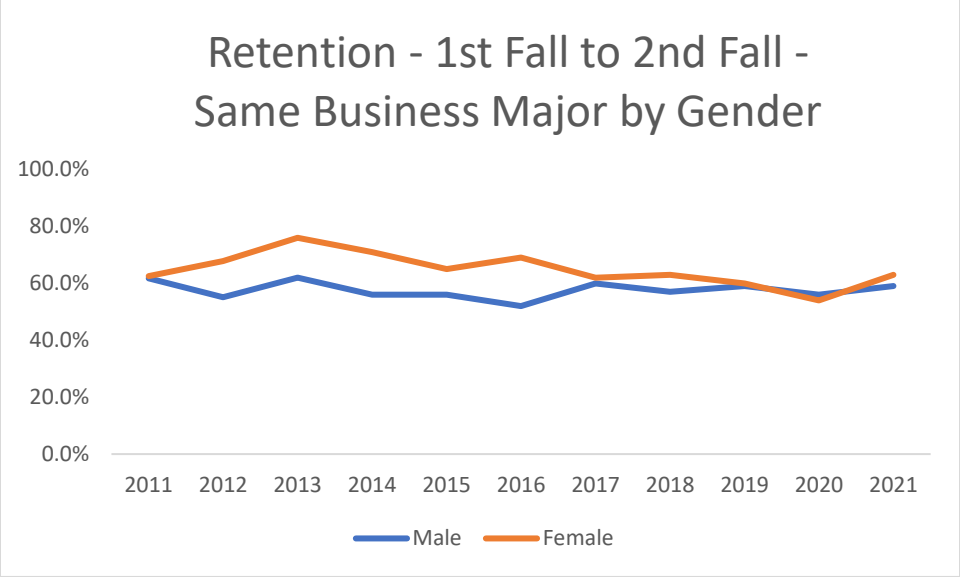


Note: Jabs female percentage has decreased since 2005.

Not only is the Jabs College of Business seeing a decline in first-year females, but some data indicates a retention loss between the first and second year for female business students.

Although we see a higher average rate of retention for female business students in Figure 1.7 we start to see a decline in retention beginning in 2013. What is not yet understood within the data is why Jabs College of Business is losing female business students between the first and second years. This research paper will determine if there are factors that contribute to major switch or dropping out of school within the first and second year of school.

Figure 1.7. First-year to second-year retention percentage



Note: Table specifies retention first fall to second fall by gender ratio.

Statement of Purpose

The purpose of this empirical survey study is to understand the factors that influence or deter a first-year business student's decision to be retained in their second year. While much research has been conducted to understand factors that contribute to the likelihood a student will pursue higher education and what major they will pick, there is not a considerable amount of research conducted to understand why students switch to a new major or leave school after their

first year within the business major. Moreover, there appears to be a disconnect between MSU and national trends in female students pursuing a degree in business and being retained in business. In addition to understanding retention strategies, the information gathered can further provide a multilayered understanding and insight into undergraduate females' choice of which major they ultimately pick and perhaps what MSU and Jabs College of Business are lacking in terms of the environment in which business majors thrive.

Research Questions

To fulfill the purpose of this study, the following research questions have been designed to inspect what factors contribute to the likelihood a business student will persist with pursuing a degree in business past the first year of college. The questions will explore the traits and characteristics of retention.

RQ 1. What are the trends in retention among first-year MSU Jabs College of Business students between 2011 and 2021 and how do these vary by gender?

RQ 2) Using the most recent and available data, what factors relate to retention among the 2021 cohort of undergraduate business students at Montana State University's Jabs College of Business?

a). What is the relationship, if any, between fixed factors, including gender, race, first-year residency, and first-generation student status and retention of first-year business students?

b). What is the relationship, if any, between malleable factors, including a sense of belonging, student satisfaction (with courses, professors, resources, etc.), and retention of first-year business students?

Significance of the Study

The benefits of having balanced workplace gender diversity within a business cannot be understated; however, not acknowledging the multifaceted issue at play is ill-informed. Chrobot-Mason & Aramovich (2013) suggest a positive domino effect occurs when equal treatment and equal access for male and female employees are combined to create identity freedom, which evolves into psychological empowerment for the employee. These two factors can create an environment for employees that allows them to be highly innovative and creates an organizational identity that leads to employee loyalty and longevity (Chrobot-Mason & Aramovich, 2013). Knowing the population that feeds the female pipeline to the boardroom is diminishing within the Jabs College of Business it is of interest to understand why. While young females in the United States continue to be socialized into their prospective gender-normed occupation efforts toward careers that are male-dominant, like business, should continue to be encouraged regardless of where the student is within their academic career. Vokić et al. (2019) postulated that highly educated women advance at a higher rate in male-dominated fields like business than women who have had fewer education opportunities.

The significance of this study is to understand factors that contribute to the decrease in first-year female retention in the Jabs College of Business by studying data that indicates where the college loses the largest percentage of female business students between the first and second year. The findings of this research will increase knowledge of understanding what factors contribute to student retention and which factors do not. Additionally, through this research, the administration at Jabs College of Business can create action plans to increase retention efforts

during the first year a female business student is here to aid in their persistence to finish a degree in business.

Theoretical Frameworks

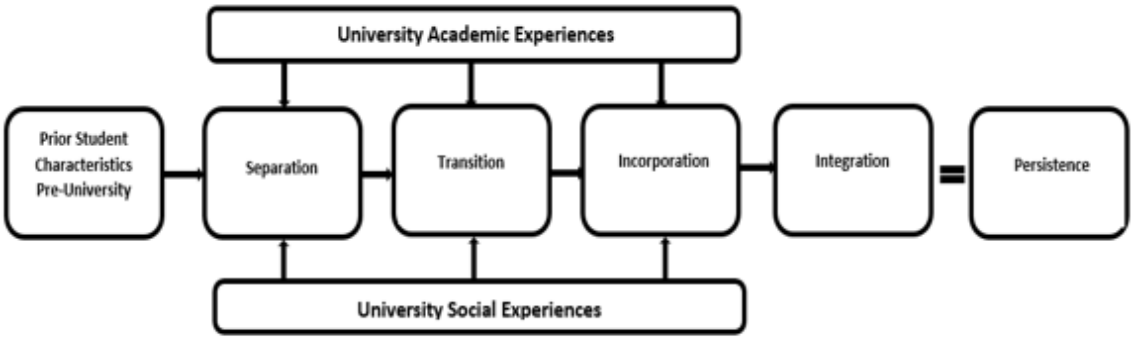
This study will utilize two theories to aid in the understanding of student retention in a business major. Looking at Vincent Tinto's (2007) Interactionalist Theory of Student Departure will assist in the understanding of persistence through the lens of student experience and the focus on retention and attrition within a college campus (Burke, 2019; Karp et al., 2010). Examining through a student perspective is important in order to grapple with perceived system deficiencies. Numerous studies indicate student satisfaction has a positive impact regarding student retention and further helps students to persist at a university (DeShields et al., 2005; Schertzer & Schertzer, 2004; Elliott & Shin, 2002). To support further comprehension of student satisfaction within a major, Herzberg's model of motivation-hygiene factor theory (job satisfaction/motivation) will provide a conceptual assessment of student satisfaction with intrinsic and extrinsic factors within their college experience (Alshmemri et al., 2017).

Vincent Tinto is one of the leading experts in student retention within higher education and believes a student is more likely to persist in an academic system if the student can find a community to belong to (Tinto, 2006). Before Tinto's model became mainstream, much of the theory behind "student dropout" assumed the cause for dropping out to be a student issue: the student can't stay because…not enough money, doesn't have the right educational background, etc. Tinto views the issue of retention through the lens of what university actions or inactions are affecting the retention rate of their students. Instead of blaming the student, what is the university neglecting to aid the student in persisting (Tinto, 2023). Better understanding place-oriented

system deficiencies unique to each level of a university is crucial to knowing if retention numbers are to increase.

The model Tinto created begins with a baseline assumption that students entering a university environment have a prior set of characteristics and community through which they understand and view the world. From there students can venture through three stages to reach integration into their university. The first stage is separation in which Tinto postulates at some level, students will begin to distance themselves from familiar norms such as high school friends, family, and past communities. The second stage, transition, is described as the "in between" in which students have made the separation of old norms but have not yet built new familiar norms. And, the last stage, incorporation, allows the student to formulate new communal norms and adapt to the new environment with ease. Students who can navigate through the three stages of separation, transition, and incorporation are more likely to find community with the university, and in turn, the student becomes committed to the institution, which conveys a willingness to persist. Tinto's model is designed to explore reasons why students leave an institution; however, this study aims to understand why female students in business switch majors rather than leaving the institution. Therefore, the model will look at departure as switching majors.

Model 1.1. Tinto's 1993 model of student integration, which leads to persistence.



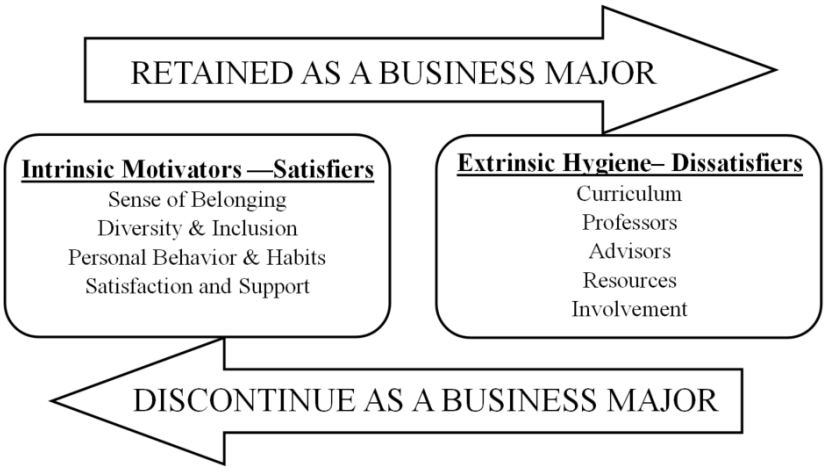
Note. Regarding persistence, as a student ventures through academic and social experiences, they simultaneously go through three stages of integration.

To further understand the lens through which this study will be conducted, Herzberg's model will explore job satisfaction and dissatisfaction occurring on two different spectrums: motivational (satisfaction) and hygiene (dissatisfaction) factors (Smerek & Peterson, 2007). Motivational factors are categorized as intrinsic 'factors' that align with a worker's personal growth, including the ability for advancement, the work itself, growth, responsibility, recognition, and achievement (DeShields, et al., 2005). Hygiene factors, which are thought to decrease job satisfaction, are more extrinsic and focus on themes like work relationships, salary, policies within the company, supervision, and working conditions (DeSheilds, et al., 2005). This study will look at what motivational factors, if any, assist female business majors decide to switch out of the business major and into another major within MSU.

Utilizing Herzberg's theory in this study, the motivational factors have been translated into intrinsic and extrinsic factors that could relate to being retained within a business major. Advancement equals the ability to progress through the major. The work translates to the

enjoyment of learning the actual subjects within a business major. Possibility explains a student's ability to grow through student development. Recognition means a student earning a business scholarship or academic award and achievement is the ability to pass the business courses. Looking at the hygiene factors that relate to a female student leaving the business major, interpersonal relationships with faculty, staff, and other students contribute to a student leaving the major. The salary translates to how much college costs and the associated extra costs the business school charges students. Company policies and administration would relate to the Jabs College of Business admission policy that holds three sets of standards a student must pass before being allowed to enroll in upper division classes; one of the standards being a cumulative 2.50 grade point average. Supervision would convey a student's experience living in the residence halls and the supervision that occurs within the living environment and working conditions translates to the setting in which students physically learn: academic buildings.

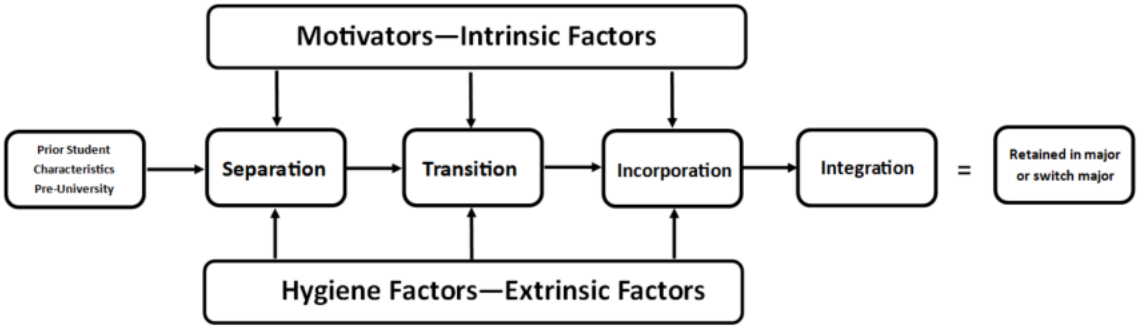
Model 1.2. Motivator and Hygiene Factors as It Relates To Business Majors Based on Herzberg's Motivation-Hygiene Factor Theory.



Note. Model based on Herzberg's motivation-hygiene factor theory/job satisfaction/motivation.

Using Tinto's (1993) and Herzberg's Two-Factor Theories together to create the conceptual framework for this study would begin with the acknowledgment that students enter college with set characteristics that were formed through their own lived experiences. From there, students moving through the three stages of integration during their first year, while simultaneously experiencing motivators and hygiene factors will ultimately help a student determine if they will be retained within the business major or decide to switch majors.

Model 1.3. Blending of Tinto and Herzberg theory to understand student persistence



Note. Students enter a collegiate atmosphere with their own set of characteristics.

Operational Definitions

Certificates: There are numerous types of certificate programs offered within the Montana University system, but within the Jabs College of Business two certificate programs exist. The certificate programs are offered to currently enrolled students to earn in conjunction with a bachelor's degree (*Specialty certificates*. Montana State University: Mountains and Minds. (n.d.).

Bachelor's degree: The Montana University System defines a bachelor's degree as an awarded credential that requires earning 120 credits worth of coursework. The coursework is made up of a general education core curriculum and major-specific classes (MBRHE, 2019).

Options: An option, as it relates to higher education, is a concentration that allows a student to focus on a specific area of study within the major. The Jabs College of Business offers one undergraduate degree: Bachelor of Science in Business. Students are then able to pick a focus area (accounting, finance, marketing, or management) to further study within upper-level courses.

Minors: The Montana Board of Regents of Higher Education's Policy and Procedures Manual describes a minor as having 18–30 credits that enhance a student's primary major. The minor can be in a related or professional area of interest (MBRHE, 2019).

Continuing Generation: College student who has parents or other family members who have attended college or a university before them. Students who identify as continuing-generation students may benefit from understanding campus cultural norms over those students who identify as first-generation.

Persistence: The National Student Clearinghouse Research Center measures and defines persistence as any student who returns to any college or university for their second year of school. However, as it relates to higher education within Montana State University and this study, persistence focuses on students returning after their first year and completing their degree at MSU.

Retention: MSU uses the same operational definitions on retention as the Persistence & Retention report from the National Student Clearinghouse Research Center (2023) and the

National Center for Education Statistics (2022), which measures the percentage rate of first-year undergraduate students who return to the same college or university the following fall. As it relates to this research study retention will be defined if a student returns to the Jabs College of Business after the first year as a business major.

Sense of Belonging: Vincent Tinto (2017) and Hoffman et al. (2002) described university settings as having microsystems across campus. The hope is students integrate themselves into these systems, thus creating a "sense of belonging." Within the theory, the more a student integrates themselves into said microsystems, the greater the commitment is to the university, thus being retained and persisting to graduation. This research study will use Tinto's framing of "sense of belonging" when described.

Student Satisfaction Survey: The Student Satisfaction survey was created within the Jake Jabs College of Business & Entrepreneurship as a way of understanding the varying levels of overall satisfaction students felt within their business experience. The survey grew to be a way to measure a "sense of belonging," and within this study, hoped to shed light on why first-year female students are not being retained to the second year.

Workforce: It is significant to note that women have been working alongside men since the beginning of time, but societal norms define what it meant to be counted as a woman in the workforce for centuries. Thus, it is important to recognize how the term "workforce" has been identified over time and what it meant to be included in historically documented numbers. Sumner (1910) described women's work as being categorized into two domains; conventional work, in which women were paid for their labor, and domestic work, in which women were unpaid and worked for their families to make their households function. Sumner (1910) goes on

to depict the work women provided was equally important to their families and tribal communities. This paper acknowledges women's contributions to the workforce as paid and unpaid labor; however, the scope of the paper will describe women in the workforce as defined within the parameters of work that is done for a wage.

Delimitations

First-year students within Montana State University: First-year female business students within Jabs were picked to study over first-year MSU students because of the rate of decline and that the trend is not similar to MSU, AACSB, or nationally.

Women: This research paper acknowledges the generalization of the term "women" within the writing. The paper further acknowledges most of the historical information detailed in Chapter 2 only gives insight into the experiences of white women throughout the decades. This review does not delve deeply into the understanding of women of color and women who came from socioeconomic backgrounds that were different from women who came from money.

Recruitment Efforts within the Jabs Business College for First-year female students: Understanding why first-year female business students are not choosing to enroll in the Jabs College of Business is important, however, the scope of this study would not have been able to gather reasonable data and analyze it to fully understand why students are choosing not to pick a business major and not picking Jabs College of Business. Therefore, understanding the lens through which first-year female Business students experience the major was a better use of time and resources.

Limitations

As with most research studies, the design of this study is subject to limitations. Due to the nature of the specific problem, the research study was only conducted at one college within one university. Results will help the Jabs College of Business at MSU but may not translate to other schools of business across the nation. Also, the period in which data is being collected is limited to the fall semester because most first-year female students enroll during the fall semester. However, this does leave out the small percentage of students who begin their college career in a spring semester. Further studies can be added to include the incoming first-year business students from the spring semester to see if the results are similar.

While sample surveys are a cost-effective way of gathering data the researcher is trying to understand, there can be confines to the usage. Douglas Heath, William Perry, and Arthur Chickering's theories became the foundation for understanding student development in higher education (Evans, et al., 2009). Knowing students go through a myriad of different stages of development creates a limitation for how the data will be gathered. The instrument this study will use to gather data is a descriptive survey. Descriptive surveys are simplistic in nature and allow the researcher to gather information that reveals the relationships between behaviors and attitudes of the population being studied (Coughlan, et al., 2009). However, as much as the survey provides information, it is only an instant in time regarding how the subject felt at the time of taking the survey and may not expose attitudes due to the subject not being able to process their true feelings on the topics being asked (Gerrish & Lacey, 2010). Ways to combat this limitation include future research in which a longitude study could be conducted to understand patterns and behaviors of why a student chose to study undergraduate business at the

time of arriving on campus and why they chose their major after flowing through stages of student development.

Lastly, response bias can be a limitation that occurs within this project due to being sampled within a class. Students may feel the pressure to respond to the survey due to where the survey gathering (classroom) is taking place. To counter this, transparency and clear communication are essential for the researcher to provide to the subjects who take the survey. Explaining to students they are free to the Jabs College of Business's first-year female business student sample size compared to the general population of first-year female business students is small in nature. However, the purpose of the study entails understanding why Jabs College of Business's first-year female business students are declining and not the general population, as the phenomenon is specific to MSU's Jabs College of Business.

Chapter Summary

The value of having workplace gender diversity is clear; however, conventional wisdom pushes back on the decade's worth of social norms that have created an environment that was never built with equitable gender workplaces in mind. Continued studies showcase the value a woman brings to a company and persistent research around the efforts to encourage women to persevere within undergraduate business education is imperative to feeding the pipeline from classroom to boardroom. As the Jabs College of Business continues to evolve, it is vital to understand the student experience (male and female) is studied to provide factual data to make an improved student experience that leads to persistence to graduation.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The contributions of women in the United States workforce are vast and current research indicates having workplace gender diversity (WGD) within businesses aids in justice-based advancements, higher return on sales, increased company retention, return on invested capital, brand boosting, better ideation, and a company's fiscal bottom line (Aguilar, et al., 2023; Fine, et al., 2020; Frank, 2019.; McKinsey, 2021). Schools of undergraduate business continue to feed the pipeline for men and women to join the business arena, but what happens when there is a gender imbalance at the undergraduate level? Examining the origin of what feeds the gender pipeline all the way to the corporate boardroom can help deconstruct the understanding of the decline in retaining female undergraduate students in the Jabs College of Business at MSU. The literature surrounding these topics can be expansive. For that reason, this literature review will focus on the historical past of women in the workforce and businesses. It will also focus on the evolution of women in higher education and highlight when undergraduate schools of business began to accept females into their programs. It will then lay out the significance of how universities and colleges have invested in retention efforts for students within their majors and what practices are being implemented to retain females in undergraduate schools of business.

Historical Significance of Women in the Workforce

Within his comparative analysis, Crenshaw (1995) argues much of modern corporate policies are haunted by the historical inequality of women in the workforce. Therefore, historical

insight into which men and women evolved within the workforce is important to study. For much of the Victorian age women's occupation very much dominated daily household work and yielded the power within the arena of moralistic and religious piety (Gordon, 1990). During this period there were protective laws in place that only allowed women to work within a small scope of occupations and during certain times of the day. For those women working for a living wage outside of the home, dressmaking, boarding housekeepers, and servant work were the traditionally held occupations (Webb, 2009). However, as the nation entered the 20th century, new opportunities for women to work outside of the home emerged. As the industrial age and commodities became more abundant, so did factories. Factories were primarily constructed in urban areas which brought rural unmarried women to the cities to find work (Webb, 2009). Inventions for household work also helped create more time for women and further medical advancements, such as contraceptives, meant family planning could be more controlled and arranged. This allowed women to enter a broader set of occupations, including more mainstream administrative jobs such as stenographers, typists, accountants, and bookkeepers (Fisk, 2003). This era also witnessed women organizing themselves to create safe working conditions and better pay, such as the National Women's Trade Union League, formed in 1903, and the United States Department of Labor created the Women's Bureau in 1920 (Sweet, 2021).

War Time

The United States has traditionally seen a temporary shift in women leaving the home to work during times of war and economic strife (Webb, 2009). During the Civil War, numerous women in the North and South spent their time working in factories, farming for food, nursing, or reporting on the war as journalists (DePauw, 1994, Harper, 2004). The labor shortage during

World War I helped to fold more women into the workforce due to men serving in the war efforts and ignited the launch of labor movements for women (Greenwald, 1990). World War I was the first war of its kind that united efforts on the "home front" and allowed women to step into roles conventionally held by men. Post–World War I an awakening occurred for women and societal norms began to shift and gained momentum until the Great Depression created a dip in employment for women (Webb, 2009). As World War II began in the 1940s the "Rosie's" entered the limelight. In a 1942 presidential speech, Franklin D. Roosevelt spoke of how impressed he was with the number of women he had already seen working in the factory line during an inspection of war factories and went on to state the need to put prejudices aside to hire women to get the job done for the war effort (Roosevelt, 1942). The media marketed the fictional "Rosie the Riveter" as showing women had a patriotic duty to help step into the place of their husbands. After the war, women were quickly laid off to make room for men to return to their jobs even though many women expressed interest in staying on with their professions post war (Lewis & Neville; 1995, Webb, 2009).

1950s–1960s

Throughout the 1950s, women were placed back into their traditional role as caretakers of the home. Webb (2009) goes on to explain much of the media also played into creating what the perfect woman and family should look like. Working outside of the home for married women was put on hold, but women continued to push the social norms, and by the 1960s, the United States seemed to be going through another crisis of identity of what gender roles should be. Just as the TV shows of the 1950s portrayed women in their conventional title role as running the

household, the 1960s and 1970s brought TV shows that shed light on how a woman could be successful in independent roles outside of the home.

As does many things, what was happening around the world impacted how women advanced in the workplace in the United States. Civil Rights, the Vietnam War, and equal pay were just a few examples of the radical changes that were occurring during the 1960s for women. This decade helped liberate women from not only being homebound, but the realization that husbands and children didn't need to be at the center of the universe for all women. Three significant historical events came to pass that helped give women protection and aided in opening more doors to work. The first was The Equal Pay Act of 1963, which stated companies had to pay men and women the same wages for the same work. An act from which women have still not fully benefited from, with the 2022 Payscale reporting the "uncontrolled" gender pay gap where women make $0.82 for every $1 a man makes (Payscale, 2022). On the heels of this Act, the Civil Rights law was put into place in 1964 that detailed people could not discriminate against a person due to their sex, race, religion, or national origin (NARA, n.d.). Finally, in 1966 the National Organization for Women (NOW) was founded by a group of women who wanted to help end sex discrimination and has been a leader throughout decades in women's rights (*History: National Organization for Women, n.d.*).

Entering the 1970s

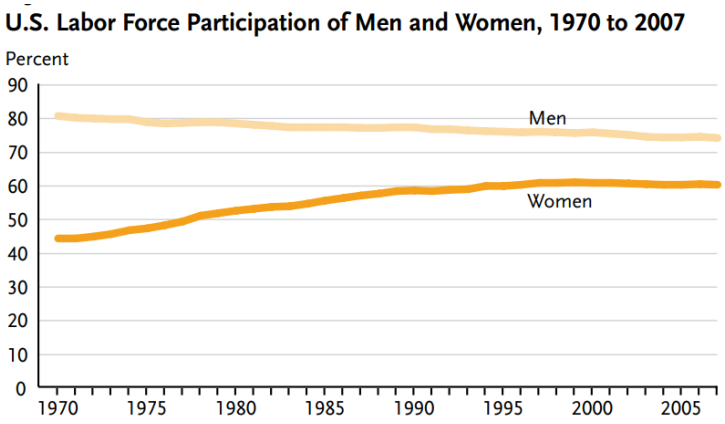
Enter in the 1970s, and Toossi (2002) describes this decade as having the largest percentage of growth with 20% of women ages 25–34 entering into the labor force. This era also brought continued social reform for women and researchers began to see a noticeable change within society that favored a more liberal and feminist attitude. Eisenstein (2005) noted the rise

of feminism contributed to women believing they should have the same rights and privileges as men. Twenge (1997) noted numerous sociology studies in the 1970s spoke to how women viewed their future which included a dual lifestyle of being a full-time worker and a mother. Toossi (2002) went on to note women married later in life and postponed childbirth to stay in school longer and pursue careers. New laws that were implemented during this decade helped those attitudes become a reality. The practice of employers being able to not hire women if they had pre-school-aged children was outlawed in 1971 because it violated the Civil Rights Act of 1964 (Phillips v. Martin Marietta Corp, n.d.). In 1972, Congress helped to expand the equal pay policy by increasing the protection of individuals working in fields that receive federal funding, such as public employees and those who worked in education (*Fifty Years After The Equal Pay Act*, 2013). Congress also passed the Pregnancy Discrimination Act of 1978 that prohibited discrimination based on pregnancy, childbirth, or any other related condition (Sweet, 2021). As much as these advancements can be considered "wins" for women, it also reveals society built a system that never intended women to be equals and the continued struggle for equity was gaining momentum during this decade.

Toward the end of the 1970s, the United States began to feel the pinch of an economic recession. The recession was due to many factors including an energy oil crisis in the Middle East, which contributed to rising inflation in the United States (Van Ours, 2015). As the 1980s ushered in, unemployment was at an all-time high and dangled around 11% with the automotive, construction, and manufacturing jobs being hit the hardest (Sablik, 2013). Van Ours (2015) provided a narrative that discussed who benefited from this time and found that women increased their employment during the recession and were more likely to keep their jobs due to the

occupations women held. Technological computer advancements started to make their way into many companies and several businesses reaped the benefits of IBM and Apple machines making work faster and more efficient. Women in the workforce had risen 20% since the 1950s and continued the upward trend through the decade (BLS, 2022).

Figure 2.1. United States Labor Force Participation by Gender from 1970-2007



Note: Female trend line begins to level off in the mid 1990

1980s–1990s

It was in the1980s that history witnessed numerous laws being passed to further protect women and their rights. The Supreme Court ruled sexual harassment illegal within the workplace and in 1988 Congress passed the Women's Business Ownership Act, which allowed women to obtain a business bank loan without a male co-signer (Applen & Kleiner, 2001). Implications of this law helped women entrepreneurs access funding they may not otherwise have found. To further showcase the progression for women, the United States Bureau of Labor Statistics reported the wage-gap disparity finally began to decline between men and women and for both black and white workers (Sorense, 1991).

The 1990s brought to age the second generation of feminists. These women delayed marriage even further into their 20s and were free to pursue arenas that were closed to their mothers a few decades before. With more opportunities to further their education, women advanced in degrees and careers, which brought more income to their families. By 1995, the Family and Medical Leave Act granted eligible workers up to twelve weeks of unpaid time off each year for pregnancy, newborn care, adoption, foster care, and other caretaking duties (FMLA, n.d.). This was an enormous win for women who continued to play the primary role of caretaker within families. The Gender Equity in Education Act passed in 1994 created training programs for teachers to educate about gender equity in math and science, dropout prevention for pregnant and parenting teens, sexual harassment and abuse, and child abuse education and prevention (Congress, 2013). However, even with these progressive Acts passing, the invisible "glass ceiling" remained a barrier for many women during this decade. Balancing children and work, hostile work environments, and lack of organizational understanding continued to put women at a disadvantage when it came to progression to being promoted to the top CEO positions (Morrison, 1992; Bass & Avolio, 1992).

2000s and Beyond

The 2000s brought the Council on Women and Girls which is a governmental agency that promotes gender equality and elimination of pay disparities (About HUD, 2022). Strong, savvy, and independent women grace the television screens to mimic what society is starting to accept with female roles (Webb, 2009). By 2010, women held 57 % of the labor market (BLS, 2021). Even though the labor market showed progressive strength of women in the workforce, the top workforce roles were still almost all held by men. Female representation severely lacked at the

top with male CEOs (chief executive officers). Female CEOs in the S&P 500 sat less than 1% in 2000 and rose to 1% in 2010 (Young, 2022). While becoming a CEO might not be the goal of all females who enter the workforce, studies show having female CEOs aids in multiple benefits for other females within the workforce. The use of harmful female stereotypes within a business can be hidden as well as show the implicit bias that is held that feed stereotypes companies are often trying to alleviate. Billions of dollars are spent annually on diversity training to help change the biased stereotypes of women in the workforce, but Lawson, et al.'s (2022) study suggests that just having a female as the CEO can mitigate stereotypical language used to describe women which cascades into a different work culture. Macabasco et al. (2022) and Appelbaum et al., (2003) illustrate how male and female CEOs differ in their leadership style with females practicing a more transformational style of leadership, while males practice transactional styles of leadership. He goes on to state studies have shown transformational styles of leadership lead to higher rates of overall company performance. Buckalew et al. (2012) depict a changing business world and an intergenerational workforce, with transformational leadership as the preferred style for employees if companies are truly looking to outperform others. There are numerous empirical research studies (Elting, 2023.; Fitzsimmons, 2014.; Macabasco et al., 2022) that showcase why women are not balancing out the CEO numbers, and bringing equality to the very top of companies will only strengthen the overall outcome.

Where the historical past of women in the workforce seems like an unending disparity, there is continued hope and perseverance. At the beginning of 2023, Eltin's (2023) Forbes article showed movement in the female CEO leadership route with female CEOs moving from 8% to

10% in S&P's Fortune 500 companies. While this seems like a meager 2% movement, it shows the business world is starting to listen and see the benefits female-led companies can provide.

Historical Significance of Women in Higher Education

Goodchild et al. (1977) detail the history of higher education throughout the known world and describe higher education being formulated as early as 500 B.C. For this literature review, we will focus on the United State' history of higher education and how women were sewn into the higher education historical fabric. Over the centuries men and women have been socialized into certain characteristics and occupations. Moving through United States historical periods, researchers and historians have shown women in business and education have been linked and have strong connections and parallels toward the historical story of women joining the workforce. Wharton School of Business may have opened its doors in 1880, but it didn't allow women to enter their undergraduate program until seventy years later, and one might believe the 1950s is the decade where business education began, but they would be mistaken.

Expansion and Reform Era

Founded in 1636, Harvard College was the first university to be chartered in the United States (Thelin, 2019). One hundred and sixty-seven years later Wesleyan opened its doors as the first women's college in 1836 in Macon, Georgia. Historians describe the time between the opening of Harvard and Wesleyan as a time when women were not conventionally invited to be educated the way their male counterparts were. Higher education was not needed for women to inherit the traditional roles of wife and mother. However, there were instances in which women were able to join smaller academic sects that focused primarily on literacy, ethics, and domestic education (Madigan, 2009; Sexton, 1976). Seminary or secondary schools for women were the

predecessors of coeducation and all women's colleges and often the only route in which women could further their education.

Educational activists like Catherine Beecher helped create some of the first seminary schools starting in 1823. Although these institutions helped pave the way for the future of women and were able to offer women larger liberal educations, they lacked the higher status of instruction that was needed. The curriculum was chaotic, and Beecher claimed that seminary education would never be able to compare or organize the way colleges and universities did due to the lack of financial security in the form of endowments (Woody, 1929). Beecher further argued that endowed institutions offered elite education and were able to attract top professors to conduct research and instruction within the classroom (Woody, 1929). By comparison, seminary and secondary schools were not able to compete with that type of structure. Many women were frustrated with their inability to pursue and have the same access to education as men.

Beecher would not have to wait a lifetime to see endowed schools dedicated to women emerge. Wesleyan may have been the first all-women's college in 1836, but history has shown there were many different categories of women's colleges. Harwarth et al., (1997) outlined three types of women's colleges that assisted in the path for women to enter higher education: private, Catholic, and public colleges. The Seven Sisters term was used to describe seven private women's colleges. Founded between the years 1836 and 1875, Radcliffe, Mount Holyoke, Vassar, Bryn Mawr, Smith, Wellesley, and Barnard were compared to the men's Ivy League colleges in the New England area (Harwarth, et al., 1997). The three most notable features of these privately held colleges included their ability to create curriculum and admission standards that closely mirrored the rigor of men's college requirements, financial support in the form of

endowments, and being able to attract and retain all-female faculty and administration (Woody, 1929; Harwarth et al.,1997). Horowitz (1984) described how each of the seven private colleges created their own pathways, but what makes the Seven Sisters historically significant was they laid the groundwork and infrastructure for other all women's colleges that soon followed. However, as significant as these colleges were, they were in and of itself discriminating against women of color and women from other religious backgrounds. Perkins (1998) outlines the Seven-Sisters Colleges as being primarily for White Anglo-Saxon Protestant women and revealed women did make advancements for themselves, but within their own gender and lived caste system.

The Catholic church was slower to establish all women's colleges as their belief system noted that higher education could cause women physical harm to their bodies, and by teaching, women past a certain grade level would threaten the domestic fabric of homelife (Harwarth et al., 1997). Yet, as the number of Catholic women entering coeducational institutions and Protestant establishments increased, the Catholic church realized there was a need for Catholic women to be educated and aligned with Catholic teachings (Oates, 2021). The church also began to see a need for higher education within their own ranks. Nuns made persuasive opinions on the necessity for higher education wanting to ensure proper Catholic ideology was being taught alongside other curricula, and the church began opening its own women's colleges (Harwarth, et al., 1997). Mother Theophilia Bauer and Directress Meletia Foley were pioneers who established the College of Notre Dame of Maryland in 1895 as the first Catholic Women's College (Oates, 2021). Their work came with numerous hurdles from raising the funds for operating costs to the development of a proper curriculum, the creation of academic polices, and above all else, social

regulations. These innovators prevailed in their goal of laying the groundwork and establishing a place where women could be educated with a religious foundation.

Lastly, we look at the evolution of all women public institutions and the impact they have on women in higher education. Much of history focuses on the all-female private schools, but public institutions began to make headway during the turn of the 19th century. The first public all-female college was the Industrial Institute and College in Columbus, Mississippi (now called Mississippi University for Women). Educational activist Sallie Reneau worked tirelessly to persuade the Mississippi state legislator to support a public all women's college and helped pave the groundwork for the Industrial Institute and College to open their doors. Sadly, Sallie Reneau passed away in 1878, but by March of 1884 her dreams became reality, and the Industrial Institute and College opened their doors for the first time (Harwarth, et al., 1997). Olivia Valentine Hastings and Annie Coleman Peyton pushed through a creative mixed curriculum agenda for the institution that included liberal arts and professional/vocational education for women. This advanced fusion of curriculum helped the market to the taxpayers of Mississippi that this all women's college was worth the investment.

Coeducation was an impetus for women entering higher education. Bradford College was founded in 1803 and was one of the initial coeducational establishments in the United States that turned into a two-year women's college (Levine, 2011). Hollins University (allowing women in 1842), Hillsdale (allowing women in 1855), Antioch (allowing women in 1850), and Oberlin (allowing women in 1837) were one of the first to open their doors to provide coeducational opportunities. Oberlin's educational programs didn't allow women the right to study the same coursework as men and research indicates some of the motivations to allow women into schools

like Oberlin weren't for the benefit of women, but rather to help train and expose men to what it was like to interact with women (Harwarth, et al., 1997).

Horace Mann, an educational activist and first secretary of the Board of Education for Massachusetts, held the position of college President at Antioch College in Yellow Springs, Ohio in 1853. He is remembered for numerous reasons, but one of the biggest was his championing of women being educated alongside men. He strongly believed women were being underutilized in society because of their lack of education. Straker (1963) detailed a letter to an Antioch board member from Mann explaining his rationale for wanting to be the college President and wrote:

> The two great ideas that woo me towards your place are: First, that of redressing the long-inflicted wrongs of woman by giving her equal advantages of education. I do not mean to say in all respects an identical education but equal advantages of education with men. Second, the idea of maintaining a non-sectarian college (p. 257).

Mann was one of the pioneers of coeducation and tried to resolve how to educate men and women on an equal playing field. However, Antioch was going to be different, and Mann helped ensure women could register for the same classes as their male colleagues. Along the way, Mann's coeducation reform did come with bumps and drama. Rury and Harper (1986) describe Mann's concern about a woman's moral purity and became increasingly worried about the interaction between men and women outside of the classroom. What appeared to be reform and freedom at the inception of Antioch's coeducation for women, turned into countless rules and regulations for women outside of the classroom. As Mann coined it, the "great experiment" had unintended consequences that did not benefit women. Yet, coeducation brought the conversation of equality toward the forefront within society and created a foundation for the suffrage movement and women's rights.

Civil War & Reconstruction Era

During the Civil War, many traditional male roles were handled by women, and post–Civil War was a time when many women lost their husbands and the necessity to provide for themselves and family was high. Universities also felt the pain of having fewer men to educate and to keep university doors financially open women were able to gain access to universities. Although higher education saw an influx of women attending universities post-war, there was still a negative stigma attached. Professors like Dr. Edward Clarke made wild claims that too much studying had physical consequences on the female anatomy. Yet, women and their families continued to pave the way for their own destinies. Parents witnessed what post-war women had to endure and wanted to ensure their daughters were going to be able to earn a living and that assurance came in the form of education. Women's organizations and parents persuaded universities to view educating women as a necessity by using the need to be educated within domestic roles to enhance the reasons to be allowed to study at universities; in order to run a successful household, one must be educated (Gordon, 1990).

It was also during this time that public colleges began appearing on the scene. Most notably, the United States government passed the Morrill Act in 1862. The act provided plots of land to states to be sold and the profits to be used as endowments to erect colleges of agricultural, military, and mechanical degrees (Thelin, 2019). Although the outcome of the Morrill Act created over 10 land-grant institutions to date, Thelin (2019) and Key (1996) suggest much of the intentions of the Morrill Act came from more ominous objectives. The political landscape of the time was hostile with the Civil War taking place and President Lincoln had numerous issues on his agenda. The Morrill Act helped take care of multifaceted issues, namely raising money for the war and Manifest Destiny.

The Morrill Act is named after Justin Morrill, an expert in land policy, who felt strongly that Western land must be utilized and developed (Thelin, 2019). Linking the expansion to higher education seemed an appropriate avenue to pursue, especially connecting education to agriculture, military, and mechanics. The land was sold, creating more lines of credit for the government to borrow against to help subsidize the war, and the issue of developing land was underway. The Morrill Act brought education to the sons and daughters of the West and ensured access to education to further promote and support the economic growth of the United States while simultaneously stealing land from Native communities. The historical intentions surrounding the Morrill Act will be debated, but there was a pocket of people who did benefit from this historic act. Sorber (2018) portrays women in coeducation as the final cornerstone of land-grant standardization. Despite societal forces, intolerance by males, unequal allocation of resources, and gender segregation, women forged ahead to make land-grant colleges places where women could study and earn advanced degrees (Sorber, 2018).

Before the Morrill Act, higher education continued to be saturated in patriarchal customs, and while there were single-sex colleges like the Seven Sisters, there were issues that stemmed from all women's colleges including the cost, curriculum, and physical access to colleges. Radke (2002) clarified that women's access to land-grant colleges was not protested and upon entry, there was much success and fulfillment for women who participated in a myriad of different clubs and organizations on campus. It is not to say women did not have a difficult time integrating into these land-grant institutions and women were still expected to stay within the realm of maternal, marital, and domestic roles (Radke, 2002). Also, the movement toward coeducation was forged in circumstances like the need to raise enrollment rates to keep college

doors open, especially during wartime and the depression (Nash, 2018). Women had to push to be allowed to study certain subjects that were more appropriate to their male counterparts. Courses like home economics evolved out of women's interest and desire to understand the scientific method, but only allowed to do so within a certain curriculum designated for women (Sorber, 2018). It may have not been Justin Morrill's intent to help women advance in education, but it did unintentionally allow access for women to further their need for education.

Industrial Era & Schools of Business Education

During the 1850s there were small pockets of commercial courses offered to men interested in bookkeeping and business correspondence, but Thelin (2019) described little interest from colleges and universities to create a curriculum around business education. It was not until Joseph Wharton, a leading businessman in mining and manufacturing, partnered with the University of Pennsylvania to establish the first school of business in 1880 (Wharton, 2019). Wharton had a vision to create a school in which future business leaders could earn a comprehensive liberal education in commerce and finance (Zucker, 2000.; Thelin, 2019). From 1880 to the First World War, numerous other schools of business opened their doors to educate males, including Dartmouth, Marquette, and Harvard. Harvard Business School, founded in 1908, was one of the first schools to create an educational track in executive programming (Zucker, 2000). In 1916, the American Association of Collegiate Schools of Business (AACSB) was founded by seventeen colleges and universities as the first accrediting organization for schools of business (AACSB, n.d.). AACSB continues to be the gold standard accreditation within schools of business worldwide and is the intermediary between business education and business.

Röbken (2004) suggests that the business curriculum did not have a solid basis in the very beginning. Thelin (2019) described Wharton's School of Business curriculum as wavering between liberal and professional education. Many believed the beginning of the business core curriculum was flawed due to the lack of foundational scientific research that had not occurred before courses were created and offered. O'Connor (2011) pushes back against this criticism and describes the early beginning of business education as a time when professional practice within industries and academic research evolved together. This decades-long debate regarding the value of professional and liberal education continues today. It was also during this era that schools of business developed masters' programs, most notably the master's in business administration or MBA. The first school to offer the MBA program was Harvard University Graduate School in 1908 (Zucker, 2000). Women were not invited to join in this advanced degree, and the school required male students to have a four-year bachelor's degree prior to being accepted to the MBA program. Many business schools quickly followed this model, including the Massachusetts Institute of Technology and the University of Chicago.

Progressive and World War II

History witnessed an overall upward trend in higher education for students, but a fallout regarding support for women on college campuses was beginning. Separate coeducational campuses gave women an opportunity to formulate their own communities that provided leadership, mentorship, and areas to discuss career prospects (Gordon, 1990). Women entering coeducational campuses rose steadily throughout the 1910s but Gordon (1990) described campuses still being male governed and continued barriers were part of this time. With the number of women pursuing higher education rising, male administrators began to feel

threatened. By 1920, women were making up almost 50% of the undergraduate population, and 90% of those women attended coeducational universities (Gordon, 1990). These numbers did not sit well with current male administrators and faculty. The threat to a changing campus landscape was so great that G. Stanley Hall, a professor at Clark University, published an article that stated educating women has glorified spinsterhood and that society should be helping to save these women from such a horrific future (Palmieri, 2007). Many institutions began to shut their doors to women or create quotas to ensure women weren't dominating the college atmosphere. It was also during this time that Palmieri (2007) notes President Roosevelt's 1905 speech in which he coined the term "race suicide" referring to the rise in the use of birth control that could lead women to not have enough children. Nevertheless, women continued to persevere in higher education during this time, even though more restrictions and less variety of majors were afforded to them (Webb, 2010).

Education for women during this time was mystifying. Zook (1947) described President Truman's 1946 Commission of Higher Education Act was created to examine ways to expand access to higher education and the review of curriculum being taught for men and women. Thelin (2019) depicts the 1930s and 1940s being a time when women had the largest amount of access to higher education, but for many all-women campuses, the mission and vision was having an identity crisis. Several of the all-women's colleges had lost their educational driven purpose of creating an equitable education compared to men and the curriculum still sidelined women away from male-dominated occupations (Thelin, 2019). The campus life was filled with extra-curricular activities that aligned with keeping women on the path to marriage and out of pursuing

graduate education (Harwarth et al., 1997). The forces that worked against women entering a man's world seemed palpable at this time.

Higher education in the 1950s was a time of calmness and was characterized by Thelin (2019) as the "quiet generation" of collegiate men and women. However, there were large events that occurred during this time including the 1954 Supreme Court's decision to declare the Fourteenth Amendment unconstitutional, which allowed desegregation within public schools and colleges and universities (Meyer & Boutcher, 2007). Campus life seemed calm on the outside, but the movement in the 1960s in higher education was the complete opposite. Thelin (2019) details societal changes did not stop at campus doorsteps and students had the ability to organize quickly around a cause. The student voice was strong when it came to social changes like protesting wars, the Civil Rights movement, and the student's freedoms on a college campus.

Although things were changing, women continued to have to prove they belonged in the classroom. In 1956, a woman by the name of Rita Sielicki entered Georgetown University to begin her studies in accounting and would emerge as the first female business graduate four years later (Pai, 2019). Sielicki's experience in her undergraduate education is what one would expect of the 1950s, wrought with prejudices and non-accommodations, but she paved the way for women to begin entering schools of business. Linda Garelik Leffert was one of the first females to graduate from the Wharton School of Business in 1958. Leffert also described the challenges that went along with integrating into an all-male setting in higher education and the prejudiced behavior not ending after graduating, but bleeding into the workplace (Brodsky, 2019).

Interestingly, schools of business were not so calm during this time. The history of business education began with criticism of the curriculum and came to a head in the late 1950s. The Ford and Carnegie Foundation subsidized a three-year study that looked at the current climate of business education. The study was released in 1959 and indicated business curriculum lacked rigor, did little in the way of preparing students for the business world, and recommended strongly that faculty begin to produce new theory-based knowledge in the form of research (McLaren, 2020.; Schlossman et al., 1998). The Ford and Carnegie Foundation helped subsidize numerous research in the area of business, and history links this study to when schools of business made the crossover from experiential learning to research-based pedagogy (Mclaren, 2020).

1960–1980

The 1960s brought an increased rate of females enrolling in higher education, and the National Center for Education Statistics reported the percentage of females enrolling in college in 1960 went from 38% to 48% in 1970 (NCES, 1999). The increase in enrollment follows the trend of the increased numbers of women entering the workforce during this time. Higher education through the 1970s was difficult. Economic issues of high inflation flowed into higher education's back door, and Thelin (2019) described this decade as a time of adversity for many college campuses with minimal help from federal and local governments. Student high school graduation rates were declining, which meant admissions offices scrambled to fill seats each semester (NCES, 2017). Yet, higher education also led with numerous efforts including Title IX in 1972, which outlawed discrimination based on sex, and in 1974, the Family Educational Rights and Privacy Act was passed to protect students' rights and privacy (ED, 2021). During

this time, women also attended colleges and universities at higher rates than twenty years previously, but there were still pockets of inequality happening at a deeper level (NCES, 2017). Bickel, et al.'s (1975) study shed light on the biases that took place in graduate school admission and found female students who had not studied calculus in high school would automatically be limited in their major choice decisions at the undergraduate level. This led to women being ineligible to apply for many other graduate-level programs, including a master's in business administration (Bickel et al., 1975). These types of issues for women in higher education would be further studied and brought to light to enhance their ability to level out the field. It was also during the 1970s when schools of business saw a boom in research and graduation rates. Bennis and O'Toole (2005) refer to faculty in business schools partnering with other disciplines to create new knowledge around best practices in business and business education. Graduate-level programs in business would see a 93% increase in degrees conferred and a 75% increase in undergraduate graduation from 1955 to 1979 (NCES, 2017).

Higher education rallied through the 1980s, and universities marketed their education as smart investment in people's futures. University presidents rubbed elbows with high-powered politicians and private businesses to help secure funding for research and development on college campuses (Thelin, 2019). As the economy bounced back from a decade of soaring inflation, higher education began to see a resurgence of students, and the elite universities began to search for top faculty and students to create environments in which all students would want to be part of (Thelin, 2019).

1990s and 2000

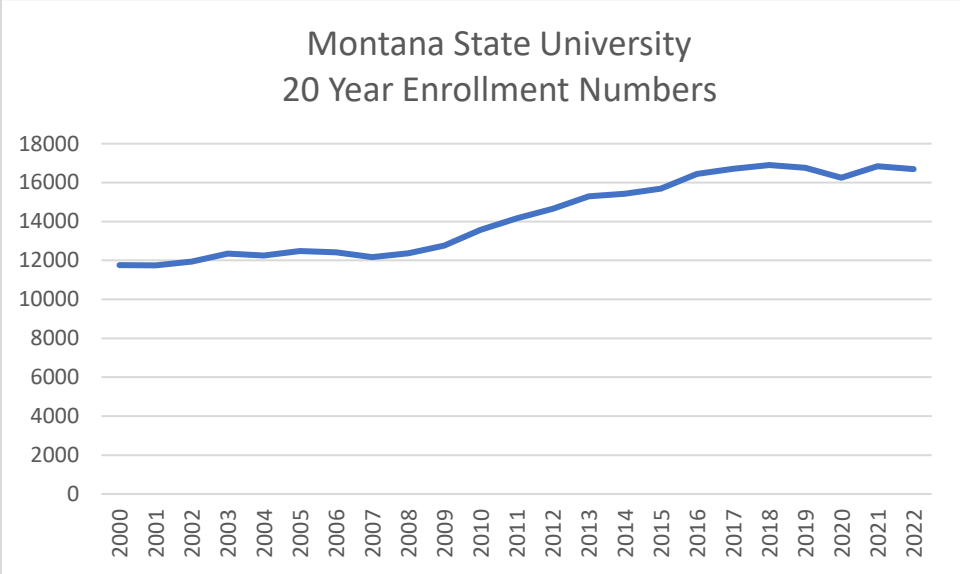
Higher education in the 1990s had become a massive establishment. The generation that attended higher education started the 1990s by sending mail through the post office and ended the decade by receiving email through their inboxes. Digitally mediated, higher education began to move at lightning speed. Information was at students' fingertips, research was more readily available to the masses, and distance learning grew. Some academics believed the internet would cheapen the university experience (Koch, 1997) with students not engaging academically or in traditional collegiate programs and events. However, the internet only enhanced the college experience for students, a value add, and faculty were able to evolve with technology to keep higher education relevant. If the internet increased higher education's clout, state budgets that helped subsidize higher education decreased. Kincaid (1993) offered insight into the rising costs of higher education due to operational needs, perceived needs, and faculty and student changing preferences on what the collegiate experience should look like. Public colleges and universities found themselves having to cut operating budgets in the early 90s due to reductions in state appropriations and the changing priorities of many state budgets (Breneman, 1993; Kincaid, 1993). Without monetary state support, the on-campus experience shifted during this decade to increase student satisfaction and bolster enrollment numbers. Bigger and better residence halls were built with student resources popping up around campus. It was also during this decade when faculty felt impacted by three major recurring issues happening within higher education: a gap between student performance and faculty expectations, administrators pandering to outside forces, and limitations to career development (Gamson, 1994) Administrators felt the need to recruit and retain students at higher levels as well as cultivate a student's logical and social development outside the classroom (Johnson, 1991). It was also during these decades a shift in

defining students became apparent, seeing students and their parents as customers of knowledge rather than consumers of knowledge (Johnson, 1991) This push and pull scenario of faculty, student, and administrator needs continued through the early 2000s and up until today. During this time, undergraduate business education continued to see a rise in business and management degrees being awarded to women by 49%, as well as the proportion of college-aged students, 57%, being women. (Longley, 2021).

Retention

The issue of retention continues to be a complex and complicated problem for higher education. For the past seventy years, there have been countless research studies conducted to wrap their arms around what are the root causes of student departure and persistence. Effective programmatic methods and strategies to understand student persistence to graduation continue to be at the forefront of administrative goals across the collegiate nation. While recruitment efforts are vitally important to institutions, what administrations have realized is that it is less expensive to retain a student than to recruit one (Jenicke et al., 2013; Lau, 2003.; Nash, 1996). But there are other reasons why retention continues to have its moment in the limelight, which include the need for skilled workers to join the workforce in a timely fashion and learn vital critical thinking skills that help society function. While a college degree continues to be scrutinized and judged for its worth, it remains to be the currency to enter middle-class society in America. Recruitment is the first job of an institution and begins with the creation of elaborate marketing campaigns to entice students to join their collegiate community. The second job is to have a student persist long enough to graduate from the institution with a degree. MSU has seen enormous growth through the past decade (see Figure 2.2).

Figure 2.2. Montana State University 20-Year Enrollment Trends



Note: By Fall 2022, MSU had a 30% increase in student enrollment (Goodwin, 2022).

Understanding retention is difficult to comprehend for a myriad of reasons. Hagedorn (2012) describes the ongoing difficulty researchers have agreeing upon categorization and defining the terminology surrounding retention. The mass generalization of retention has confused many, which denotes the complexity surrounding retention and terms researchers have used in the past and present (Manyanga et al., 2017; Pantages & Creedon, 1978). Hagedorn (2012) used the terms ‘persister’ and ‘non-persister’ when researching retention issues. Students who begin, remain, and complete a degree at an institution are defined as a ‘persister,’ whereas a student who decides to leave their institution and never return are defined as a ‘non-persister.’ However, even with the basic definitions of ‘persister’ and ‘non-persister,’ the layers of situational uniqueness regarding why a student persists or does not is multifaceted. Researchers have attempted to understand the behavior of non-persistent students through multiple lenses

(Astin, 1999 Bean & Metzner, 1985; McNeely, 1937; Seidman, 2018; Spady, 1970; Summerskill, 1962; Tino, 2006).

Seidman et al. (2012) take a deep dive into the historical context of college student retention and the evolution over the past century, as well as why there does not seem to be a "silver-bullet" approach to retaining students. Researchers have found the solution is situational and institutions should shift the focus on finding a "silver-bullet" solution as to why students persist or do not and pivot to what the institutional student make-up is combined with what the student brings to the situation (Tinto, 2006). Much of the systematic approach to retention efforts did not begin until the 1960s. There was no need for administrators to focus on student persistence to graduation due to the nature of which the goal or outcome of what higher education stood for. From the inception of Harvard in 1636, so few students were attending institutions of higher education that time, energy, and resources were focused on keeping institutional doors open rather than graduating students (Berger, 2012). Most students were being trained to be ministers in the colonial days of the 1700s, but moving into the 1800s, higher education became a status symbol, and many wealthy and affluent families sent their sons to be educated at elite institutions (Thelin, 2019). "Retention" was continuing the cycle of wealthy white men being able to send their sons to their alma mater.

Societal issues and events have a way of mimicking higher education. During the nineteenth century, the United States went through the Industrial Revolution, and commerce became more of the focus and trained professionals were in need (Berger, 2012; Geiger, 2014). Both historical points helped elevate the status of higher education and history began to see the number of students choosing to attend colleges and universities grow. The Progressive Era

provided a huge increase in college enrollment throughout the early 1900s to1930s. This allowed elite colleges and universities to be more particular with who they allowed into their school. Families from the upper class continued to be the primary student body make-up at these institutions, but it allowed schools to recruit the best students from around the United States, regardless of social class. With an increase in students, the path to recruitment was drawing lots of attention, but retention and persistence slowly began to make their presence known. The earliest retention study was conducted in 1939 through the United States Department of the Interior and the Office of Education with the primary author being John McNeely. For its time, the report was extremely progressive in examining the efficiency of higher education after the Great Depression era. McNeely's in-depth review was extremely holistic and spanned colleges and universities across the United States. Variables within the study looked at the student and included sex, age, health, finances, location, and size of the institution (McNeely, 1939). The study also looked at the institution through coursework, course credit hours, student academic success/failure, and interest in the major (McNeely, 1939). The conclusion of the study highlighted student 'mortality' (also known as attrition) as the center of what administrators should be focusing on and developing institutional programs that assist in lowering mortality through evolved instructional methods, campus atmosphere, and admission/graduation requirements (Slater, 1960).

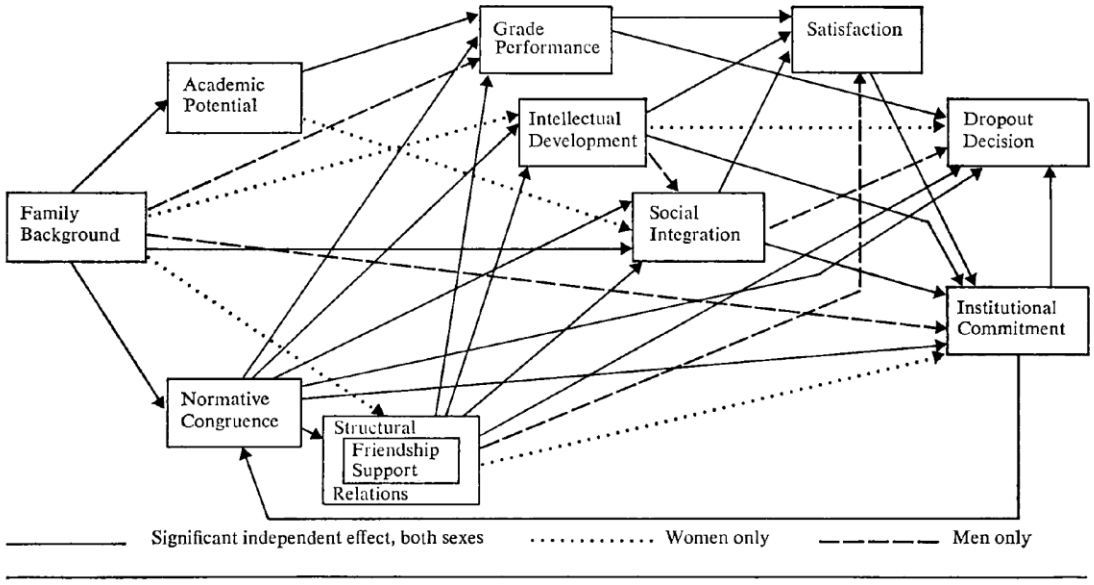
As does most cycles of higher education, much change came about due to following patterns of what was occurring in public policy and American society. Post–World War II brought droves of students to colleges and universities through governmental programs like the G.I. Bill and the National Youth Administration. Thelin (2019) describes the 1950s as the quiet

generation in higher education and how America craved stability during this decade. The characteristics of a college student began to change from upper-class white students to a diverse population of students from a wide breadth of demographics. Many institutions were not prepared to handle the needs of such a variety of students, and to history's dismay, many students from underrepresented populations tended to be the students who were not persisting due to a combination of collegiate environment and academic preparedness (Seidman et al., 2012). Issues on retention continued to be put on the back burner in the early part of the 1960s, due to the sheer number of students registering for classes. But the small amount of research that was taking place during the 1960s was looking at retention through the lens of what deficiencies the student had and or came to school with (Seidman et al., 2012).

In the early 1960s, Summerskill's (1962) research into reasons why students withdrew from college posited psychological, familial, social, and economic issues and suggested further research focus on what the institutional issues were that contributed to academic failure (Morrison & Silverman, 2012). It was also Summerskill (1962) that first suggested student attrition was multilayered, and more research should be done through the lens of psychology and sociology to gain more insight into how complex the issue of retention was (Seidman, 2012). In his 1970s paper "Higher Education: An Interdisciplinary Review and Synthesis," Spady (1970) described research gaining momentum toward the end of the 1950s and into the 1960s regarding the need to understand why students persist within college. Categorizing current research into six types of scholarly themes that were occurring around the subject of retention, Spady (1970) lists off the central themes around student retention: philosophical, census, autopsy, case, descriptive, and predictive research. Philosophical studies observed how student dropout should be prevented

and provided recommendations for institutions to follow. Census focused on data within and across institutions that dealt with how many students stayed, dropped out, or transferred out of their university. Autopsy research looked at self-disclosed data from students regarding why they left school. Case studies looked at incoming students who held at-risk characteristics and tried to understand what kept students persisting to graduation. Descriptive research looked at the experiences of students who had dropped out and predictive studies focused on markers within the admission process that could help explain why students dropped out. Spady (1970) found the studies informative but missed the mark with empirical and theoretical unity and consistency. Understanding the deep variability regarding why a student stops persisting and in conjunction with Durkheim's 1897 theory on suicide, Spady (1970) built a working framework that could use multiple variables to understand why a student decides to leave an institution or persist. In 1971, Spady released a continuation of his 1970s work to help explain the attrition process by connecting pre-existing student attributes with social and academic life on a college campus. Spady's research looked at retention through a sociological view rather than a psychological view and thus created the Student Integration Model (SIM) (Manyanga et al., 2017).

Figure 2.3. Spady's Empirical Model of the Undergraduate Dropout Process

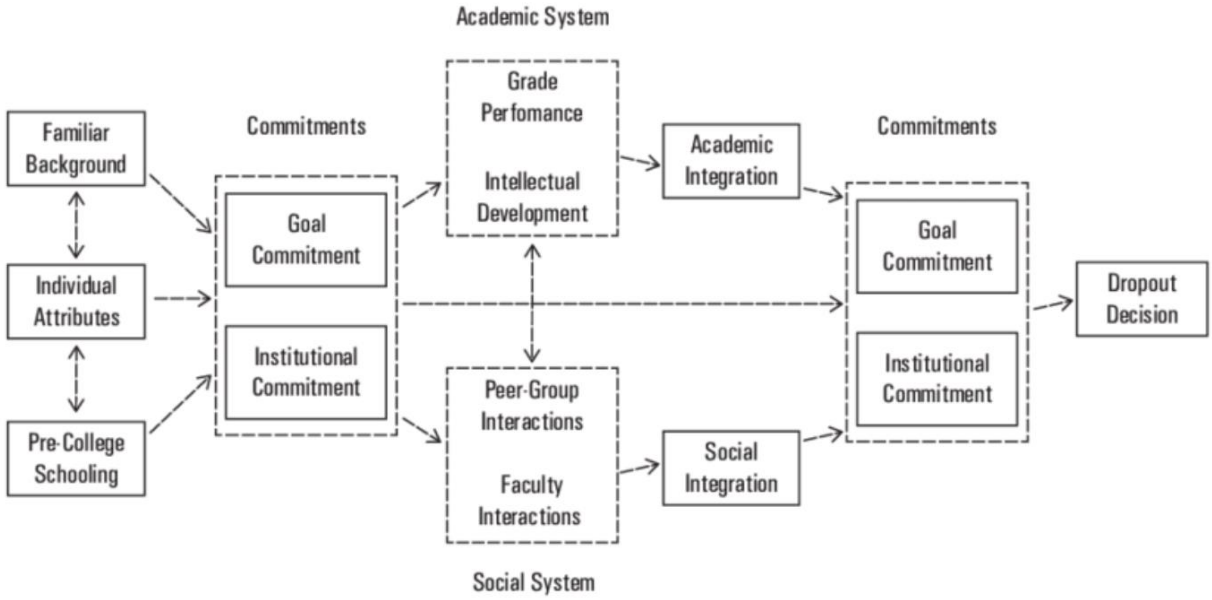


Note. Model includes student background before college and how that plays into students' experience in school. From Dropouts from Higher Education: Toward an Empirical Model, by W. Spady, 1971. (https://link-springer-com.proxybz.lib.montana.edu/content/pdf/10.1007/BF02282469.pdf).

Spady's model described student departure as an equation between the student and collegiate environment (Spady,1971; Seidman, 2012). Students arrive at college with certain values, attitudes, and interests and are placed into the college culture with faculty, staff, and student peers. If the student and college culture are compatible and the student is able to meld into life academically and socially, student persistence increases (Spady,1971). Spady's model was important because it served as the basis for Vincent Tinto's model of student departure. Tinto's interactionalist model of student departure builds upon Spady's model by incorporating a few more features. Tinto postulated student departure was an equation that began with what characteristics a student brought to the collegiate environment, paired with their internal

motivation to be at school and graduate from school. It then added early and continued college environment commitment to the student influenced whether a student would be academically and socially integrated. Tinto's model is wildly popular and is the best-known and most cited of all student departure models (see Figure 2.4).

Figure 2.4. Vincent Tinto's Model of Institutional Departure (Durso, et al., 2018)



Note: Tinto's model expanded on Spady's 1971 model to include academic and social systems with the decision to drop out. From Determinant Factors for Undergraduate Student's Dropout in an Accounting Studies Department of a Brazilian Public University, by De Oliveira Durso & Da Cunha, 2018 (https://www.researchgate.net/publication/324921182_DETERMINANT_FACTORS_FOR_UNDERGRADUATE_STUDENT'S_DROPOUT_IN_AN_ACCOUNTING_STUDIES_DEPARTMENT_OF_A_BRAZILIAN_PUBLIC_UNIVERSITY#fullTextFileContent)

Other notable authors who brought more substance to retention include Pascarela and Terenzini. These researchers were among the first to create empirical studies that used Tinto's model and created operationalized measurements of core constructs within retention (Pascarela

et al., 2004). Their work was influential as it created a methodical understanding of student departure. Alexander Astin's 1984 Student Development Theory focused on student's level of involvement a student input while at college and how involvement correlated to not only their academic success, but further explained student departure by postulating if a student's level of involvement lacked, they were more likely to depart the institution (Astin, 1999). Astin's theory was refreshingly simplistic, easy to understand, and gave administrators a theoretical foundation on which to base student involvement programs on that could be assessed. Alan Seidman posited universities could retain their students if their programs had the resources to do so. In order to do this, an institution needs to figure out a way to address and find solutions to early intervention programs such as placement exams before a student sets foot on campus (Morrison & Silverman, 2012). Lastly, building on Tinto's model, Bean's (1980, 1982) model is grounded in quantitative statistical analysis (rather than Tinto's and Durkheim's models, which were theorized within sociology and philosophy) and found that male and female students depart institutions of higher education for different reasons. He further postulated males will leave institutions even if they are satisfied with their overall experience, while females, who are satisfied and committed to their institutions are less likely to leave (Bean, 1980). Studies that followed into the 1980s used the foundational knowledge of Spady, Bean, Tinto, Astin, and Pascarela and Terenzini. As higher education enrollment began to level off in the 1980s, the importance of understanding student departure continued to rise. Universities unified their efforts, and the term 'enrollment management' was coined in the mid-1970s but spread nationally to unite admissions offices and other campus units to control the number and quality of the entering student body as well as create a systematic approach for the full student

experience from recruitment to retention and finally graduation (Green, et al., 2019). The 1980s brought about the variety of different lenses through which to view retention (by major, economic, gender, environmental, etc.) using Tinto's interactionalist model as a foundation (Bean, 1982; Bean & Metzner, 1985; Seidman, 2005). Campus administrators and professionals were loaded with research that translated into programs and campaigns to combat the retention issue on campus. Retention began to take center stage at regional and national conferences and shared knowledge among colleges and universities began to occur (Spady, 1970).

Additionally, in the late 1980s and early 1990s retention diversified, and studies began to look at underrepresented student bodies from different racial, ethnic, and socioeconomic backgrounds. In 1997, John Braxton ran empirical research using Tinto's interactionalist theory and broke down each variable to ascertain if Tinto's variables were interrelated. Braxton (2000) concluded a student's social contact and integration were key indicators of the likelihood of student departure. Creating a sense of belonging on a college campus began to emerge across campuses and marrying social and academic interaction was key in the 1990s. Funding the cost of attending college and academic preparedness were also looked at during this decade as indicators of student persistence as well as institutions' realization that students graduate from a different university from which they started their higher education career were gaining in numbers (Berger et al., 2012). Further research was conducted to understand the "push/pull" factors that influenced retention. Researchers Leone and Tian (2009) explored what "push" (factors that influenced students to leave) and "pull" factors (what factors pulled them to their current institution) led a student to transfer out of their starting institution. The results of the study showcase what factors administrators need to pay attention to regarding why students are

leaving. Lastly, Nieuwoudt and Pedler (2023) research in Australia regarding student retention focused on current students in college who considered leaving school and their reasons for leaving and staying. Within the study, the gender differences showed female students were more likely to leave due to the following factors: expected study workload, family commitments, financial strain, and mental health issues, while male students were more likely to stay due to commitment to career goals, receiving support from friends, and receiving support from the university (Nieuwouldt & Pedler, 2023). It is of interest to note the issues between genders are different, and with male students, the focus is on what they receive regarding support from their friends and the university, while females report hire rates of mental health issues.

The 2000s continued to build upon past research and understanding of student persistence. Retention efforts were key issues entering the 21st-century higher education platform. Just as enrollment and graduation rates are indicators of the health of an institution, retention has snuck its way into being an equally important benchmark to which students, parents, faculty, and administrators also mark. Researchers from the past were able to reflect upon the hundreds of studies that came about from the 1960s and synthesize what they knew then regarding retention and what they know now. Retention committees are commonplace on college and university campuses and will continue to be part of the national conversation as well as at the forefront of higher education research.

Retention within Undergraduate Colleges of Business

Looking closer at undergraduate schools of business historical context concerning retention followed similar issues and trends of mainstream higher education. However, the literature within schools of undergraduate business conducted their research through the filter of

a business model. Combining higher education retention theory with marketing and management strategies provided a different avenue to understand the retention issue plaguing undergraduate schools of business. Returning to the inception of business schools, the conflict to run a university like a business can make the administration and faculty uneasy. Since the beginning, squabbles have occurred over the best pedagogical approach to teach students about business practices: liberal or professional education (O'Conner, 2011). Yet, not giving credibility to how colleges and universities share similar processes in running like a business is naïve. Marks et al. (2016) study on undergraduate business satisfaction found students highly valued experiential learning opportunities with non-tenured professors who concurrently worked within the business world. Students understood the value of learning outside of a traditional classroom. The Federal Financial Aid system, collegiate sports, civil and women's rights movements, and scientific research from the federal government all contributed to the evolution of the business model running parallel to the liberal education model (Lichy & Enstrom, 2015). Lichy & Enstrom, 2015 argued the issue institutions face stems from not being able to pivot fast enough to stay ahead of the needs and characteristics of their students, in conjunction with how industry standards are evolving. The characteristic of traditional 18-year-old high school students, with full-time enrollment status and limited work and family obligations are becoming relics and being replaced with students with diverse backgrounds (age, socioeconomic status, employment, parents, two-year college) are on the rise with some estimates averaging 40% of the undergraduate students as post-traditional in 2015 (NCES, 2017; Smith-Barrow, 2017). Understanding trends of post-traditional students is important because it can connect the understanding of why certain higher education programs are not producing higher yields with

retaining students. Administrators may find how they market to students is not as effective as they think.

When looking at research through a business lens, DeShields et al. (2005) postulated it was worth exploring how business models view customer satisfaction and the long-term financial benefits associated with customer satisfaction as a model for understanding student satisfaction, which leads to retention. Specifically, his study of Herzberg's two-factor theory of job satisfaction and motivation was used to understand the academic satisfaction and motivation to persist DeShields et al. (2005). He found there were certain variables (academic advising, faculty relationships, relevant classes) that offered high levels of satisfaction that are associated with a student's sense of belonging and reasons to persist. Others feel undergraduate business education will have an uphill battle to contend with regarding making the case for recruiting and retaining students. Cavico and Mujtaba (2010) describe business colleges will not only have to prove to students that business education is worth the time and cost but will also need to further partner with industry leaders to keep them convinced of the quality and caliber of their programs will lead to successful careers. Businesses could view the higher education model and contend they are in crisis and begin to go after students right out of high school to train them earlier, essentially cutting out the "middle-man."

Jenicke et al. (2013) approached the retention issue in undergraduate schools of business through a more analytical business approach and studied the Six Sigma methodology to improve retention rates. In the business world, the Six Sigma concept is data-driven with the goal of having a 70% improvement rate over the found defect within the business. In this case, Jenicke et al. (2013) tried to understand students at risk and specifically what areas could be determined as

defects to improve student retention. Using Six Sigma, Jenicke et al. (2013) found advising, academic resources, student organizations, parental guidance, and quality of instruction were strong factors in helping students to persist.

Chapter Summary

As a result of highlighting the literature regarding women at the collegiate level, women in the workplace, and undergraduate retention issues, reveals the struggle women have endured to receive equitable treatment within higher education as well as the workplace. Understanding historical context can assist in filling gaps of knowledge that provide further evidence to continue researching why there continues to be a gender imbalance between female and male leadership. Knowing the value and importance WGD brings to a business, and the people working within aids continued research toward understanding where the deficiencies are occurring with the unequal balance MSU's Jabs College of Business is witnessing between men and women. The intersection between women in college, business, and retention in higher education just may lead to concrete answers as to what administrators can do to further promote retention.

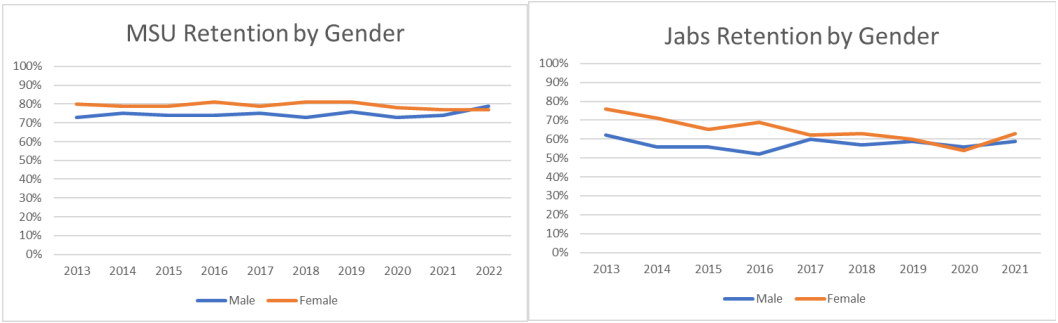
CHAPTER THREE

METHODOLOGY

Introduction

According to the Office of the U.S. Department of Education's Federal Student Aid, the definition of retention as it pertains to higher education, is the measurement of first-year, first-time undergraduate students who return to the same institution the following fall (Federal Student Aid, 2023). The Jake Jabs College of Business & Entrepreneurship has witnessed a decline in first-year, first-time female undergraduate business students from their first year to their second year and an uptick of retention for males beginning in 2016 (see Figure 3.1). Therefore, it is of interest to explore variables that contribute to the retention of business students.

Figure 3.1. First Year to Second Year MSU and Jabs Retention Percentage



Note: Jabs female retention has declined by 10% over nine years.

This chapter will describe (a) the research questions, (b) the context of the study, (c) the research design, (d) researcher positionality, (e) sampling procedure and participants (f) evariables, constructs, and instruments, and (g) reliability and validity. It is of interest to understand what fixed and malleable factors, if any, contribute to business students not returning to the institution and Jabs College of Business for a second year. It is also of interest to discern if student satisfaction relates to retention for first-year business students. Therefore, the following research questions have been posed to try to understand the phenomena:

RQ 1. What are the trends in retention among first-year MSU Jabs College of Business students between 2011 and 2021, and how do these vary by gender?

RQ 2) Using the most recent and available data, what factors relate to retention among the 2021 cohort of undergraduate business students who are retained from first to second year compared to undergraduate students who switch majors out of business at Jabs College of Business but remain at MSU?

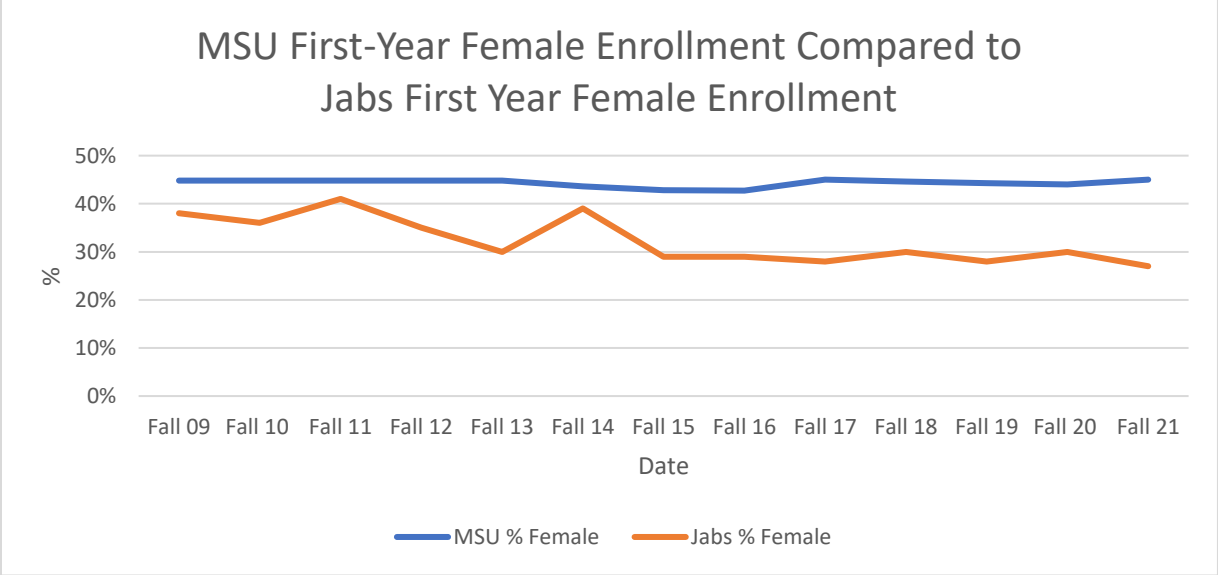
a). What is the relationship, if any, between fixed factors, including gender, age, race, first-year residency, and first-generation student status and retention of first-year business students?

b). What is the relationship, if any, between malleable factors, including a sense of belonging, student satisfaction (with courses, professors, resources, etc.), and retention of first-year business students?

Context

This study was conducted at Montana State University's Jabs College of Business. Jabs is one of seven academic colleges that make up MSU. MSU has seen a steady enrollment pattern for first-year female students; however, Jabs's first-year female students have witnessed a pattern of decline with an 11% decrease in enrollment from 2011 to 2021 (see Figure 3.2). First-year MSU females have seen a steady pattern of enrollment compared to Jabs first-year females who have seen a steady decline beginning in 2009.

Figure 3.2. Jabs first year females compared to MSU first year females

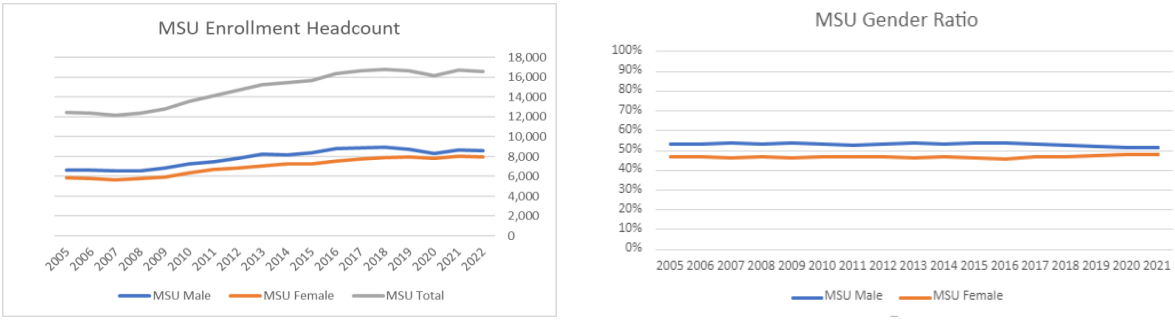


Note: Jabs first-year females are not enrolling at the same pace as MSU first-year females.

MSU has witnessed a 25% growth since 2005 with the average gender difference between males and females being 8%. However, growth rates for both males and females have increased at similar proportions (see Figure 3.3). The Jabs College of Business has also seen a 39% growth in enrollment from 2005 to 2022 with a significant 8% growth from fall 2021 to fall

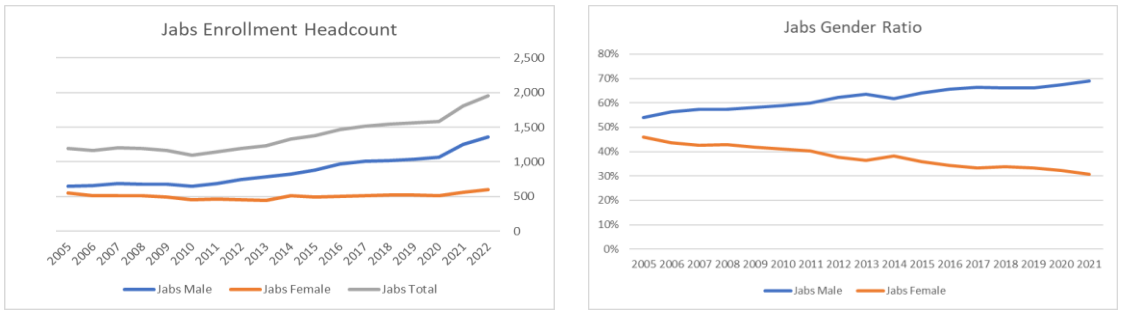
2022 (OPA, 2023). A stark difference in Figure 3.3 as compared to Figure 3.4 shows a disproportionate increase in the rate of growth between the percentile gap of male and female students who have declared business as a major. In 2011, the difference in percentile gap rate of males and females in the Jabs College of Business was 33%. Ten years later, the percentile gap rate had grown to 55%.

Figure 3.3. Montana State University Enrollment Headcount and Gender Ratio



Note: Adapted from *MSU Gender Headcount*, by M. Blake, 2023, Tableau.

Figure 3.4. Jabs College of Business Enrollment Headcount and Gender Ratio



Note: Adapted from *Gender Headcount by College*, by M. Blake, 2023, Tableau.

In 2011, MSU alumnus, Jake Jabs donated $25 million to the College of Business. At the time, it was the largest private donation MSU had received. Mr. Jabs infused a heavy emphasis on entrepreneurship and with the gift came the college name change to the Jake Jabs College of

Business & Entrepreneurship. Entrepreneurship was the buzzword of the twenty-tens and with faculty sprinkling entrepreneur concepts throughout the four-year curriculum the college had a large amount of material to work with to market to students to join the college. With a new building and focus on an entrepreneurial curriculum, Jabs College of Business began to see enrollment trends trickle upward in 2014–2015.

Jabs College of Business offered two master-level programs: Accounting and Innovation and Management. At the undergraduate level, there was only one undergraduate degree offered which was a general business degree: Bachelor of Science in Business. Within the major, there were four options for students to choose from: Marketing, Management, Finance, and Accounting. The college also offered five minors: Entrepreneurship & Small Business Management, Finance, Accounting, International Business, and Business Administration. Lastly, the college offered two certificate programs: Business Administration and Entrepreneurship. With a focus on the undergraduate business major, the curriculum had all students roughly taking 70% of the same course work (hence describing the major as a general business degree).

Understanding the curriculum that makes up a business student's first year is important because of the mixed requirements from the university and Jabs College of Business. Students who study business are advised by professional academic advisors during their summer orientation program. It is during this time the advisor and student will have one-on-one conversations to determine what courses the student should register for based on numerous factors (math placement, writing placement, amount of college credits being transferred to the university in the form of advanced Placement (AP) and dual enrollment credits (DE). In the fall of 2021, the Office of Admissions reported that 40% of the incoming first-year students did not

bring in any type of college credit (Montana State University Office of Admissions, 2023). Based on a first-year, first-time student without additional course credit, a business student's first-semester coursework is focused on a combination of general education courses, which are required by all MSU students to include math, writing, and a required introduction to business course. Math and writing placement levels are determined by a student's ACT/SAT scores or an in-house, homegrown placement level entry exam given by MSU's math department. The Introduction to Business and Entrepreneurship course (Business & Entrepreneurship Fundamentals Seminar—BGEN 104US) is a University Seminar Core class and counts toward a student's "US Core" requirement (MSU Core General Curricular Requirements, n.d.). It also counts toward a student's major required coursework, "double" counting for a student. Meaning, that if a student decided to change their major to something else the BGEN 104US course would continue to be applied as their "US Core" being completed. University seminar courses have traditionally been small class sizes and capped at 18–20 students. With the rise in enrollment, BGEN 104US has seen sections swell to 22 students. The purpose of the class is to 1.) have students interact and 2.) hone their critical thinking, writing, and presentation skills. A constructivist approach of the course has an entrepreneurship tone in which the course culminates with a start-up venture competition between the sections (ranging from 20 to25 sections depending on the year) to judge which section has developed the best start-up business idea. Course coordinator, Mark Hom identified the following Fall 2021 learning outcomes for the BGEN 104US seminar class to include the following:

- Identify, define, and apply fundamental business principles of management, marketing, finance, and accounting.

- Engage in the entrepreneurial process of product development and business start-up planning.
- Demonstrate critical thinking and problem-solving skills in addressing business dilemmas, product ideation, and business planning.
- Employ strategies for developing and monitoring your professional goals.
- Organize and deliver effective writing and oral communications.

Figure 3.5. Required business courses for a first-year business student.

Bachelor of Science in Business:

Management Option Worksheet 2021-2022

1st Year

Fall		Spring	
____BGEN 104US – Bus & Eship Fund	3	____ BGEN 215- Career Readiness	2
***Students transferring into Jabs who have already earned US credit must take BGEN 204 instead of BGEN 104US+BGEN 215		____ ECNS 101IS- Econ Way of Thinking	3
____ Math ***Specific course based on math placement	3-6	____ M 161Q – Survey of Calculus	4
____ WRIT 101W – College Writing	3	____ U-Core or Non-Bus/Non-Econ Elecs	6
____ U-Core or Non-Bus/Non-Econ Elecs	3-6		15
	15		

Note. Students are required to take an introduction to business course first semester and career readiness course in their second semester. Adapted from Jabs College of Business Management Option Worksheet 2021. (https://www.montana.edu/business/current-students/documents/worksheets/2021-22-Management.pdf)

During the second semester of a student's first year, course work continues with progression through general education requirements, continued math sequence, introduction to economics, and a required business course that focuses on professional development, resume building, and general business knowledge. The highest-level math requirement in the college is a calculus course entitled: Math 161Q – Survey of Calculus (counts as a general education class in the realm of quantitative reasoning). The course is designed to teach the fundamentals of calculus, including differentiation, limits, and incorporation with applications to the social

sciences and business (MSU Catalog, n.d.). At MSU, economics is taught through the College of Agriculture and the College of Letters and Sciences. The introduction course is entitled ECNS 101IS – Economic Ways of Thinking (counts as a general education class in the realm of inquiry into social sciences). This course is designed to give broad strokes of what economics entails through the lens of production, distribution, and consumption of goods and services. It also strives to illustrate how economics is not only used in the financial sector, but how it teaches people to use equations to help solve the world's problems. It is the world in which business lives and students understanding that environment help lay the foundation of the degree. The last required class first-year students in the Jabs College of Business enroll in is entitled BGEN 215 – Career Readiness. This class was originally designed for students to take in their third year of school. Over years of feedback, students would tell the college the course was valuable; however, they had wished the course was required sooner so that students could benefit from the outcomes earlier in their academic career. Much of the course was designed to prepare students with practical knowledge of creating their résumé, interview skills, and career readiness. The course was revamped by the business faculty in 2019 and pushed into the first year. The learning outcomes focus on building an academic and career plan, which includes building their résumé so that students understand what gaps in their résumé they need to focus on as they move through their college journey. The course was also a way for the college to help students solidify if the undergraduate degree in business was the right major for them.

The Jabs College of Business prioritized retention support systems at MSU, and it came in many forms, but two resources that are closely aligned with Jabs College of Business during a student's first year are professional academic advisors that are housed in the Office of Student

Services and the Bracken Center that specializes in career and internship development. An assistant dean oversees both centers and reports directly to the dean of the college. By design, professional academic advisors were hired in 2016 to provide the college with recruiting students, orient first-year students, and guide them through the first and second years of college. Students were assigned advisors, and advisors helped students understand the semesterly process that occurred, so students knew how to navigate their way through their first few years of college. By the third year, students were reassigned to faculty advisors. Faculty advisors added more in-depth career mentorship, while professional academic advisors helped with understanding the policies and procedures of the university.

Research Design

This study reviewed pre-existing survey data from the Fall 2021 Jabs Student Satisfaction Survey and institutional census from Fall 2022 to understand how many first-year business students were retained to the second year. Tinto (2017), Astin, (1999), and Bean & Metzner (1985) have used quantitative methodology for decades to sleuth through retention efforts within higher education and when using survey questionnaires within research, the purpose is to gather impartial and reliable data from a sample population (McColl et al., 2001). Therefore, a quantitative cohort model design approach was used to examine if correlations existed between flexible and malleable factors that influenced retention for undergraduate business students who are retained from the first to second year. Jabs College of Business was chosen to conduct the research for two reasons. The first reason showcased a problem with retention issues stemming from first-year female business students and the need to know why this problem was occurring. The second reason was the available data that already existed to the researcher due to the

employment of the researcher at the time. The researcher currently works at Montana State University's College of Agriculture but was formally employed by the Jabs College of Business & Entrepreneurship. MSU and Jabs College of Business continued to understand the need for further research to be conducted on retention issues between first- and second-year students.

Researcher Positionality

As a researcher, it is important to be cognizant of how significant my multiple and overlapping identities can influence and make meaning of this study. Therefore, I intend to explore my positionality for readers to understand where my passion for women in higher education and the workforce comes from as well as showcase the possible bias that I bring to the study.

In my own words: I grew up in a nuclear family on the East Coast. Adopted at the age of five months from Seoul, South Korea to White parents and a biological older brother. I acknowledge the substantial amount of privilege I grew up with, which consisted of a two-parent household with a stay-at-home mother, and a father with two master's degrees who taught English at our local high school. We grew up having the ability to visit vast amounts of places on summer vacations and had the opportunity to play numerous sports throughout my childhood. As much privilege as I held, simultaneously, I felt the trauma of being an adopted child who was deeply scared of constantly being abandoned. I used multiple ways to cope with my adoption trauma, which included a "people-pleaser" personality. I went through the motions of what I was supposed to do through high school and into college. It was never a matter of "if" you got to go to college, but rather "where" would you go.

Learning was difficult for me growing up. I was diagnosed with an auditory learning disability in my junior year of high school. By the time I was diagnosed, I never used the resources provided to me because I had learned to survive until junior year and my habits of coping were hard to break. Understanding the benefit of my resources to allow me to have an equitable chance at learning didn't bloom until much later in my academic career. I went through the motions of applying to college and landed at Mesa State College in Grand Junction, Colorado. Two thousand miles away from my family, I struggled to find my academic and personal identity. I considered my career under the umbrella of education and my profession within higher education. I have been working within a university setting since 2000 when I was hired as a desk clerk within my residence hall. This position, as small as it sounds, gave me insight into what the student affairs side of the house brought to a university. From there, I catapulted into the campus branch of housing and residence life. I served as a Resident Assistant, Assistant Director, and Resident Director within three years. Parallel to this, I was a student who had a completely fixed mindset for learning and had earned a 2.2 grade point average. I just was "not good" at school but had a knack for bringing people together and creating a sense of belonging through educational programs. It wasn't until my Chief Housing Officer brought me into her office and asked what I was going to do with my future when I graduated. It was the first time someone outside of my family had asked what my future looked like and took an active interest in what I could do with my strengths. This brought me to MSU in the summer of 2004. My career at MSU has evolved from Housing & Residence Life to Family & Graduate Housing and then to the academic affairs side of the house where I brought my student affairs knowledge to the Jabs College of Business and College of Agriculture. It was during my years in Jabs

College of Business that I learned the power and influence women have within businesses that could make substantial economic and social change to help lift other women up and ultimately our society and world. Throughout my entire academic career, it was vast amounts of women who championed me and helped influence my understanding of self-worth within the world of academics and higher education. Mrs. Greer was the first person to tell me I could succeed in math courses. Dr. Jill Eckart was the person who helped me realize I could become a professional within higher education, and Dr. Betsy Palmer told me I belonged in my master's program when my impostor syndrome was overwhelming me. My passion for understanding why first-year female business students are not retained from year one to year two stems from firsthand knowledge of the powerful influences women can have in creating mentorship and confidence for other women to move forward (McKinsey & Company, 2021). If the goal is to create gender equity within high-ranking positions that will influence equitable change, then understanding why women are not progressing from the first year to the second year in an undergraduate business curriculum is essential.

Sampling Procedure and Participants

The population for this study was all first-year business students who entered MSU during the fall 2021 semester (n = 587). To obtain the greatest number of participants the required Introduction to Business and Entrepreneurship course (BGEN 104US) was picked to administer the survey. The demographic breakdown of the Fall 2021 incoming first-year business students included the following characteristics:

Table 3.1. Fall 2021 First-Year Business Student Enrollment

		Male	Female	Not Available	Total
Total	Student Enrollment	412 (70%)	174 (30%)	1	587
Residency	In-state	132 (22%)	82 (14%)		214
	Out-of-State	280 (48%)	92 (16%)	1	372
Race	Identify as White	363 (62%)	143 (24%)	1	506
	Identify as Hispanic	16 (4%)	5 (1%)		21
	Identify as Asian	12 (2%)	11 (2%)		23
	Identify as Indian/Native Hawaiian/Pac Islander	13 (2%)	6 (1%)		19
	Identify as other or missing	8 (1%)	9 (1%)		17

The sample participants in this research study included all first-year students who were declared business and were enrolled in the BGEN 104US – Business & Entrepreneurship course during the Fall 2021 semester. In the fall of 2021, the incoming first-year class for the Jabs College of Business was 587 students. Of the 587 students, 539 were enrolled in the BGEN 104US course. BGEN 104US is a required business course within the Jabs College of Business. Due to the increase in enrollment to MSU and Jabs during the fall 2021 registration period, only students who were declared business as a major were allowed into a section of BGEN 104US. Also, there were incoming first-year business students who did not need to take BGEN 104US for reasons such as they transferred equivalent course work, or the course was at capacity and students who arrived late would take the required BGEN 104US course during the Spring 2022 semester. In total there were 26 sections of BGEN 104US offered in the fall of 2021. Out of the 26 sections offered, 23 of them were face-to-face instruction, while one section was offered entirely online. One section of BGEN 104US was designated for students who participate in the MSU Honors Program, and three sections were designated for a pilot program entitled CABLE

(A Community of Aspiring Business Leaders). The program goals were to help increase retention by having additional support within the freshmen year experience. Examples included registering students for the same courses to create a cohort that would quickly create a community that led to a stronger sense of belonging. The sections were taught by a range of non-tenure track faculty that have worked in a business field (marketing, management, finance, or accounting) or currently worked within a field in business. Due to the online section of BGEN 104US and three sections of CABLE having different settings and programmatic goals, it was decided these sections would be removed from the sample (n =77). This left the sample size n = 462. Section times ranged from a Monday/Wednesday/Friday, 50-minute course or a Tuesday/Thursday, 1 hour and 15 minutes. The sample demographic breakdown of the fall 2021 BGEN 104US course included the following characteristics:

Table 3.2. Fall 2021 BGEN 104US Course Enrollment

		Male	Female	Not Available	Total
Total	Student Enrollment in BGEN 104US	390(73%)	148 (27%)	1	539
Residency	In-state	123 (22%)	69 (13%)		192
	Out-of-State	267 (50%)	79 (15%)	1	347
Race	Identify as White	342 (63%)	120 (22%)	1	474
	Identify as Hispanic	15 (4%)	6 (1%)		463
	Identify as Asian	12(2%)	9(2%)		20
	Identify as Indian/Native Hawaiian/Pac Islander	11(2%)	7(1%)		18
	Identify as other or missing	10(2%)	6 (1%)		16

Variables, Constructs, and Instrument

Research question one was answered using descriptive statistics to get a better sense of the trends over time and if there was potential variation by gender to further explore. Data visualization software, Tableau, was used to summarize findings. Regarding research question two, online survey instruments have grown in popularity over the past two decades within the social science world and provided numerous benefits in gathering large amounts of data in a short amount of time with fewer costs associated (Albaum, et al., 2011). To understand the student experience, Jabs College of Business began to implement a Student Satisfaction Survey (see Appendix A) to all Jabs students, which was piloted in the spring of 2019. During the fall of 2018, the survey evolved from MSU's Office of Planning & Analysis's institutional survey that was a combination of an old senior survey and the MSU Student Survey (sampling of freshmen, sophomores, juniors, and seniors) and was created using the Qualtrics online platform. The survey included a mix of Likert scale, open-ended, and close-ended questions to avoid response bias, captured quantitative and qualitative data, and described a range of student experiences (Albaum, et al., 2011). Over the next five years, testing of the survey was conducted twice per academic year and the survey was revised to include clear and concise questions to avoid terminology students might not understand. Tavakol and Dennick (2011) discussed the importance reliability has as it pertains to an instrument's ability to measure consistently and explain the power of using Cronbach's alpha to show the strength or weakness of a survey instrument. To further verify the reliability of the survey instrument, the survey data was run through R-Studio using Cronbach's alpha to calculate internal consistency (Tavakol and Dennick, 2011). The overall Cronbach's alpha for the Fall 2021 survey data was extremely high,

with a coefficient of 0.999. Further calculations were run to measure between individual survey questions to see the relationships used the function of standardized Cronbach's alpha as well as accounting for the confidence internals (CI), which additionally measured the confidence within the survey instrument. Both standardized and CI measured at 0.999, which verified the internal consistency of the data was excellent.

Lastly, the survey was put before the MSU Institutional Review Board (IRB) and approved to conduct the survey within the college and to be published within research projects. The survey was conducted within the Business & Entrepreneurship class (BGEN 104US) two to three weeks before the Fall 2021 semester concluded. Staff from the Office of Student Services were given 10–15 minutes at the start of class for each section. The staff explained the purpose of the survey to students and how the data would be used. Students were informed their participation was completely voluntary and would have no bearing on their grades in the course. Students' confidentiality was maintained throughout the survey administration and data analysis.

The Jabs Student Satisfaction survey consisted of 47 overall questions, 99 opportunities to answer, ranging from text entry (13 questions), matrix/Likert scale (17 questions), and multiple choice (including demographics—17 questions). Each participant was asked to input their student identification so tracking would be accessible for retention inquiry the following year. Seven sections were identified to understand a first-year Jabs College of Business student experience as it related to retention and student satisfaction within the college. Categories included sense of belonging, curriculum and professors, diversity, and inclusion, advising and college resources, student support, personal behaviors/habits, level of involvement, and demographic information. The make-up of these categories served as the foundation of the

independent variables within the study, while whether a student returned to the business college or not in the fall of 2022 served as the dependent variable.

The sample was primarily students who identified as White with a total of 86% and 30% being female and 36% paying in-state tuition. The sample consisted of 462 participants of which 252 responded (55% response rate). The first question of the survey asked participants to input their student identification number in order to know if they returned to Jabs as a student for their second year. To determine the sample power, G*-Power3 (Faul, et al., 2007) test was administered using a medium effect size (0.50) and alpha level of 0.05. Test Family X^2-test, Statistical Test: Goodness-of-fit, Type of Power Analysis: Post hoc. Results indicated the sample size of 102 participants gave a power of = 0.8058. It was concluded the sample size held enough power to proceed with further test models. Subsequently, a post-hoc power analysis was performed, using the collected observed data. This analysis reaffirmed the study's strength, as it demonstrated a power calculation of 0.99986. This high power, achieved with a sample size of 252 participants, a medium effect size of 0.5, and a significance level of 0.05, indicated a substantial probability of detecting true effects based on the observed size and sample size.

When the survey was gathered in fall 2021, it was stored and kept on a secured drive for a full year. A year time-lapse was needed to know how many of the Fall 2021 BGEN 104US students returned a full year later (Fall 2022) as a second-year business student or changed their major or did not return to MSU as a student. Reviewing the data showed 252 responses (55% response rate) were provided through the Qualtrics output function. The data was checked to ensure the sample of responders was valid by gender and retention percentages reflected the overall population of fall 2021 students (see Table 3.3).

Table 3.3. Gender and Retention reflect the overall population of FA21 first year Business students

Year	**FA 21**	**FA 21**	**FA 21**	**FA 22**
Type	Population Sample	Survey Sample	Survey Results	Retained
Male	412 (70%)	325 (70%)	166 (66%)	109 (68%)
Female	174 (30%)	137 (30%)	83 (33%)	54 (32%)
Genderqueer/Genderfluid	0	0	1	0
Prefer not to answer	0	0	0	0
Not Listed/Missing	1	0	2 (1%)	2
Total	587	462	252	165

Note. Data compiled from surveys conducted in Fall 2021 (FA 21) and Fall 2022 (FA 22)

As is the practice for MSU, a census snapshot is taken on the 15th class day to report what the fall student enrollment numbers were. Using an Excel database, a v-lookup procedure was used to understand how many students from Fall 2021 BGEN 104US returned for a second year to MSU as well as the Jabs College of Business. The v-lookup function in Excel also revealed how many students did not return as business students and whether they switched majors or did not return to MSU at all (see Table 3.4). From there, the data was translated from ordinal answers into numerical answers. This further prepared the data to be run through the professional software R-Studio.

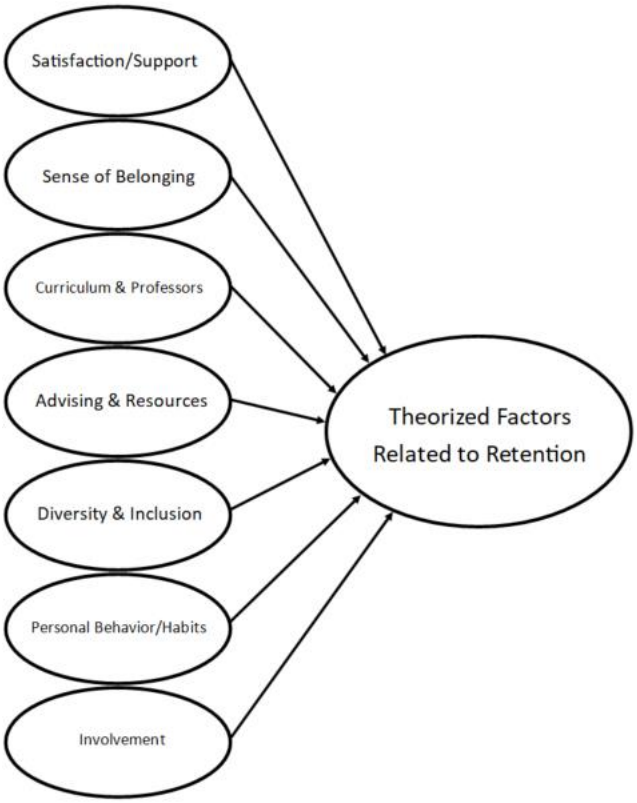
Table 3.4. Gender post Fall 2022 census of those who were retained, switched majors and left MSU

Year	**FA22**	**FA22**	**FA22**
Type	Retained as Business Majors	Switched Majors	Left MSU
Male	109 (68%)	12 (50%)	45 (70%)
Female	54 (32%)	11 (42%)	18 (25%)
Genderqueer/Genderfluid	0	1 (4%)	0
Prefer not to answer	0	0	0
Not Listed/Missing	2	0	0
Total	165	24	63

Note. 35% of female Business students did not return to the Business school a year later

With the need to understand a first-year Jabs College of Business student experience as it relates to retention, an exploratory factor analysis (EFA) was the best statistical analysis to begin answering the research questions. An EFA model was important to begin the statistical analysis because the process provides a variety of helpful information. First, the EFA uncovered latent variables hidden within the survey. It was important to understand the relationship between these variables and specifically how these variables influenced the survey responses. It also helped reduce the complexity of the survey. With 47 questions to sleuth through, the EFA simplified the questions by grouping them together. Lastly, the EFA aided in highlighting redundant or not-contributing questions within the survey. A path diagram of the Jabs Student Satisfaction Survey was created to show the latent constructs or seven theorized categories (see Figure 3.6), questions associated with latent constructs (survey questions within the seven theorized categories), and the expected relationship concerning them (output). The assessed output showed if the theoretical model fit the observed data.

Figure 3.6. Seven Theorized Categories -Jabs Freshmen Student Satisfaction Survey



Note. Survey administered Fall 2021 used to explore relationships toward retention

The EFA identified latent relational factors within the variables and reduced the number of factors by explaining the correlation between each variable within the construct. Each construct was run through R-Studio to create a correlation matrix. This revealed the relationship and strength between individual variables. The statistical process determined the number of factors to run by using parallel analysis and scree plot interpretation. Using the R-Studio output for the analysis, the study reviewed the eigenvalues. Additionally, the study ran an oblique principal-axis factor analysis and comparisons were made to determine which factors explained the most variances within the survey. Once the number of factors had been determined, the study

ran an EFA using oblique rotation. An oblique rotation was used because there was most likely a correlation between the factors. The study considered loadings more than 0.5. After attaining a simple structure, the root mean square of residuals (RMSR—desired output close to 0), root mean square of error of approximation (RMSEA—desired output < 0.05), and Tucker-Lewis Index (TLI- desired output > 0.9) was looked at to validate the proposed model. Factors were analyzed and compared/revised to run the logistic regression analysis.

A logistic regression analysis sought to understand what influence the independent variables had on the dichotomous dependent variable. In this study, a logistic regression analysis is the appropriate to run after the EFA due to the researcher wanting to know whether a student is retained within the study is true or false. The dependent variable was dichotomously coded (0 = not returning to Jabs second year and 1 = returning to Jabs second year).

The logistic regression models explored student satisfaction levels as they related to students being retained the following academic year and if gender, race, residency, and first-generation student status predicted returning for another semester within the business major. The logit function equation for the study was log(Retained/1-Retained).

For the logistic regression, there were four estimated models:

M1: log(Retained/1-Retained) = $X^1GENDER$

M2: log(Retained/1-Retained) = X^1GENDER + X^2RACE + X^3RESIDENCY + X^4FIRSTGEN

M3: log(Retained/1-Retained) = X^1GENDER + X^2RACE + X^3RESIDENCY + X^4FIRSTGEN + X^5GENDERxRACE + X^6GENDERxRESIDENCY+ X^7GENDERxFIRSTGEN

M4: log(Retained/1-Retained) = X^1GENDER + X^2RACE + X^3RESIDENCY + X^4FIRSTGEN + X^6GENDERxRACE + X^7GENDERxRESIDENCY+ X^8GENDERxFIRSTGEN

$+X^{9}$SATISFACTION + X^{10}SENSEOFBELONGING + X^{11}CURRICULUM+ X^{12}ADVISING + X^{13}DIVERSITY + X^{14}PERSONALBEHAVIOR + X^{15}INVOLVEMENT

The model included dummy variables for Gender (where male is the reference group: male = 0), Race (where White is the reference group: White = 0), In/Out-of-State (where, In-State is the reference group: In-State =0), First Generation (where first generation is the reference group: First Gen = 0), and the factors from the EFA. The focus of the outputs was the odds ratio (Exp(B)), which represented the change in odds with every one unit increase of the explanatory variable, holding constant all other variables. The Wald test (goodness of fit) tested the null hypothesis of the model, which stated gender had no significance in determining whether a student would be retained. The study strived to reject the null hypothesis. Finally, the odds ratio was looked at to see if there was statistical significance. Stolzfus (2011) stated, "the odds ratio reveals the strength of the independent variables contribution to the outcome and are defined as the odds of the outcome occurring versus not occurring for each independent variable" (p. 1103). The first model tested the relationship between gender and the likelihood a student would be retained or not retained. The second model expanded from the first model and included gender, race, residence, and first-generation status and the likelihood a student would be retained or not retained. The third model explored if there was a relationship if combining gender with race, residence, and first-generation status. Lastly, the fourth and most complex model sought to understand the relationships of all the variables including the independent EFA variables and what was the likelihood a student was retained or not. Predictions were made based on the output of all four models.

Reliability and Validity

To ensure the degree to which a study using survey data can be replicated and generalizable to other populations sans variables, one must consider the risks to external validity (Bracht & Glass, 1968). The way this study dealt with external validity is as follows; the study used a representative sample of the target population to ensure the findings can be generalized to the broader population. The survey data also provided detailed information regarding the population by asking specific questions about demographic information. All efforts were made to gather the representative group by visiting all BGEN 104US classes to conduct the survey and have a high response rate. To further decrease threats to external validity survey design and the response rate was looked at. The survey design was built with intention and used concise and unambiguous language and avoided leading questions that could lead to response bias. The response rate sat at 55%, which helped further ensure validity and reliability. The survey was conducted after the first semester of the first year of school and factors occurring during the spring semester could have influenced the outcome of why students decided to return for a second year as well as why a student did not return to the university and or business as a major.

This study looked at threats to internal validity by taking steps to minimize alternative explanations within the relationship between the independent and dependent variables. Research questions were distinctly defined and refined, while Cronbach's Alpha was used to measure the survey reliability and appropriate statistical analysis to understand the causal connection between the dependent and independent variables.

Chapter Summary

The goal of this chapter was to describe the research questions that were outlined above and to provide background knowledge and context of the study to understand the research questions. It also gave a rich description of the research design to allow readers to understand the techniques that were used in order to perform the data analysis. The chapter also gave insight to the researcher's expertise and background to identify areas in which the researcher could be biased and walked through the details of the sampling procedures and description of the participants within the study. The variables, constructs, and instruments used to conduct the study were illustrated and lastly, reliability and validity were talked about to further give evidence of being able to replicate the study as well as the methods used within the study were the most accurate way to answer the research questions of this study.

CHAPTER FOUR

RESULTS

Introduction

This empirical survey study's purpose was to examine trends in retention among first-year MSU Jabs College of Business students between 2011 and 2021 and how they varied by gender. It also researched factors that related to student retention among the 2021 cohort of undergraduate business students who are retained from the first to second years. To achieve this, the research design included examining trends using descriptive statistics as well as inferential methods to understand factors that influence student retention. This chapter will first discuss trends in retention using institutional data and then discuss the quantitative results and analysis of the survey to answer the second research question.

Findings Research Question 1

The first research question examined overall trends in retention among first-year Jabs College of Business students and by gender to see if disparities were evident. Using descriptive statistics this paper began by examining overall trends in retention within the Jabs College of Business (Figure 4.1), where retention is operationalized as students persisting within the Jabs major from year one to year two (Figure 1.7).

With an eleven-year average of 65%, first-year female business students have seen a downward trend, mainly downward, with a decline happening from 2013 to 2020. Male first-year business students see a more consistent trend with an eleven-year average hovering at 57% retainment from year one to year two. Table 4.1 provides a summary of the measures of central

tendency and dispersion for male and female first-year business students, highlighting the mean, median, range, and standard deviation as descriptors that illustrate the differences in gender within retention trends.

Table 4.1. Measures of Central Tendency and Dispersion for Male and Female First-Year Business Students—2001-2021

	Mean	Median	Mode	Range	SD
Male	57.8	57.5	56.0	10.1	3.0
Female	65.2	64.0	63.0	20.1	5.0

Note. Female students retained at a higher level than males.

Looking further at measures of central tendency, the mean and median highlight the differences between males and females. The mean of the male group sits at 57.8% with a median and mode at 57.5% and 56.0%, while the female mean comes in higher at 65.2% with a median at 64.0%. This showed, on average, first-year female business students are retained at higher rates than first-year male students. Knowing the range measures the variability of retention over the years from minimum to maximum, the male students have a range of 10.1, while female students' range was at 20.1, indicating retention has varied over time much more for females than it has for males. Lastly, the standard deviation looks at how spread out or close together the years are compared to the mean. In the case of this data, the standard deviation for male students is at 3.0, and female students are at 5.0 indicating the spread for females is greater for male students suggesting a bigger variation in retention rates for females. Although female retention rates appear higher than males over the eleven years, it is worth noting the variability with females is more inconsistent than males. Males seem to have a steady trend line, while the

female line shows a notable increase and decreasing pattern over time. Understanding the variables that could contribute to these fluctuations will be explored further in research question 2.

Findings Research Question 2

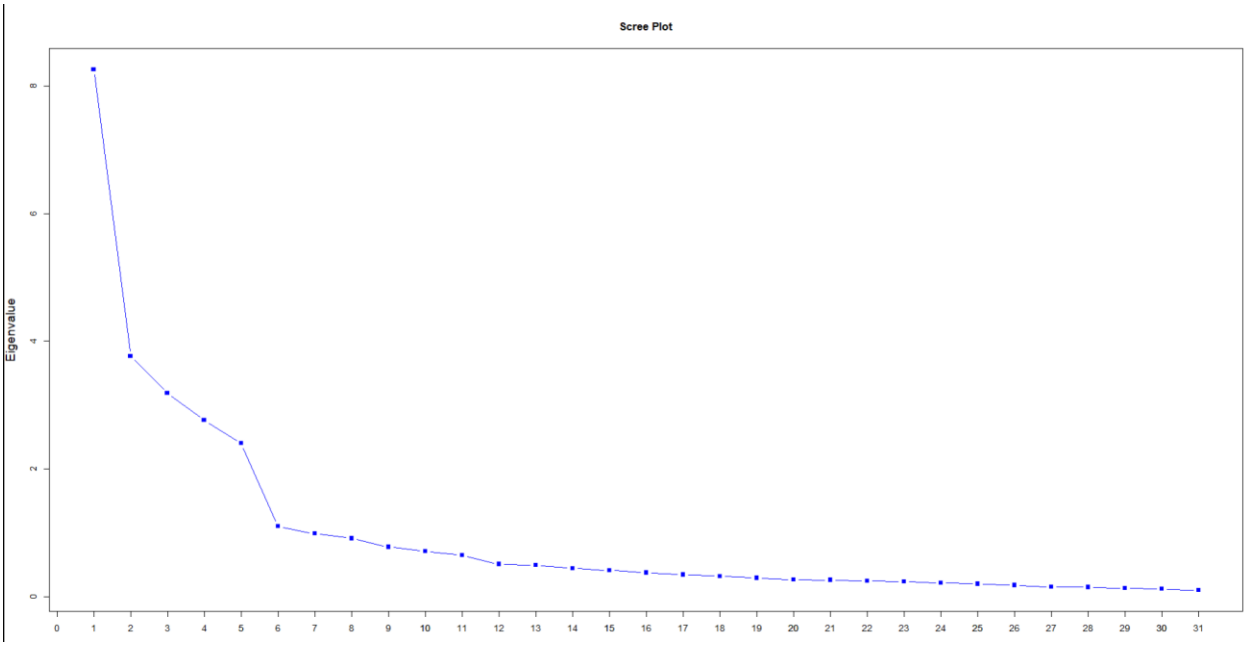
The second research question sought to understand factors that related to and influenced retention among the 2021 cohort of undergraduate business students. In order to do this an EFA and logistic multiple regression were the best statistical analysis to conduct on the survey results. The analysis revealed what factors were related to retention among the fall 2021 cohort, what were the relationships between fixed and malleable factors. The instrument used to answer this question was the Jabs Student Satisfaction Survey. Using 249 observations and 70 factors (individual questions), an EFA model was conducted using R-Studio.

The first step in the EFA process was to run a few tests to understand if the EFA process was the appropriate test to run. Using Bartlett's chi-square test to determine whether the correlation matrix was different from an identity matrix, the test output showed a chi-square value of 4010.99 with 528 degrees of freedom, resulting in a $p<.001$. The p-value indicates the data is significantly different from an identity matrix. The second test that was run was the Kaiser-Meyer-Olkin (KMO) test to measure the overall sample adequacy. Using Kaiser and Rice (1974) interpretation guidelines, the test looked for KMOs higher than 0.50. The KMO test output showed a value of 0.85, which was much higher than the standard 0.50 value, indicating variables closely overlapped and an EFA test was an appropriate test to run.

The next step was to estimate the number of factors that account for the relationship among our variables. Based on the Pearson correlations, a scree plot was generated to maximize

variance within the data by transforming the original variables into uncorrelated variables (principal components) and visually assessing the optimal number of factors for the analysis. (see Figure 4.1). The plot revealed a total of 33 factors with positive eigenvalues. The first factor explained 27% of the variance, and the second explained 12% of the variance, with ensuing factors showing fewer and fewer variances. The scree plot shows a factor loading of 0.50 as the ideal number to proceed with for the EFA.

Figure 4.1. R-Studio Scree Plot Output



Note. Plot of Eigenvalue - Principal Component Analysis (PCA) solutions against a component number (Root)

The next step in the analysis was to uncover latent factors. The EFA was run using oblique rotation. An oblique rotation was decided upon due to the likelihood that there was a correlation between the factors rather than orthogonal rotation, which would rotate factors in a way that would have factors remaining uncorrelated. The study considered loadings more than

0.5. After attaining a simple structure from the EFA, the root mean square of residuals (RMSR—desired output close to 0), root mean square of error of approximation (RMSEA—desired output < 0.05), and Tucker-Lewis Index (TLI—desired output > 0.8) was looked at to validate the proposed model. Based on the Eigenvalue suggestion, five factors were run through an oblique principle-axis EFA within R-Studio. The analysis revealed the total variance explained by the five-factor load was 55%. To further improve the analysis, loadings less than 0.50 were not considered (Howard, 2016).

Table 4.2. Exploratory Factor Analysis of the Student Satisfaction Survey Fall 2021

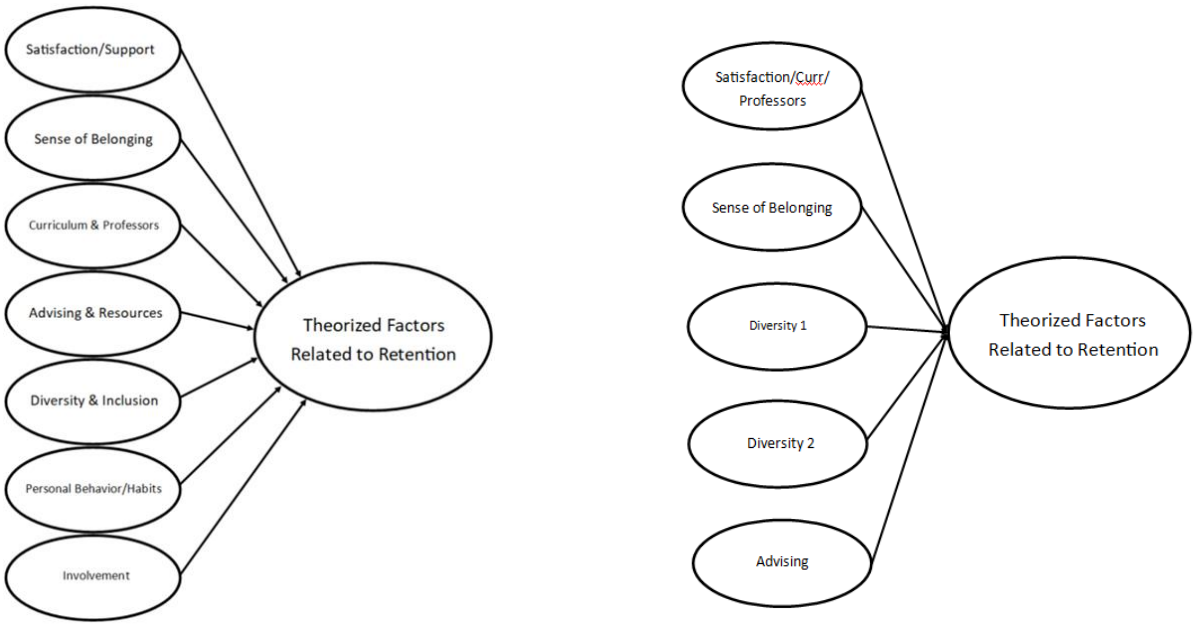
Jabs Student Satisfaction Survey		Factor loading				
		1	3	5	4	2
Factor 1. Satisfaction, Curriculum, Professors	3.2 Overall experience in Jabs college	**0.66**	0.06	0.17	0.07	0.07
	3.3 Quality of instruction you received in Jabs college	**0.78**	0.05	0.03	0.01	0.07
	3.4 Your decision to study business within Jabs	**0.50**	0.03	0.35	0.07	0.05
	9.1 Satisfaction with Professors interest in the subject	**0.81**	0.01	-0.05	-0.05	0.00
	9.2 Satisfaction with Professors help in achieving your professional goals	**0.95**	-0.04	-0.02	-0.01	-0.05
	9.3 Satisfaction with emotional support and encouragement you received from professors	**0.75**	0.04	-0.02	0.01	-0.01
	9.4 Satisfaction with general quality of faculty instruction	**0.84**	0.03	0.00	0.04	-0.05
Factor 3. Sense of Belonging Agree or Disagree	4.4 When someone criticizes Jabs college it feels like a personal insult	-0.04	0.04	**0.82**	-0.02	0.01
	4.5 I am very interested in what other think about Jabs college	-0.01	0.00	**0.78**	0.04	0.03
	4.6 When I talk about Jabs, I usually say "we" rather than "they"	0.04	0.00	**0.66**	0.08	0.00
	4.7 This college's successes are my successes	0.14	0.00	**0.73**	0.02	-0.02
	4.8 When someon praises Jabs, it feels like a personal compliment	-0.01	0.05	**0.82**	0.04	-0.06
	4.9 if a story in the media criticized the school, I would feel embarrassed	-0.02	-0.11	**0.73**	-0.10	0.02
Factor 2. Diversity #1	12.1 Hostile:Friendly	0.18	**0.71**	-0.02	-0.01	0.12
	12.2 Racist : Not-Racist	-0.02	**0.65**	-0.03	0.04	0.01
	12.3 Homogeneous : Diverse	-0.03	**0.60**	0.11	0.03	-0.15
	12.4 Sexist : Not-Sexist	0.06	**0.80**	-0.04	0.00	0.06
	12.5 Homophobic : Not-Homophobic	-0.03	**0.85**	-0.02	0.02	-0.07
	12.6 Elitist : Not-Elitist	-0.02	**0.81**	0.06	0.00	-0.02
	12.7 Competitive : Cooperative	-0.03	**0.55**	0.07	-0.05	0.03
Factor 5. Diversity #2 How often have you experienced discriminatory events because of your:	14.1 Ability or Disability Status	-0.01	-0.11	-0.03	0.12	**0.71**
	14.2 Rcial or Ethnic identity	0.03	-0.08	-0.08	0.05	**0.65**
	14.4 Sexual Orientation	-0.01	-0.10	0.01	-0.03	**0.64**
	14.5 Gender identity or gender expression	-0.09	0.13	0.04	-0.04	**0.71**
	14.6 Veteran Status	-0.01	0.13	-0.01	-0.04	**0.82**
	14.8 Age	0.07	-0.06	0.05	-0.04	**0.55**
	14.11 Poltiical Orientation	0.08	-0.20	0.06	-0.08	**0.51**
Factor 4. Resources Academic Advising	19.1 General Academic Advising	0.10	-0.03	-0.06	**0.89**	0.00
	19.2 Advisor as a mentor	0.04	0.06	0.04	**0.87**	-0.05
	19.3 Availability of your advisor	-0.05	0.00	0.02	**0.90**	0.03
	19.4 Quality of time spent with your advisor	-0.08	-0.01	0.01	**0.92**	0.01

Note. N = 252. The extraction method was principal axis factoring with an oblique principal-axis (Promax with Kaiser Normalization) rotation. Factor loadings above .50 are in bold

*Loadings = > 0.50
Note. Extraction method; maximum likelihood; Rotation method; Promax (oblique).
Fit Indices: TLI = 0.82 RMSEA = 0.08 BIC = -845.61 RMSR = 0.07

The results from Table 4.2 indicated questions loaded onto five factors with values higher than 0.50. The model exhibited a good fit, supported by TLI < 0.82 (TLI = 0.90), RMSEA < 0.08 (RMSEA = .08), and a low BIC value (BIC = -845.61). Additionally, the RMSR revealed an appropriate average difference between observed and predicted values. Aligned with current literature a theorized path diagram (Figure 3.6) was created to show the expected relationships within the survey. However, the findings from the EFA revealed latent variables that transformed the path diagram revealing a new perspective on what factors related to each other. The new path diagram (Figure 4.2) shows a simplified model using EFA results.

Figure 4.2. Obtaining Simple Structure: EFA Model Showing on the Right Indicating Relational Factors



Note. Figure 3.6 Seven theorized categories EFA Results

Results from the EFA revealed a simpler structure. Factors within the survey that did not show relationships were removed, such as Support, Inclusion, Personal Behavior/Habits,

Resources, and Involvement. While these factors may appear insignificant in relation to this survey, it is important to understand their lack of loading does not lessen the importance of seeing how they contribute to a first-year student experience. Within the boundaries of this survey, the EFA showed these factors did not indicate a statistical relational significance between the observed factors. Looking at factors that did load, it is of interest to note two different loadings were under the topic of diversity/student satisfaction and curriculum/professors loaded strongly together.

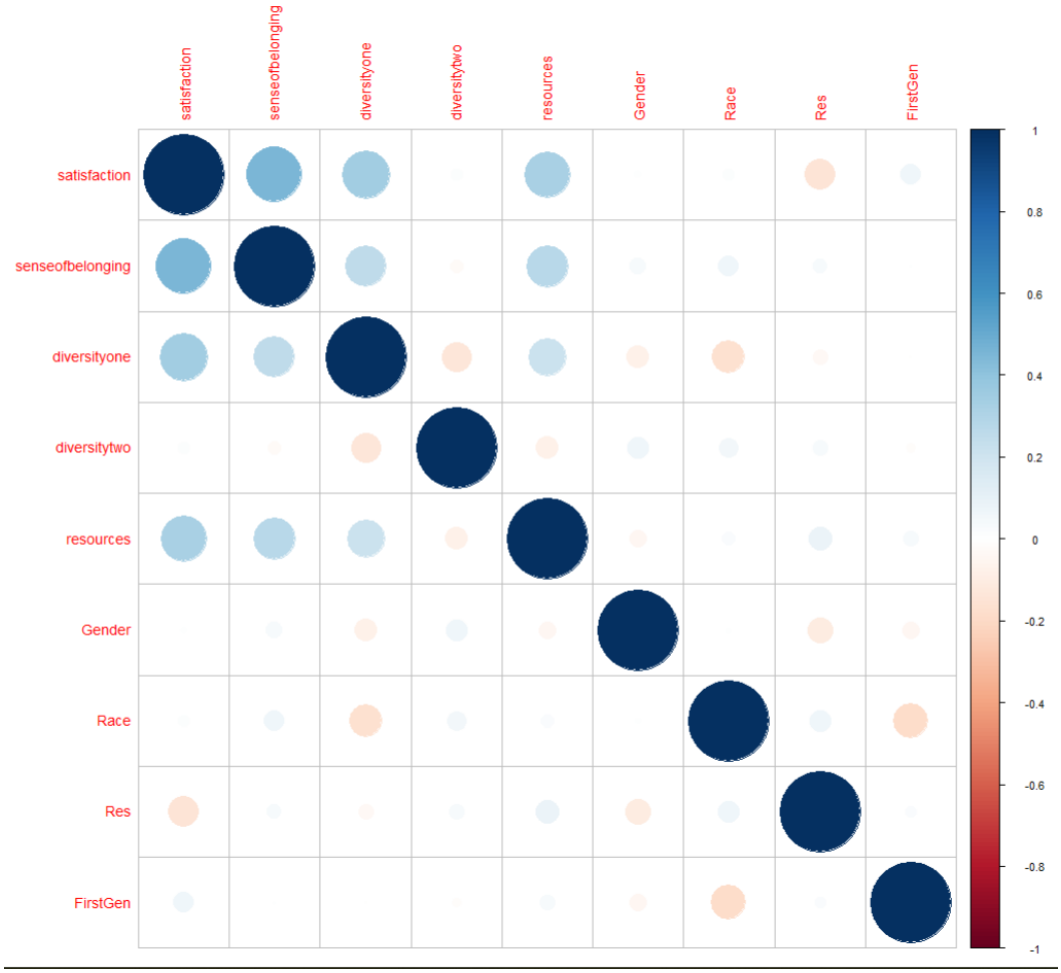
From there, the EFA model was used in the next step of the analysis. Predicting whether a student will return to Jabs College of Business as a business student in their second year used a binary model– Retained/1-Retained to the second year. Therefore, the statistical method used to understand this will be logistic regression. Results from the EFA were placed into composite scores. Composite scoring allows for a parsimonious representation of the EFA results by reducing the original variables into a set of scores. Composite scores were created by calculating the average of standardized scores of the variables that loaded. The composite scores will be representative indicators of the underlying constructs detected in the EFA, which included Satisfaction/Curriculum/Professors, Sense of Belonging, Diversity 1, Diversity 2, and Advising.

Logistic Regression Analysis

After composite scores were created and added to the overall data set, testing for multicollinearity was the next step to ensure two or more factors in the regression model were not highly correlated. The variance inflation factor (VIF) code was run through R-Studio to examine the predictor variables to assess multicollinearity. The output revealed a VIF ranging

from 1.03 to 1.51, indicating the values were well below the threshold of 10 and thus multicollinearity among the variables was not an issue in the logistic regression model.

Figure 4.3. Heat map correlation matrix between variables



Note. The darker the circles, the higher the correlations.

A logistic regression analysis was used for a variety of reasons because the dependent variable, retention, is a binomial variable with two possible outcomes: Retained/1-Retained. This statistical analysis also provides interpretable odds ratios, creating a clear understanding of how

predictor variables impact the odds of retention. Lastly, logistic regression allows for the ease of creating multiple model combinations to test which model best explains why business students are retained. Logistic regression was run against the four predicted models, with Gender as the predictor variable in Model 1 (M1). Model 2 (M2) added Race, Residency, and First-Generation status, Model 3 (M3) added interactions with gender, and Model 4 (M4) added the EFA variables.

M1: log(Retained/1-Retained) = $X^1GENDER$

M2: log(Retained/1-Retained) = X^1GENDER + X^2RACE + X^3RESIDENCY + X^4FIRSTGEN

M3: log(Retained/1-Retained) = X^1GENDER + X^2RACE + X^3RESIDENCY + X^4FIRSTGEN + X^5GENDERxRACE + X^6GENDERxRESIDENCY+ X^7GENDERxFIRSTGEN

M4: log(Retained/1-Retained) = X^1GENDER + X^2RACE + X^3RESIDENCY + X^4FIRSTGEN + X^5GENDERxFIRSTGEN +X^6SAT/CURR/PROF + X^7SENSEOFBELONGING + X^8DIVERSITY1+ X^9DIVERSITY2 + X^{10}ADVISING

Table 4.3. Results from Logistics Regression Models

Results from Logistics Regression Models

	Model 1			Model 2			Model3			Model 4		
Predictor	OR	(S.E)	P	OR	(S.E)	P	OR	(S.E)	P	OR	(S.E)	P
Intercept		(.173)	2.36e-		(.453)	.580		(.500)	.692		(3.63)	.254
Gender	0.739	(.318)	.343	0.695	(.324)	.261	0.108	(1.14)	.050*	0.113	(1.16)	.060
Race				0.462	(.481)	.109	0.443	(0.49)	.097	0.422	(.519)	.097
Residency				0.633	(.301)	.130	0.665	(0.31)	.180	0.727	(.313)	.311
First Generation				0.697	(.424)	.400	0.399	(0.50)	.067	0.360	(.526)	.052
GenderXFirst-Gen							8.405	(1.19)	.074	1.385	(1.22)	.081
Satisfaction										0.947	(.231)	.159
Sense of Belonging										0.916	(.137)	.694
Diversity1										0.006	(.199)	.660
Diversity2										0.993	(3.19)	.120
Advising										8.411	(.117)	.958
AIC	286.91			287.01			284.80			287.26		

Note. Number of responses = 252, * $p < 0.05$; **p between .1 and .05

The first logistic regression model (Table 4.3) only included one predictor variable 'GENDER,' and the formula used was M1: log(Retained/1-Retained) = $X^1GENDER$. Beginning with a simple model helped create a baseline understanding of how well GENDER explained the variation in being retained. For each model, three areas of the analysis were looked at to understand and interpret the output; odds ratio will gauge the impact of predictors on retention, standard error assessed the precision of coefficient estimates, and p-value looked at the significance of the relationship between retention and predictor variables. The odds ratio for the predictor variable (female) was 0.74 (95% CI:[0.40, 1.38]), this implied that compared to the reference group (male), females had 26% lower likelihood of being retained. However, the results were not statistically significant ($p = 0.343$). The whole model, including the intercept, was statistically significant ($\chi^2 = 5.584$, $df = 1$, $p < 0.001$), indicating the whole model explains a proportion of the variance in student retention. The null deviance represents how well retention is predicted by a model that assumes no relationship between the predictor variables and the outcome. In this output, the null deviance was 283.82 on 248 degrees of freedom, and the residual deviance, which tells us how much our predictions are off by, was 282.91 on 247 degrees of freedom, resulting in an Akaike Information Criterion (AIC) of 286.91.

M2: log(Retained/1-Retained) = X^1GENDER + X^2RACE + X^3RESIDENCY + X^4FIRSTGEN

The second model (see Table 4.3) built upon the first and examined the relationship between being retained and other predictor variables; Gender (0 = male, 1 = female), Race (0 = white, 1 = not white), Residency (0 = in state, 1 = out-of-state), and First Generation (0 = First-Generation, 1 = Continuous-Generation). The results disclosed none of the predictor variables were statistically significant in explaining the odds of being retained: Gender ($\chi^2 = 0.92$, p =

0.261), Race ($\chi^2 = 2.82$, $p = 0.109$), Residency ($\chi^2 = 2.38$, $p = 0.130$), and First-Generation status ($\chi^2 = 0.70$, $p = 0.40$) did not yield statistically significant changes in deviance. The odds ratios and their 95% confidence intervals indicated that Gender (OR = 0.70, 95% CI [0.37, 1.31]), Race (OR = 0.46, 95% CI [0.18, 1.19]), Residency (OR = 0.63, 95% CI [0.35, 1.14]), and First-Generation status (OR = 0.70, 95% CI [0.30, 1.60]) were not statistically connected with the odds of retention. The null deviance was 283.82 on 248 degrees of freedom, and the residual deviance was 277.01 on 244 degrees of freedom, resulting in an AIC of 287.01. The AIC is slightly better than M1 but has a similar effect explaining the variation in the data.

M3: $\log(\text{Retained}/1\text{-Retained}) = X^1\text{GENDER} + X^2\text{RACE} + X^3\text{RESIDENCY} + X^4\text{FIRSTGEN} + X^5\text{GENDERxRACE} + X^6\text{GENDERxRESIDENCY} + X^7\text{GENDERxFIRSTGEN}$

While the standard practice may be dedicated against running a third model following the non-significant results from Model 2, the null findings of main effects prompted an exploratory analysis in Model 3. The third, more complex model, built upon Model 2, but introduced variables that interact with each other. Specifically, how gender interacts with race, residency, and first-generation status to understand if the relationship between gender and retention is dependent upon or altered by other factors. The significance of the model showed the complexity of the relationship among variables and provided further understanding of how gender impacts retention relative to other fixed factors. In order to understand and pinpoint which of the three interactions (Gender:Race, Gender:Residency, and Gender:Firstgeneration) was changing the significance level of gender, mini models were run independently of each other. Gender:Race ($p = 0.477$) and Gender:Residency ($p = 0.4257$) yielded no statistical significance and therefore those interactions were removed from the overall model. Running

Model 3 with the interaction Gender:FirstGeneration found marginal statistical significance. The coefficients for the predictor variables (Retained/1-Retained) are presented in Table 4.3.

The results indicated the overall model improved from Model 1 and Model 2; however, Race ($\chi^2 = 2.75$, $p = .097$) and Residency ($\chi^2 = 1.79$, $p = .180$) did not exhibit statistical significance. An important distinction to be made with the introduction of the interaction variable Gender:FirstGen resulted in changing the interpretation of the variables. Within Model 3, the main effects of the interacting variables were no longer interpreted separately, but rather contingent upon the levels of the other variables (Gender and First Generation) involved. Having Gender:FirstGen interaction suggested the effect of Gender on retention was modified by whether a student was first-generation or not, or rather, the relationship between gender and retention was different for first-generation students compared to continuing-generation students (see Table 4.4).

Table 4.4. The interaction variable Gender:FirstGeneration alters how the individual variables Gender and First Generation are interpreted.

Variable	Interpretation
Gender	Comparison between women who are continuing-generation students and men who are continuing-generation students.
First Generation	Comparison between men who are first-generation students and men who are continuing-generation students.
Gender:FirstGen	Examining how the effect of gender on retention differs between first-generation female and continuing-generation male students.

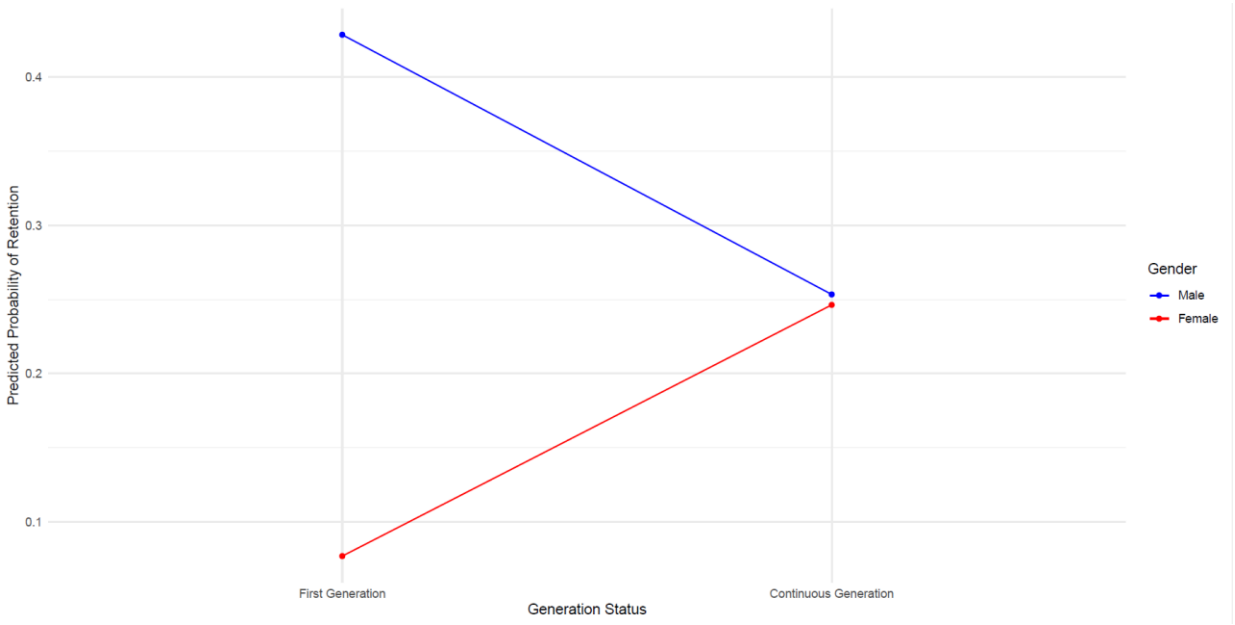
Note. Reference group is now continuing-generation male.

Knowing the above information helped decipher the output. Gender:FirstGen ($\chi^2 = 3.18$, $p = 0.074$) interaction exhibited marginal statistical significance, which implied there was evidence to suggest the relationship between gender and retention varied depending on whether a student was first-generation or continuing-generation. Also, the factor First-generation exhibited marginal statistical significance ($\chi^2 = 3.34$, $p = 0.067$), suggesting that, compared to continuing-generation male students, first-generation male students were estimated to have lower log odds of being retained. Looking at Gender it revealed there was statistical significance with a p =0.050 and chi-square = 3.80. It is important to distinguish the Gender variable only became significant due to the introduction of the Gender:FirstGen interaction variable. The odds ratio value for the predictor variable (continuing-generation female) was 0.108 (95% CI [-4.46, 0.013]). This outcome implied that compared to continuing-generation male business students, continuing-generation female business students have 90% lower odds of being retained. The odds ratios and

their 95% confidence intervals indicated Race (OR = 0.443, 95% CI [-1.77, -0.852]), Residency (OR = 0.665, 95% CI [-1.01, 0.181]), First-Generation (OR = 0.399, 95% CI [-1.90, 0.066]), and Gender:FirstGen (OR = 8.405, 95% CI [-0.210, 4.470]) were not statistically connected with the odds of retention. The AIC value decreased from Model 1 (286.91) and Model 2 (287.01) and revealed an output of 284.80 which indicates a better overall model fit. Ultimately, this model demonstrated the interaction between Gender and FirstGen affected retention, with Gender also contributing to the overall model's impact.

Given the complexity of the relationships among Model 3 and the presence of marginal significance of the interaction effect with gender and first generation further exploratory analysis was performed to understand how different combinations of predictor variables influenced the likelihood of retention. Predicted probability allowed the researcher to further understand the likelihood of retention occurring given the specific interaction variable of Gender:FirstGeneration within Model 3. Using R-Studio, predicted probability code was run from the logistic regression output of Model 3 (see Figure 4.4).

Figure 4.4. Predicted Probability based on the interaction variable Gender:FirstGen in Model 3. Note: First-generation females are less likely to be retained.



The output presented a predicted probability of a student being retained based on different combinations of gender and first-generation status. First-generation male students have a higher likelihood of being retained (0.42), while first-generation female students had a lower likelihood of being retained (0.07). Continuous-generation male students had a lower likelihood of being retained (0.25) compared to first-generation male students and continuous-generation female students had a higher likelihood (0.24) of being retained compared to first-generation females and a similar likelihood compared to continuous-generation male students.

To provide further statistical analysis of the factors contributing to retention, a descriptive statistics table (see Table 4.5) was created to display the mean scores of specific variables among different demographic groups. Table 4.5 presents valuable insight into the relationship between various factors and student retention within the Jabs College of Business & Entrepreneurship. Specifically, the table presents the mean scores for factors such as Satisfaction, Sense of

Belonging, Diversity 1, Diversity 2, and Advising, disaggregated by gender and generational status (first-generation vs. continuous generation). By examining these mean scores, patterns, and differences in the experiences of retained and not retained students can be seen, casting light on the underlying dynamics influencing retention within the college.

Table 4.5. Mean and Standard Deviation scores for EFA factors by Gender and First-Generation Status

	Sat M	Sat SD	SOB M	SOB SD	DIV1 M	DIV1 SD	DIV2 M	DIV2	Ad M	Ad SD
First Gen Male Retained	6.32	0.58	4.96	1.28	6.56	0.79	1.08	0.22	4.71	1.71
First Gen Male Not Retained	5.76	0.78	4.04	1.25	6.44	0.89	1	0	4.36	1.24
Cont Gen Male Retained	5.87	0.89	4.43	1.26	6.28	0.91	1	0	5.09	1.19
Cont Gen Male Not Retained	6.16	0.59	4.28	1.28	6.36	0.81	1	0.2	5.12	1.65
First Gen Female Retained	5.56	0.81	4.26	1.00	5.92	1.72	1.02	0	5.48	1.37
First Gen Female Not Retained	*3.43*	*n/a*	*4.17*	*n/a*	*5.71*	*n/a*	*1*	*n/a*	*3.5*	*n/a*
Cont. Gen Female Retained	5.98	0.69	4.39	1.28	6.2	2.41	1.06	0.03	4.73	1.95
Cont. Gen Female Not Retained	6.38	0.97	5.11	1.36	6.33	0.968	1.02	0.22	5.1	1.88

Note. Continuing females not retained had the highest mean score for levels of satisfaction. First Gen Female Not Retained had an *N=1*.

Standard Deviation (SD) and Mean (M) values were used to analyze various factors that influenced retention among male and female students, distinguishing between continuous generation and first-generation students. Using the average score for each factor and insight to the variability of the data around the mean helped provide further understanding of what the students first year experience entailed. It is important to note, the First-Generation Female Not Returned had an N = 1. It is of interest to note the factor Satisfaction, as it related to males, continuous generation males who were not retained had a higher satisfaction mean than retained males, while Sense of Belonging yielded low overall mean scores across all males. The variable Diversity 1 asked students to select one option between sets of adjectives on a Likert scale of 1–7 that best represented how they rated Jabs College of Business based on their direct experiences.

The adjectives described ranged from Racist to Non-Racist, Hostile to Friendly, Elitist to Non-elitist, etc. In reviewing the mean data, first-generation female students who were not retained had the lowest overall mean score of 5.71 compared to first-generation male students who were retained. Conversely, the majority of male and female business students' mean score for Diversity 2, which asked how often students experienced discriminatory events due to their status had similar experiences with the mean scores hovering at 1.00 (never experienced discriminatory events). Lastly, the Advising variable reported differences in experiences between males and females. The Advising portion of the survey asked specific questions about having an advisor as a mentor, the availability of your advisor, and the quality time spent with their advisor. First-generation males who were not retained reported a 4.71 mean score for Advising, while first-generation females who were retained yielded the highest mean score of 5.48. Reviewing mean scores allowed for quick comparisons of each factor between retained and not retained students who were male and female. This provided insight into potential differences within first-year experiences and the factors that may contribute to retention.

M4: $\log(\text{Retained}/1\text{-Retained}) = X^1\text{GENDER} + X^2\text{RACE} + X^3\text{RESIDENCY} + X^4\text{FIRSTGEN} + X^5\text{GENDERxFIRSTGEN} + X^6\text{SAT/CURR/PROF} + X^7\text{SENSEOFBELONGING} + X^8\text{DIVERSITY1} + X^9\text{DIVERSITY2} + X^{10}\text{ADVISING}$

The final model built upon Model 3 but added complexity by including factors from the earlier EFA results to understand if there were any further insights to be garnered. The EFA results represented factors originated from the Jabs Student Satisfaction Survey taken in the fall of 2021 that were put into simple structure. After the EFA model was created, Model 4 was modified to fit EFA results. Looking over the results (Table 4.3) there were elements to look at when understanding the relationship between the factors and the outcome (Retained/1-Retained).

The coefficients for the Intercept, Race, Residency, Satisfaction, Sense of Belonging, Diversity One, Diversity Two, and Advising yielded no statistical significance as their p-values were greater than 0.10. The coefficients for Gender and Gender:FirstGeneration showed marginal statistical significance with p-values in between .06-.08. The odds ratio for Gender (0.113) suggests if you are a continuing-generation female business student you are 89% less likely to be retained compared to non-first-generation male business student. Lastly, First Generation's coefficient revealed marginal statistical significance with $p = 0.052$, indicating that, holding all other factors constant, a potential relationship exists between first-generation male business students and retention. To further assess the overall model fit, the chi-square output was looked at showing the model is moderately significant with improvement over the null model, implying predictors have some explanatory power. It also showed the AIC score increased with this model (AIC = 287.26) indicating the overall fit decreased with the additional EFA factors and the predictor variables.

Chapter Summary

In conclusion, this chapter provided the descriptive statistics that aided in answering research question one and descriptive statistics for mean scores of key retention-related factors that were disaggregated by gender and generational higher education status, as well as statistical interpretations of four model outputs to better understand the factors that influence first-year business student retention from data based on the Jabs Student Satisfaction Survey. An EFA was used to uncover latent variables and a composite model (M4) was created. The models built upon each other in complexity to identify areas that helped predict being retained as a first-year business student as well as test the theoretical concepts outlined in chapter one.

CHAPTER FIVE

DISCUSSION

Introduction

The purpose of this study was to understand factors that influence or deter first-year business student retention specifically, if factors contribute to or deter first-year female business students at Montana State University's Jake Jabs College of Business & Entrepreneurship. To answer this question two research questions were posed:

RQ 1. What are the trends in retention among first-year MSU Jabs College of Business students between 2011 and 2021 and how do these vary by gender?

RQ 2) Using the most recent and available data, what factors relate to retention among the 2021 cohort of undergraduate business students at Montana State University's Jabs College of Business?

a). What is the relationship, if any, between fixed factors, including gender, race, first-year residency, and first-generation student status and retention of first-year business students?

b). What is the relationship, if any, between malleable factors, including a sense of belonging, student satisfaction (with courses, professors, resources, etc.), and retention of first-year business students?

Summary of Results

In reviewing research question one, trends in retention over eleven years indicate male business students' variability in retention was unremarkable. Digging further into the meaning of the data, male students denote symmetrical distribution with the median being 57.5% and the standard deviation for male retention rates being at 3.0. This means a close-fitting cluster of data points around the mean. This suggests males may have a more consistency with retention potentially revealing male students have more stability and reliability in their first year than female students do. Conversely, first-year female business students display a positively skewed shape within the data. The median, being at 63.8%, was closer to the lower quartile (62%) than the upper quartile (68.9%), showing a variability in retention rates. The larger standard deviation for female retention rates (SD = 5.0) also indicates a greater variability in their first-year experience. The variability suggests the highs and lows of the data points compared to the mean are unstable.

Reviewing a decade's worth of retention data revealed numerous observations that should be investigated further. Consistent with national trends, females are being retained at a higher rate than males within the Jabs College of Business; however, it is the instability factor for females and downward progression that stand out. When observing female trends in retention, it is important to explore the various other factors that may have coincided with the variability in retention rates during the timeframe being observed. Refraining from definitive causality, these observations serve as possible areas of interest for understanding the broader context of first-year female business student trends. The first observation looked at the increased retention rate from 2011 to 2013 for female students. During this time, Jake Jabs announced he would give the

College of Business at MSU a $25 million-dollar unrestricted gift. At the time, it was the largest gift given to MSU from an alum. This gift made headline news and brought in a substantial amount of publicity to the college on a national stage. A large portion of the gift was put toward building a new business building for the students of the college. It was also in 2013 that the Jabs College of Business announced it had earned another five years of accreditation from the AACSB. Accreditation is a worldwide recognized symbol to students looking for credible and quality business education. The world economy was also still recovering from the 2008 financial crisis, and when the economy was not doing well or seemingly unstable, university enrollment numbers rose as students were more likely to rely on the credentials secondary education provided to compete in a volatile economy (Long, 2014).

Conversely, a divergence occurred for males and females in 2016 and a convergence happened a year later. Female students in the Jabs College of Business increased their retention rate from 65% in 2015 to 69% in 2016, while male student numbers decreased from 56% in 2015 to 52% in 2016, which yielded a 47% difference in one year. In 2017, female retention decreased from 69% to 62%, while male retention increased from 52% to 60%. Looking inward to what was occurring at this time within the college, details showed a heightened focus on entrepreneurship as stated in the fall 2015 issue of Mountains and Minds article showcasing Jabs College of Business helping create a new generation of Montana entrepreneurs:

> To help more students enjoy entrepreneurial success, as Rickert has—and to foster qualities that are useful to entrepreneurs, as well as to others interested in business and even other pursuits—the MSU Jake Jabs College of Business and Entrepreneurship is establishing itself as a leader in entrepreneurship education in the region. “Our business college has a strong track record of fostering entrepreneurship and entrepreneurial thinking,” said Kregg Aytes, dean of the Jake Jabs College of Business and Entrepreneurship. “We aspire to do even more.” (Cantrell, 2015)

Is there a connection between females being less risk-averted to the entrepreneurial lifestyle (Sexton & Bowman-Upton, 1990) and Jabs College of Business promoting an education that has entrepreneurship woven into the curriculum that would deter a female student from wanting to continue pursuing a degree in business? Further research into this topic would be key to understanding the decline in first-year female business student enrollment.

Shifting the focus to research question two, the study examined factors that contributed or deterred students from returning to the business college for a second year and pursuing a general business degree. To properly run the logistic regression models, an EFA was performed to reveal latent variables and obtain a simple structure of the data. The Student Satisfaction Survey held a large number of questions and Figure 4.2 showcased how the EFA examined seven theorized categories and aimed to identify latent variables to simplify the model that consolidated the seven categories into five. Surprisingly, after the EFA model was run, the categories changed dramatically and what was thought to stand out as factors that contributed to being retained did not emerge as significant factors. Support, Resources, Personal Behavior, and Involvement factors were removed from the final model, and the simple structured model combined "Satisfaction/Curriculum/Professions" into one category showing how intertwined these factors were. Diversity split into two categories suggesting the diversity experiences within the first year acknowledged the complex nature of diversity within the student experience. Also, unexpectedly, the Resource data did not show it was contributing to the overall model and was removed, while Advising remained relevant and was retained within the model. Lastly, Sense of Belonging remained relevant after the EFA was run highlighting the alignment with Tinto's (2017) theory

of student departure. Obtaining a simple structure model was essential to be able to run the logistic models.

While this study did aim to understand factors that deter or retain students in the business program, it was also connected to how they varied by gender. Knowing the first model (M1: log(Retained/1-Retained) = $X^1GENDER$) focused solely on the predictor variable being "Gender," the objective created a baseline understanding of gender alone contributed to the variation of business student retention. Results yielded no statistical significance ($p = 0.343$). Model 1 provided further evidence that gender alone did not predict a significant difference in the odds of being retained for males compared to females which supported Nieuwouldt and Pedler's (2023) study that indicated numerous other factors contribute to females wanting to leave their home institution besides just their gender. However, Model 1 did contribute a baseline understanding to construct models two, three, and four.

Expanding on the predictor variables, the second logistic regression model (M2 = log(Retained/1-Retained) = X^1GENDER + X^2RACE + X^3RESIDENCY + X^4FIRSTGEN) added Race, Residency (in-state or out-of-state) and first-generation status to understand whether additional fixed factors predict being retained or not. Ultimately, the data resulted in the model having no statistical significance on any of the variables. Gender ($p = 0.261$), Race ($p = 0.109$), Residency ($p = 0.130$), and First Generation ($p = 0.40$) indicate these results do not showcase a clear relationship with the odds of being retained from year one to year two. However, what is of interest within the results showed the decrease in residual deviance compared to the null deviance and the AIC being at 277.01 suggesting while the predictor variables showed no statistical significance the overall model did improve from M1. This analysis indicated that fixed

factors contributed to a better understanding of what influences being retained. It is also important to note that because gender, race, residency, and first-generation yielded no statistical significance, does not infer these factors have no influence on retention, but rather within the parameters of this specific model fixed factors did not appear as significant.

The third model, (M3: log(Retained/1-Retained) = X^1GENDER + X^2RACE + X^3RESIDENCY + X^4FIRSTGEN + X^5GENDERxRACE + X^6GENDERxRESIDENCY+ X^7GENDERxFIRSTGEN), introduced additional variables and showed improvement over the first two models. M3 was built to illustrate how the fixed factor, gender, interacted with the other fixed factors, race, residency, and first generation. Results from the logistic regression output revealed the Intercept, Race, Residency, First Generation, Gender:Race, and Gender:Residency all yielded results that were not statistically significant. Another interesting finding showed, albeit not at the standard statistical significance of < 0.05, was the result of Gender:FirstGeneration ($p = 0.074$). With marginal statistical significance, Gender and First Generation indicated this interaction should be looked at more closely. While the p-value falls above the standard significance the proximity could suggest a relationship. Compared to continuing-generation female business students, First-generation female business students were estimated to have lower log odds of being retained, which tracks with Gibbons, et al., 2011 and Pratt et al.'s 2019 findings that suggested first-generation college students are less likely to have the same academic and social capital experiences entering into a university setting as students who have parents/guardians with a degree. Current research discusses the difficulties first-generation college students endure. Soria and Stebleton (2012) found evidence to suggest first-generation college students engage differently, specifically with fewer interactions within the

classroom setting, lower grade point averages, and lower likelihood of how to obtain and utilize campus resources. What is the lived experience of a first-year female first-generation college student within Jabs College of Business? One could surmise students who fit these two factors have different first-year experiences than those who do not identify as female and first-generation calling for further research using qualitative approaches.

In examining gender, there was statistical significance found ($p = 0.050$) suggesting the incorporation of a more complex model influenced the significance of gender, and compared to continuing-generation male business students, continuing-generation female business students had a 90% lower chance of being retained. Gender was the factor that was consistently used throughout all four models. Although gender alone yielded no statistical significance, it emerged as a significant factor as the models became more complex suggesting these findings align with the literature of female students.

Lastly, the results from Model 4 included incorporating the factors resulting from the EFA. This is the most complex of the four models and combined fixed and mailable factors. The AIC output resulted in a score of 287, which indicated the overall model fit did not change significantly from Model 1 to Model 4 but yielded a higher AIC score than Model 3. Looking at variables that showed no statistical significance included the Intercept, Gender, Race, Residency, Satisfaction, Sense of Belonging, Diversity One, Advising, Gender:Race and Gender:Residency. What Model 4 did help identify was the instrument survey used to gather data was not a great indicator for retention. Despite including variables that were directly from the Student Satisfaction survey, they did not yield significance. However, even though the survey instrument was found wanting within this study, there could be unmeasured factors or aspects of the student

experience that have a more significant impact on retention. Therefore, further research and refinement of the survey instruments could assist in revealing factors influencing student retention within the Jabs College of Business. Two factors that showed moderate statistical significance were First Generation ($p = 0.066$) and Gender:FirstGeneration ($p = 0.081$). Overall, Model 4 showed a worse overall fit compared to Model 3 and yielded no statistical significance, hence the focus and reporting on Model 3.

Theoretical Implications

Trends over Time

Drawing back to the theoretical framework, the exploration of retention trends within the Jabs College of Business over eleven years exposed interesting nuances when compared to Vincent Tinto's (1979 and 1993) interactionalist theory of student departure and Frederick Herzberg, (1959) model of motivation-hygiene factor theory (job satisfaction/motivation). Tinto's (1979 and 1993) model focused on the stages of integration and the transformation of belonging into a community. The male students within Jabs showed stable and consistent retention trends that aligned strongly with what Tinto (1993) postulated regarding the stages of integration indicating a more seamless transition to college. Alternatively, the female retention distribution showed a positive skewed shape which raises inquiries about how Tinto's (1993) integration model fits. The downward trend from 2013 to 2020 indicate females were not progressing strongly through the three stages of integration to have positive outcomes of being retained. When examining this phenomenon through Frederick Herzberg, et al., (1959) model of job satisfaction and dissatisfaction the inconsistent patterns with the range and standard deviation for first-year female business students could suggest female students are experiencing more

dissatisfying factors that contribute to high and low retention percentages. Regarding male students, even with consistent patterns, further investigation should be looked at with satisfaction/dissatisfaction to observe if interventions could be used to increase male numbers.

Regression and Theory

In relation to the logistic regression models that were tested and how they interacted with this study's theoretical framework, the significance of Model 3 was most notable as it related to being retained from year one to year two within the Jabs College of Business. The interaction variable Gender:FirstGen found evidence to suggest a relationship between gender and retention existed depending upon if a student was first-generation or continuing-generation. The predicted probability revealed First-generation female students were less likely to be retained (0.07). It also revealed Gender (a fixed factor) as a significant variable that suggested female business students have lower odds of being retained which challenged the standard assumptions that female students are retained at higher rates than males and aligned with Tinto (1993) and Herzberg's (1959) theoretical models. Looking more closely at Tinto's Integration model, which posits a student's integration into a university community influences whether a student is retained or departs, we see a female business student may experience specific challenges based on mean scores of raw data (Satisfaction and Diversity1) with feeling they can create an environment within Jabs College of Business that promotes integrating. Specifically, looking at the "Transition" and "Incorporation" stages of Tinto's model become important areas for understanding first-year female Business students' lived experiences as they navigate through the academic and social phases of their first year. Having difficulties within these stages may lead to a lack of commitment to the university and the likelihood of not returning increases. Lastly and

surprisingly, first-generation male students were more likely to be retained than continuing-generation male business students. Looking at the transition and incorporation, one might suggest continuing male students would have an easier time transitioning through Tinto's stages of integration, but this study showed first-generation male business students show evidence of having more grit to persevere.

Herzberg et al.'s Two-Factor Theory (1959) contributes to the interpretation of gender-specific retention by highlighting intrinsic and extrinsic factors through the lens of job satisfaction. While the theorized model of intrinsic factors did not yield statistical significance, it did recognize Kimberle Crenshaw's (1989) research regarding factors that interplay. Crenshaw (1989) introduced the term "intersectionality" in the 1980s and posited discrimination and oppression are multilayered and understanding lived experiences are created through the intersection of these lived experiences. Crenshaw's (1989) theory is particularly relevant when examining the interaction between being female and a first-generation college student (predicted probability of female, first-generation students being at 0.07). Within this study, this layered experience highlights Crenshaw's (1989) notion that researchers and administrators need to view retention issues through multiple lenses. The significance of being female/male and first/continuous generation can have a negative effect on moving through Tinto's stages of integration.

In combining the insights from Tinto's (1993) model and Herzberg's (1959) intrinsic and extrinsic factors, it is important to note that first-generation female students who progress through the stages of integration are less likely to be retained and the complex factors contributing to their likelihood of leaving the business major remain unclear. In the context of

Herzberg's framework, intrinsic motivators such as Satisfaction/Curriculum/Professors, Diversity, Advising, and Sense of Belonging were theorized to promote retention. Surprisingly, none of these factors exhibited statistical significance in the study. This departure from the findings of DeShields (2005), Schertzer and Schertzer (2004), and Elliot and Shin (2002), who suggested a positive connection between student satisfaction and increased likelihood of retention from year one to year two, raises further questions regarding the unique dynamics at play within Jabs first year students.

Within this study, the assessments of Astin (1984, 1999) and Seidman (2005) on student retention differ from the extrinsic factors proposed within this study. This paper considered factors such as Curriculum, Professors, Advisors, Resources, And Involvement to be markers in which current research suggests have ties to retention. According to Astin (1984, 1999), students who actively engaged with and were involved in their university systems were more likely to be retained and persist to graduation. However, the outcomes of this study diverge from Astin's (1984, 1999) Student Development Theory, as involvement failed to attain statistical significance. Additionally, the factor Resources, which included career development, did not achieve statistical significance, contradicting Seidman's work, which suggested if a university provided academic and social resources early on in their programs, the chances of retaining students could increase. The most surprising result was that Professors and Academic Advisors did not significantly influence a student's likelihood of retention. There have been numerous studies in which Academic Advising has been highlighted as a critical component to successfully retaining students (Cuseo, 2003., Habley, 2012 Wyckoff, 1999). Tinto's (2023) current research

looks specifically at the impact faculty and their curriculum can create promising ties to student retention yet did not yield as true within this study.

Practical Implications

The results from this study not only shed light on the overall complexity of student retention but also suggest new actionable measures and transformative changes within the first-year experience in the Jabs College of Business. As practical implications are explored inside and outside the Jabs College of Business, it is apparent administrators, faculty, and staff in higher education have opportunities to increase and build on the first-year student experience and thereby retention. This section will bridge the gap between theory and application and explore real-world applications of the research findings to guide the development of strategies, programs, and interventions that will enhance the overall student experience. Beginning with factors that resulted in statistical significance, such as Gender and Gender:FirstGeneration, this study's findings can recommend practical implications as well as offer insights that extend beyond statistical significance such as the intersectionality support programs, engagement opportunities, and enhanced academic advising.

This study's findings indicate gender is an promisng predictor of retention among first-year female business students. Not only does the study confirm a relationship exists between being female and not returning to a second year as a business student, but it also allows administrators to have a starting point to further explore a female perspective within the college. Ensuring female business students move through Tinto's (1993) stages of integration through the lens of Herzberg's (1953) intrinsic and extrinsic factors can be a framework in which to increase overall student numbers with a clearer understanding of actual programmatic and curricular

factors that work. Pivoting away from a “shotgun” approach of engagement, where time, effort, and resources are used without clear data, the Jabs College of Business can optimize its resources by implementing a more methodical and holistic approach. Further, this study’s findings offer an opportunity for the Jabs College of Business to fold in student conversations and continual feedback. Creating an environment of open dialogue, it allows the Jabs College of Business to gain valuable insight into the lived experiences, difficulties, and expectations faced by their female student body. Not only does this cycle of feedback demonstrate to their students they value their opinion but could help create additional sense of belonging and trust the college may be lacking.

Second, understanding the practical implications of the crossroads of first-year female students who are also first-generation can provide early programmatic intervention for these students. Specifically recognizing and researching how intrinsic motivators may differ for first-generation female students could lead to a deeper level of understanding to create support systems and resources these students could benefit from. These results build on existing evidence from Choy (2002), Warburton et al. (2000), and Pascarella et al. (2004) that imply first-generation college students encounter vastly different experiences in their first year of college and suggest, compared to their peers who have parents/guardians who have been in some form of higher education, they are disadvantaged. Pascarella et al. (2004) study gave further evidence that first-generation students begin at a disadvantage and once in college, the knowledge gap grows wider and dominos into other issues. However, Pascarella et al. (2004) went on to state if a first-generation student is able to navigate the first year of college successfully, the persistence

gap grows smaller with each subsequent year. Knowing this information will help administrators dig deeper into the nuances that first-generation female students have.

Although the logistic regression models did not yield statistically significant findings for Satisfaction/Curriculum/Professors, Sense of Belonging, Diversity 1, Diversity 2, and Advising, this paper acknowledges the EFA did detect underlying relationships that have interesting associations tied to them. Tying back the intersectionality of female first-generation students, Astin (1984), Choy (2000), and Pascarella et al. (2004) suggest fostering a sense of belonging in which an environment is created through rich diversity, supportive advising, and resources can all contribute to the retention equation. Patton et al. (2006) and Hawthorne and Young (2010) posit a strong relationship exists between professors/students and retention by describing professors who build strong teaching practices and supportive environments that help bolster a student's sense of belonging within the institution. The impact professors have within the classroom continues to be a significant indicator of how a student persists through the first year and beyond (Tinto, 2023). The diversity framework that schools create must have individualized collegiate depth and breadth and must be considered when developing curriculum and creating inclusive policies and procedures. This starts with data-driven understanding of where an institution is currently at and then forming a diverse collegiate environment for students to feel they can be themselves while simultaneously be challenged in safe surroundings.

The findings within this study highlight the complex dynamics of retention within the Jabs College of Business and opens doors for practical changes. Looking toward the opportunities administrators, faculty, staff, and students have to make transformational enhancements, this study identified three areas of recommendation to further explore: the first-

year female experience, the cross section of first-generation females, and the overall first-year experience inclusive of programmatic engagement and the classroom curriculum. Beyond the confirmation, a relationship exists between being female and not being retained, the findings create a starting point for leadership teams to continually explore the female experience. Aligning Tinto's (1993) stages of commitment and Herzberg's (1953) intrinsic and extrinsic factors, a foundation can be created to increase student numbers and retention. Most importantly, the findings suggest an opportunity exists for the Jabs College of Business community to create an open dialogue of communication with their students, specifically female students, which builds trust within the college community.

While this study did suggest a relationship did exist between being female and not being retained from year one to year two, translating that into practical solutions will take time. Three areas in which administrators, faculty, and staff can focus their efforts can be gender-specific support programs, networking opportunities with female business leaders, and promotion of inclusive classroom environments. In regard to gender-specific programming, considering specific mentorship cohorts that cover onboarding, extended orientation, tutoring, involvement in research, and networking. These cohorts should be led by female faculty and staff, which in turn this study recommends beginning with establishing a stable work environment for female faculty and staff. Cohoon (2002) suggests a stable work environment for females equates to a higher yield of female students being retained. The creation of networking/mentoring female students through industry partners is a way to close the gap and connect young female students with those who have been within the workforce to offer support and comradery.

The cross section of female first-generation student needs to be examined in greater detail. Kim et al., (2021) identified support systems lacking in female first-generation college students and understanding the students' lived experience can assist in the transition to navigate through the first year of school and beyond. The creation of one-on-one mentorship programs that begin after a female first-generation college student is accepted to a university can have a great impact. The mentorship does not need to high impact, but rather, early onboarding before a student steps foot on campus can assist in the transition. Additionally, extended orientation with the mentor can help the female first-generation students navigate their way through the complex higher education system. However, ensuring the mentors have a thoroughly trained understanding of how a first-year student's experience differs from their peers is imperative. While programs and resources intended to help first-generation female students can be impactful, the foundation on which it is built needs to be carefully crafted. Hossler (2009) warns institutions that while setting out to help first-generation college students is admirable, if proper steps are not taken to ensure those who are providing the care are trained or are identified as being first-generation college students, implicit bias can creep in unintentionally.

Evaluating the overall first-year student experience, beginning before a student steps foot on campus, can help make transformative progress in retaining students. This can begin with communication and messaging that is sent out to students once they have been accepted to MSU. Orientation practices can be reviewed to see it through the lens of a female student. Looking into providing extended orientation for female students throughout the first year that highlights areas in which female students struggle can circumvent problems before they occur or give resources and support for when they do occur. Looking inward toward the curriculum, a review of course

material to understand gender bias. This can be as little as reviewing case studies in which the protagonist is female versus male, which highlights Chen et al. (2019) work in which suggests female representation matters. Lastly, the implementation of a peer mentoring program can strengthen the ties for female students and create supportive networks. This can be a program as small as utilizing female students from the Senior Capstone class (BGEN 499) to connect with female students within the Introduction to Business and Entrepreneurship (BGEN 104US) or as big as having female students from both classes collaborate on a project together, which addresses the approach Patton et al. (2006) describes with creating learning communities, which in turn has ties to retention.

Suggestions for Future Research

While this study has shed light on the relationship that does exist with female students, and first-year female students as they relate to retention, it also serves as a pathway for future studies. In this section, future research topics will be explored that can assist with further understanding of what retention factors exist for first-year business students within the Jabs College of Business. The five areas to highlight for further studies include a qualitative or mixed method study that includes focus groups, case studies, and interviews to have a deeper understanding of the lived experiences of female business students that offer a more in-depth perspective than a survey can, especially because the survey instrument found no statistical significance. The second suggestion focuses on women of color's unique lived experiences within the first year to unearth how factors may differ from their peers. Jabs College of Business female students identify as predominantly white, but as the college continues to recruit students of color, their needs may differ drastically. The third area of future research explores the

effectiveness of gender-specific programming. Assessment needs to be part of the equation of understanding the retention model within Jabs College of Business. This will take time and outcomes are not likely to surface within a year or even two. Building a strategic assessment plan for all programs related to gender and retention will improve programmatic efficacy, identify specific success strategies within the program, address challenges that might not be working, and allocate recourses properly knowing they are scarce much of the time and hold the college accountable for creating a program that helps close the gap for women to the boardroom. The fourth area delves into how the COVID-19 pandemic played into retention and how it will continue playing into retention—specifically looking at Tinto's (1993) theory on Student Integration regarding prior characteristics students bring to a college campus. The lived experiences of these students through the lens of COVID-19 are deep and research has just begun to scrape what characteristics students will come to college with. Lastly, although Sense of Belonging emerged as being not statistically significant within the study, it is worth exploring further as it relates to first-year female business students. Sense of belonging has been inferred within many theoretical frameworks (Astin, 1984.; Bean, 1980.; Pascarella & Terenzini, 2004.; Tinto, 2017) and has considerable ties to retention, it merits further research studies within the framework of Jabs College of Business.

Chapter Summary

This empirical study intended to understand retention trends and relationship factors (intrinsic and extrinsic) within the Jabs College of Business & Entrepreneurship at MSU that contributed to the retention of first-year business students. The findings of this study revealed a relationship does exist between being female and not returning for a second year within the

college and specifically how female first-generation students may be more at risk for not returning. Theoretical implications of the findings were associated with Tinto's (1993) and Herzberg's (1953) theory of female students encountering hardships through the stages of integration through the lens of intrinsic and extrinsic factors. Practical implications and recommendations can be sought to foster a greater sense of belonging while simultaneously continuing to research the unique factors that foster or deter students from returning to a second year. The need for a consistent dialogue surrounding student retention, specific to females, is imperative and can assist in creating the pathway to the boardroom where decisions for the betterment of females can be made.

REFERENCES CITED

About Us. AACSB. (n.d.). https://www.aacsb.edu/about-us

About Us. EAB. (2024, March 5). https://eab.com/about/

About Hud. HUD.gov / U.S. Department of Housing and Urban Development (HUD). (2022, March 31). https://www.hud.gov/about

About us: Red. Montana State University: Mountains and Minds. (n.d.). https://www.montana.edu/research/about.html

About Wharton. The Wharton School. (2019, August 9). https://www.wharton.upenn.edu/about-wharton/

(ACT/EMP), B. for E. A. (2019, May 22). *Women in business and management: The Business Case for Change*. Global report: Women in Business and Management: The business case for change. https://www.ilo.org/global/publications/books/WCMS_700953/lang--en/index.htm

Agresti, A. (2018). *Statistical Methods for the Social Sciences* (5th ed.). Pearson.

Aguilar, Y., Aguilera, B., Bhai, L., Brown, H., Jackson, E., Mariano, A., & Means, V. (2023). (rep.). 2022 Technical Equity Experience Survey. AnitaB.org. https://anitab.org/wp-content/uploads/2023/04/Anita-B-TechEES-2022-Report-FINAL-1.pdf

Akee, R. (2021). Stolen Lands and Stolen Opportunities. *Native American and Indigenous Studies 8*(1), 123-128. https://www.muse.jhu.edu/article/784824.

Albaum, G., Wiley, J., Roster, C., & Smith, S. M. (2011). Visiting item non-responses in internet survey data collection. *International Journal of Market Research*, *53*(5), 687-703.

Alshmemri, M., Shahwan-Akl, L., & Maude, P. (2017). Herzberg's two-factor theory. *Life Science Journal*, *14*(5), 12-16.

Appelbaum, S., Audet, L., & Miller, J. C. (2003, February). (PDF) gender and leadership? leadership and gender? A journey through ... https://www.researchgate.net/publication/235285425_Gender_and_Leadership_Leadership_and_Gender_A_Journey_Through_the_Landscape_of_Theories

Applen, H., & Kleiner, B. H. (2001). An overview of U.S. Supreme Court decisions in sexual harassment cases. *Managerial Law*, *43*(1), 17-23. https://doi.org/10.1108/03090550110770264

Association to Advance Collegiate Schools of Business. AACSB Data Direct. (n.d.). https://datadirect.aacsb.edu/home.cfm

Astin, A.W. (1984). Student Involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25(4), 297-308.*

Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development, 40*(5), 518. https://www.proquest.com/scholarly-journals/student-involvement-developmental-theory-higher/docview/195180247/se-2

Baker, J., & Cangemi, J. (2016). Why Are There So Few Women CEOs and Senior Leaders in Corporate America? Organization Development Journal, 34(2), 31-43. https://www.proquest.com/scholarly-journals/why-are-there-so-few-women-ceos-senior-leaders/docview/1791020833/se-2?accountid=28148

Balsamo, M., Lauriola, M., & Saggino, A. (2012). Personality and College Major Choice. Which Come First? Psychology, 03(05), 399-405. https://doi.org/10.4236/psych.2012.35056

Barbera, S. A., Berkshire, S. D., Boronat, C. B., & Kennedy, M. H. (2020). Review of undergraduate student retention and graduation since 2010: Patterns, predictions, and recommendations for 2020. *Journal of College Student Retention: Research, Theory & Practice, 22*(2), 227-250.

Bass, B. M., & Avolio, B. J. (1994). Shatter the glass ceiling: Women may make better managers. *Human resource management, 33*(4), 549-560.

Bean, J. 1980. Dropouts and turnover: The synthesis and test of a causal model of student attrition. Research in Higher Education. 12(2): 155–187.

Bean, J. 1982. Conceptual models of student attrition: How theory can help the institutional researcher. New Directions for Institutional Research. 1982(36): 17–33.

Bean, J. P., & Metzner, B. S. (1985). *A Conceptual Model of Nontraditional Undergraduate Student Attrition*. *Review of Educational Research, 55*(4), 485–540.

Berger, E.L., Pina, A.A., & Therrien, W. H.(2012). Supporting persistence in online and campus degree programs: A conceptual model. *Online Journal of Distance Learning Administration,* 15(1). Retrieved from https://www.westga.edu/distance/ojdla/spring151.html.

Berger, M. C. (1988). Predicted Future Earnings and Choice of College Major. ILR Review, 41(3), 418–429. https://doi.org/10.1177/001979398804100306

Berger, M. (2012). *375th: A Look Back. Harvard Gazette*. Retrieved from Archives — Page 365 of 876 — Harvard Gazette

Bennis, W. G., & O'Toole, J. (2005). How business schools have lost their way. *Harvard business review*, *83*(5), 96-104.

Bickel, P. J., Hammel, E. A., & O'Connell, J. W. (1975). Sex Bias in Graduate Admissions: Data from Berkeley. *Science*, *187*(4175), 398–404. http://www.jstor.org/stable/1739581

Biswas, P. K., Chapple, L., Roberts, H., & Stainback, K. (2021, November 5). *Board gender diversity and women in Senior Management - Journal of Business Ethics*. SpringerLink. https://link.springer.com/article/10.1007/s10551-021-04979-x

Blake, M. (2023) *Gender Headcount by College* Tableau Software. Montana State University

Bourke, B. (2014, August 18). *Positionality: Reflecting on the research process - core*. TQR. https://core.ac.uk/download/pdf/51087095.pdf

Buckalew, L. W., Daly, J. P., & Coffin, D. A. (2012). Leading an intergenerational workforce: An integrative conceptual framework. *Journal of Organizational Behavior*, *33*(8), 1166–1186.

Bracht, G. H., & Glass, G. V. (1968). The external validity of experiments. *American educational research journal*, *5*(4), 437-474.

Braxton, J. M. (Ed.). (2000). *Reworking the student departure puzzle*. Vanderbilt University Press.

Brenan, M. (2023, August 17). *Americans' confidence in higher education down sharply*. Gallup.com. https://news.gallup.com/poll/508352/americans-confidence-higher-education-down-sharply.aspx

Breneman, D. (1993). Higher Education: On a Collision Course with New Realities. Viewpoints, (120). https://files.eric.ed.gov/fulltext/ED379975.pdf

Brodsky, M. (2019, November 20). *Catching up, finally, with a first female*. Wharton Magazine. Retrieved February 18, 2022, from https://magazine.wharton.upenn.edu/digital/catching-up-finally-with-a-first-female/

Bureau of Labor Statistics, U.S. Department of Labor, The Economics Daily, Changes in men's and women's labor force participation rates at https://www.bls.gov/opub/ted/2007/jan/wk2/art03.htm (visited April 20, 2022).

Burke, A. (2019). Student Retention Models in Higher Education: A Literature Review. *College and University*, *94*(2), 12-21. https://www.proquest.com/scholarly-journals/student-retention-models-higher-education/docview/2232610556/se-2

Cantrell, A. (2015, November 16). *Building a better entrepreneur*. Montana State University. https://www.montana.edu/news/mountainsandminds/15827/buildling-a-better-entrepreneur

Carpenter, H. C. (1951). Emerson, Eliot, and the Elective System. *The New England Quarterly, 24*(1), 13–34. https://doi.org/10.2307/361254

Cavico, F., & Mujtaba, B. (2010). Discrimination and the Aging American Workforce: Legal Analysis and Management Strategies. *Journal of Diversity Management*, *5*(2), 1-10.

Chen, J., Leung, W. S., Song, W., & Goergen, M. (2019). Why female board representation matters: The role of female directors in reducing male CEO overconfidence. *Journal of Empirical Finance*, *53*, 70-90.

Cho, S., Crenshaw, K. W., & McCall, L. (2013). Toward a field of intersectionality studies: Theory, applications, and praxis. *Signs: Journal of women in culture and society*, *38*(4), 785-810.

Choy, S. (2002). *Nontraditional Undergraduates: Findings from "The Condition of Education, 2002."* ED Pubs.

Christ, T.J. (2007), Experimental control and threats to internal validity of concurrent and nonconcurrent multiple baseline designs. Psychol. Schs., 44: 451-459. https://doi.org/10.1002/pits.20237

Chrobot-Mason, D., & Aramovich, N. P. (2013). The psychological benefits of creating an affirming climate for workplace diversity. Group & Organization Management, 38(6), 659-689.

C. Schertzer & S. Schertzer (2004) Student Satisfaction and Retention: A Conceptual Model, Journal of Marketing for Higher Education, 14:1, 79-91, DOI: 10.1300/J050v14n01_05

Cohen, A. M., & Kisker, C. B. (2009). *The shaping of American higher education: Emergence and growth of the contemporary system*. John Wiley & Sons.

Cohoon, J. M. (2002). Recruiting and retaining women in undergraduate computing majors. *ACM SIGCSE Bulletin*, *34*(2), 48-52.

Congress. (2013, April 26). https://www.congress.gov/113/bills/hr1793/BILLS-113hr1793ih.pdf

Correll, S. J., Benard, S., & Paik, I. (2007). Getting a Job: Is There a Motherhood Penalty? *American Journal of Sociology*, *112*(5), 1297–1338. https://doi.org/10.1086/511799

Coughlan, Cronin, P., & Ryan, F. (2009). Survey research: Process and limitations. Inernational Journal of Therapy and Rehabilitation, 16(1), 9–15. https://doi.org/10.12968/ijtr.2009.16.1.37935

Cox, P. L., Schmitt, E. D., Bobrowski, P. E., & Graham, G. (2005). Enhancing the first-year experience for business students: Student retention and academic success. *Journal of Behavioral and Applied Management, 7*(1), 40-68.

Crenshaw, C. (1995). The "protection" of "woman": A history of legal attitudes toward women's workplace freedom. *Quarterly Journal of Speech, 81*(1), 63-82.

Cuseo, J. (2003). Academic advisement and student retention: Empirical connections and systemic interventions. *National Academic Advising Association*, 2019-01.

Curriculum, Higher Education ." Encyclopedia of Education. . Retrieved July 28, 2022 from Encyclopedia.com: https://www.encyclopedia.com/education/encyclopedias-almanacs-transcripts-and-maps/curriculum-higher-education

Crenshaw, K. (1989). Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics. *University of Chicago Legal Forum, 1989(1), 139-167.*

De Pauw, L. (1994). Roles of Women in the American Revolution and the Civil War. Social Education Special Section.

DeShields, O. W., Kara, A., & Kaynak, E. (2005, March 1). *Determinants of business student satisfaction and retention in higher education: Applying Herzberg's two-factor theory*. International Journal of Educational Management. Retrieved December 2, 2022, from https://www.emerald.com/insight/content/doi/10.1108/09513540510582426/full/pdf?title=determinants-of-business-student-satisfaction-and-retention-in-higher-education-applying-herzbergs-twofactor-theory

Dickson, L.M. (2009). Race and gender differences in college major choice. Retrieved from Princeton University website: http://theop.princeton.edu/reports/wp/ANNALS _Dickson_Manuscript_FINAL_(31May09).pdf

Digest of Education Statistics, 2017. National Center for Education Statistics (NCES) Home Page, a part of the U.S. Department of Education. (n.d.). Retrieved March 29, 2022, from https://nces.ed.gov/programs/digest/d17/tables/dt17_325.25.asp

Durkheim, E. (1897/1951). *Suicide: A Study in Sociology.* Gelncos, IL: Free Press. Translated by J.A. Spaulding and G. Simpson.

Durso, Samuel & Cunha, Jacqueline. (2018). Determinant Factors For Undergraduate Student's Dropout In An Accounting Studies Department of a Brazilian Public University. Educação em Revista. 34. 10.1590/0102-4698186332.

Eisenstein, H. (2005). A Dangerous Liaison? Feminism and Corporate Globalization. *Science & Society*, *69*(3), 487–518. http://www.jstor.org/stable/40404269

Elliott, Kevin M. and Dooyoung Shin (2002), "Student Satisfaction: An alternative approach to assessing this important concept,"Journal of Higher Education Policyand Management, Vol. 24, No. 2, 2002.

Elliott, R. W., & Paton, V. O. (2018). US higher education reform: Origins and impact of student curricular choice. *International Journal of Educational Development*, *61*, 1–4. https://doi.org/10.1016/j.ijedudev.2017.11.008

Elting, L. (2023, January 30). *New Year, New Glass Heights: Women now comprise 10% of top U.S. corporation CEOS*. Forbes. https://www.forbes.com/sites/lizelting/2023/01/27/new-year-new-glass-heights-for-the-first-time-in-history-over-10-of-fortune-500-ceos-are-women/?sh=3485a58be77f

Evans, N. J., Forney, D. S., Guido, F. M., Patton, L. D., & Renn, K. A. (2009). Student development in college: Theory, research, and practice. John Wiley & Sons.

Family and medical leave act. United States Department of Labor. (n.d.). Retrieved February 19, 2022, from https://www.dol.gov/agencies/whd/fmla

Faul, F., Erdfelder, E., Lang, AG. *et al.* G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods* 39, 175–191 (2007). https://doi.org/10.3758/BF03193146

Field, A., Miles, J., Field, Z. (2012) *Discovering Statistics Using R.* Sage Publications, Inc.

Fifty Years After the Equal Pay Act. Fifty Years After The Equal Pay Act. (2013, June). https://obamawhitehouse.archives.gov/sites/default/files/equalpay/equal_pay_task_force_progress_report_june_2013_new.pdf

Fine, C., Sojo, V., & Lawford-Smith, H. (2020). Why does workplace gender diversity matter? Justice, organizational benefits, and policy. Social Issues and Policy Review, 14(1), 36-72.

Fisk, D. M. (2003). American labor in the 20th century. Compensation and working conditions, 6, 3-8.

Fitzsimmons, T. W., Callan, V. J., & Paulsen, N. (2014). *Gender disparity in the C-suite: Do male and female CEOS differ in how they reached the top?*. Gender disparity in the C-suite: Do male and female CEOs differ in how they reached the top? https://www.sciencedirect.com/science/article/pii/S1048984313000908?ref=pdf_download&fr=RR-2&rr=7cf82dc6b8edc6e1

Founding. National Organization for Women. (n.d.). Retrieved April 17, 2022, from

Frey, B. (2016). *There's a Stat for That!* Sage Publications, Inc.

Gamson, Z. (1994). Nots on Higher Education in the 1990s. *New England Journal of Public Policy.* Vol 10, Issue 1, Article 19

Gerrish, K., & Lacey, A. (2010). The research process in nursing. John Wiley & Sons.

Gibbons , M.M. , Woodside , M. , Hannon , C. , Sweeney , J.R. and Davison , J. 2011 . The lived experience of work and career: Women whose parents lack postsecondary education . *Career Development Quarterly* , 59 : 315 – 29 . doi: 10.1002/j.2161-0045.2011.tb00072.x

Glass, C., & Cook, A. (2018). Do women leaders promote positive change? Analyzing the effect of gender on business practices and diversity initiatives. *Human Resource Management, 57*(4), 823-837.

Goodchild, L. F., Wechsler, H. S., Domonkos, L. & Association for the Study of Higher Education. (1997). *The history of higher education*. Needham Heights, MA: Simon & Schuster Custom Publ.Gordon, L. D. (1990). *Gender and higher education in the Progressive Era*. New Haven: Yale University Press.

Goodwin, Ian. "Montana State University Enrollment Gender by College." Tableau.mus.edu, 2021, https://tableau.mus.edu/#/site/bozeman/views/GenderbyCollege/Gendernew?:iid=2. Grawe, N. D. (2018). Demographics and the demand for higher education. Johns Hopkins UniversityPress.https://ebookcentral.proquest.com/lib/montana/reader.action?docID=4862747&ppg=1

Goodwin, I. (2022). *Historical Enrollment Headcount & FTE.* Montana State University. https://www.montana.edu/opa/students/enrollment/headhist.html

Gordon, L. D. (1990). *Gender and higher education in the Progressive Era*. New Haven: Yale University Press.

Grawe, N. D. (2018). *Demographics and the demand for higher education*. JHU Press.

Green, T., McConahay, M., & Range, E. (2019, March 8). *7 things you should know about enrollment management*. EDUCAUSE. Retrieved November 26, 2022, from https://library.educause.edu/resources/2019/3/7-things-you-should-know-about-enrollment-management

Greenwald, M. (1990). Women, War, and Work – The Impact of World War I on Women Workers in the United States. Cornell University Press

Geiger, R. (2014). *The History of American Higher Education: Learning and Culture from the Founding to World War II.* Princeton: Princeton University Press. https://doi.org/10.1515/9781400852055

Habley, W. R. (1981). Academic advisement: The critical link in student retention. *Naspa Journal*, *18*(4), 45-50.

Habley, W. R., Bloom, J. L., & Robbins, S. B. (2012). *Increasing persistence research-based strategies for college student success* (1st ed.). Jossey-Bass.

Harper, J. (2004). Women During the Civil War – An Encyclopedia. Routledge Publishing.

Harwarth, I., Maline, M., DeBra, E. (1997). *Women's Colleges in the United States: History, Issues, and Challenges.* United States Department of Education

Hawthorne, M., & Young, A.,(2010). First-Generation Transfer Students' Perceptions. *The Journal of College Orientation and Transition*, *17*(2). https://doi.org/10.24926/jcotr.v17i2.2722

Heiat, A., Brown, D., & Johnson, D. M. (2007). An empirical analysis of underlying factors affecting the choice of accounting major. *Journal of College Teaching & Learning (TLC)*, *4*(8).

Herzberg, F. (1959). The Motivation to Work. *Personnel Psychology*, 12(2), 137-142.

History: National Organization for Women. National Organization for Women -. (n.d.). https://now.org/about/history/

History. The Wharton School. (2019, October 15). Retrieved April 2, 2022, from https://www.wharton.upenn.edu/history/

History. History of The MSU School of Business. (1982). Montana State University College of Business

Hoffman, M., Richmond, J., Morrow, J., & Salomone, K. (2002). Investigating "Sense of Belonging" in First-Year College Students. *Journal of College Student Retention: Research, Theory & Practice*, *4*(3), 227–256. https://doi.org/10.2190/DRYC-CXQ9-JQ8V-HT4V

Hom, M. (2021) BGEN 104US: Business and Entrepreneurship Fundamentals [Syllabus]. Bozeman, MT: Montana State University.

Horowitz, H. (1984). *Alma mater : Design and experience in the women's colleges from their nineteenth-century beginnings to the 1930s* (1st ed.). New York: Knopf.

Hossler, D. (2009). The Study of Institutional Practices Related to Student Persistence. Journal of College Student Retention: Research, Theory and Practice.

Howard, M. (2016) A Review of Exploratory Factor Analysis Decisions and Overview of Current Practices: What We Are Doing and How Can We Improve?, International Journal of Human-Computer Interaction, 32:1, 51-62, DOI: 10.1080/10447318.2015.1087664

Hu, L.T., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling: A Multidisciplinary Journal, 6(1), 1-55.

Jenicke, L. O., Holmes, M. C., & Pisani, M. J. (2013). Approaching the challenge of student retention through the lens of quality control: A conceptual model of university business student retention utilizing six sigma. *Journal of College Student Retention: Research, Theory & Practice*, *15*(2), 193-214.

Johnson, D. (1991). Higher Education in the United States in the year 2000. *UNESCO International Bureau of Education, Prospects: quarterly review of education XXI, 3, p. 430-442.*

Kaiser, H. F., & Rice, J. (1974). Little Jiffy, Mark IV. *Educational and Psychological Measurement, 34*(1), 111–117. https://doi.org/10.1177/001316447403400115

Karlen, J. M. (2004). ATTRITION OF WOMEN BUSINESS MAJORS IN AN URBAN COMMUNITY COLLEGE. *Journal of College Student Retention, 5*(1), 1-9. https://www-proquest-com.proxybz.lib.montana.edu/scholarly-journals/attrition-women-business-majors-urban-community/docview/196723271/se-2

Karp, M. M., Hughes, K. L., & O'Gara, L. (2010). An Exploration of Tinto's Integration Framework for Community College Students. *Journal of College Student Retention: Research, Theory & Practice, 12*(1), 69-86. https://doi.org/10.2190/CS.12.1.e

Kellams, S. E. (1981). [Review of *Academic Adaptations: Higher Education Prepares for the 1980s and 1990s*, by V. A. Stadtman]. *Higher Education, 10*(5), 607–610. http://www.jstor.org/stable/3446302

Key, S. (1996) Economics or Education: The Establishment of American Land-Grant Universities, The Journal of Higher Education, 67:2, 196-220, DOI: 10.1080/00221546.1996.11780256

Kim, J., Miller, S. M., Hwang, J., & Olson, J. S. (2021). Female First-Generation College Students: A Review of Challenges and Successes. *Journal of Global Education and Research*, *5*(2), 136-150.

Kincaid, J. (1993). Government financing of higher education in the 1990s: Austerity, affordability, and accountability. *Metropolitan Universities*, *4*(3), 33-47.

Koch, J. V. (1997). *PRICE, QUALITY, AND SERVICE ON THE INTERNET: SENSE AND NONSENSE*. *Contemporary Economic Policy, 15*(3), 1–7.

Kolev, K., Hughes-Morgan, M., & Rehbein, K. (2021). The role of female directors in the boardroom: Examining their impact on competitive dynamics. *Business & Society, 60*(4), 811-843.

Lau, L. K. (2003). Institutional Factors Affecting Student Retention, *Education, 124(1),* 126-136.

Lawson, M. A., Martin, A. E., Huda, I., & Matz, S. C. (2022, February 22). *Hiring women into senior leadership positions is associated with a reduction in gender stereotypes in organizational language*. PNAS - Psychological and Cognitive Sciences. https://www.pnas.org/doi/10.1073/pnas.2026443119

Leone, M., & Tian, R. G. (2009). *Push vs pull: Factors influencing student retention*. American Journal of Economics and Business Administration, 1(2), 122–132. DOI: 10.3844/ajebasp.2009.122.132

Levine, A. (2011). Bradford College: Requiem for a college. New Directions for Higher Education, 2011(156), 19-26.

Lewis, C., & Neville, J. (1995). Images of Rosie: A content analysis of women workers in American magazine advertising, 1940–1946. Journalism & Mass Communication Quarterly, 72(1), 216-227.

Lichy, J., & Enström, R. (2015). Rethinking business models for 21st century higher education: A European perspective. *Journal of Higher Education Policy and Management*, *37*(6), 651–664. PDF

Long, B. T. (2014, December). *How the financial crisis and great recession affected higher ... - NBER*. How the Financial Crisis and Great Recession Affected Higher Education. https://www.nber.org/system/files/chapters/c12862/c12862.pdf

Longley, Robert. (2021, March 3). Profile of Women in the United States in 2000. Retrieved from https://www.thoughtco.com/women-in-the-us-in-2000-3988512

Lucas, C. J. (1994). American higher education: A history. New York: St. Martin's Press

Macabasco, L. W., Lawson, M. A., Martin, A., Huda, I., & Matz, S. C. (2022, August 31). *Hiring female CEOS changes how companies talk about women*. Stanford Graduate School of Business. https://www.gsb.stanford.edu/insights/hiring-female-ceos-changes-how-companies-talk-about-women

Madigan, J. C. (2009). The education of women and girls in the United States: A historical perspective. *Advances in Gender and Education, 1*(1), 11.

Malgwi, Charles A., Howe, Martha A., & Burnaby, Priscilla A. (2005). Influences on Students' Choice of College Major. *Journal of Education for Business, 80*, 275–282. http://dx.doi.org/10.3200/JOEB.80.5.275-282

Manyanga, F., Sithole, A., & Hanson, S. M. (2017). Comparison of Student Retention Models in Undergraduate Education from the Past Eight Decades. *Journal of Applied Learning in Higher Education, 7*, 30-42.

Marks, M. B. , Haug, J. C. & Huckabee, W. A. (2016) Understanding the factors that influence student satisfaction with the undergraduate business major, Journal of Education for Business, 91:5, 280-288, DOI: 10.1080/08832323.2016.1188757

Mavin, S. (2009). Navigating the labyrinth: senior women managing emotion. International Journal of Work Organization and Emotion, 3(1), 81-87.

McColl, E., Jacoby, A., Thomas, L., Soutter, J., Bamford, C., Steen, N., ... & Bond, J. (2001). Design and use of questionnaires: a review of best practice applicable to surveys of health service staff and patients. *Health Technol Assess*. 2001;5:31.

McDermott, R. (2011). Internal and external validity. *Cambridge handbook of experimental political science, 27*.

McKinsey & Company. (2021, December 13). Women in the workplace 2021. McKinsey & Company. Retrieved February 20, 2022, from https://www.mckinsey.com/featured-insights/diversity-and-inclusion/women-in-the-workplace

McLaren, P. G. (2020). Strengthening capitalism through philanthropy: The Ford Foundation, managerialism and American business schools. *Management Learning*, *51*(2), 187-206.

McNeely, J. H. (1937). *College Student Mortality* (Report No. 123). United States Government.

Meyer, D., & Boutcher, S. (2007). Signals and Spillover: Brown v. Board of Education and Other Social Movements. *Perspectives on Politics*, 5(1), 81-93.

Mills, G. E., & Gay, L. R. (2019). *Educational research: Competencies for analysis and applications*. Pearson. One Lake Street, Upper Saddle River, New Jersey 07458.

Montana State University Census. (2021). *Montana State University Fall Census*. Internal Report Montana State University

Montana State University - website Degree and Certificate Types (mus.edu)

Montana Board of Regents of Higher Education Policy and ... - mus. (2019, November 22). https://mus.edu/borpol/bor300/303-1.pdf

Morrison, A.M. (1992), "NEW SOLUTIONS TO THE SAME OLD GLASS CEILING", *Women in Management Review*, Vol. 7 No. 4. https://doi.org/10.1108/09649429210014360

Morrison, L., and Silverman, L. (2012). Retention Theories, Models, and Concepts. In Seidman, A. *College Student Retention* (pp.69 – 84). New York Rowman & Littlefield Publishers, Inc.

MSU Catalog (n.d.). Montana State University. Retrieved Jan 31, 2023, from http://catalog.montana.edu/coursedescriptions/m/

MSU Core General Curricular Requirements (n.d.). Montana State University. Retrieved Jan 25, 2023, from http://catalog.montana.edu/core-general-curricular-requirements/

Nash, M. (1996). Spotlight falls on drop-outs: United Kingdom colleges of further education, recruitment and retention plans. *Times Educational Supplement*, *4187*, 28.

Nash, M. (2018). *Women's Higher Education in the United States: New Historical Perspectives.* Palgrave Macmillian.

National Archives and Records Administration. (n.d.). *Civil Rights Act (1964)*. National Archives and Records Administration. Retrieved April 17, 2022, from https://www.archives.gov/milestone-documents/civil-rights-act

National Center for Education Statistics. (2017). Public High School Graduation Rates. *Condition of Education*. U.S. Department of Education, Institute of Education Sciences. Retrieved [date], from https://nces.ed.gov/programs/coe/indicator/coi.

National Center for Education Statistics. (2019). Undergraduate Enrollment. Condition of Education. U.S. Department of Education, Institute of Education Sciences. June 5, 2022 ,from https://nces.ed.gov/programs/coe/indicator/cha.

National Equal Pay Task Force. (2013, June). *Fifty years after the equal pay act - whitehouse.gov*. Fifty Years After the Equal Pay Act. Retrieved April 17, 2022, from https://obamawhitehouse.archives.gov/sites/default/files/image/image_file/equal_pay-task_force_progress_report_june_10_2013.pdf

Nieuwoudt, J. E., & Pedler, M. L. (2023). Student Retention in Higher Education: Why Students Choose to Remain at University. *Journal of College Student Retention: Research, Theory & Practice, 25*(2), 326-349.

Noël, Michaels, C., & Levas, M. G. (2003). The Relationship of Personality Traits and Self-Monitoring Behavior to Choice of Business Major. *Journal of Education for Business, 78*(3), 153–157. https://doi.org/10.1080/08832320309599713

Oates, M. (2021). *Pursuing Truth: How Gender Shaped Catholic Education at the College of Notre Dame of Maryland*. Ithaca, NY: Cornell University Press. https://doi.org/10.1515/9781501753800

Oakley, J.G. Gender-based Barriers to Senior Management Positions: Understanding the Scarcity of Female CEOs. *Journal of Business Ethics* 27, 321–334 (2000). https://doi.org/10.1023/A:1006226129868

O'Connor, E. (2011). *Creating New Knowledge in Management: Appropriating the field's lost foundations*. Stanford University Press.

October 12, 1942: Fireside Chat 23: On the Home Front. Miller Center. (2017, April 26). Retrieved February 20, 2022, from https://millercenter.org/the-presidency/presidentialspeeches/october-12-1942-fireside-chat-23-home-front

Office of Planning and Analysis (2023). Montana State University

Pai, S. (2019). *Women in business break new ground: 60 years of McDonough Alumnae*. McDonough School of Business. Retrieved March 27, 2022, from https://msb.georgetown.edu/news-story/women-in-business-break-new-ground-60-years-of-mcdonough-alumnae/

Palmieri, P. A. (2007). From Republican Motherhood to Race Suicide: Arguments on the Higher Education. *The history of higher education, 204.*

Pantages, T. J., & Creedon, C. F. (1978). Studies of College Attrition: 1950—1975. *Review of Educational Research, 48*(1), 49–101. https://doi.org/10.3102/00346543048001049

Parmer, L. L. (2021). The road to gender equality: Persisting obstacles for American women in the workforce. *The Psychologist-Manager Journal*, *24*(2), 85-96. doi:https://doi.org/10.1037/mgr0000115

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini, P. T. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education*, *75*(3), 249-284.

Patton, L. D., Morelon, C., Whitehead, D. M., & Hossler, D. (2006). Campus-based retention initiatives: Does the emperor have clothes?. *New Directions for Institutional Research*, *2006*(130), 9-24.

Payscale. (2022, April 9). *2022 state of the Gender Pay Gap Report*. Retrieved April 17, 2022, from https://www.payscale.com/research-and-insights/gender-pay-gap/

Perkins, L. M. (1998). The Racial Integration of the Seven Sister Colleges. *The Journal of Blacks in Higher Education*, *19*, 104–108. https://doi.org/10.2307/2998936

Persistence & Retention. National Student Clearinghouse Research Center. (2023). https://nscresearchcenter.org/persistence-retention/#:~:text=Persistence%20rate%20is%20measured%20by,return%20to%20the%20same%20institution.

Pratt, I. S., Harwood, H. B., Cavazos, J. T., & Ditzfeld, C. P. (2019). Should I Stay or Should I Go? Retention in First-Generation College Students. *Journal of College Student Retention: Research, Theory & Practice*, *21*(1), 105-118. https://doi.org/10.1177/1521025117690868

Radke, A. G. (2002). *'Can she not see and hear, and smell and taste?': Women students at coeducational land-grant universities in the American* West, 1868–1917*. The University of Nebraska-Lincoln.

Renn, K. A., & Reason, R. D. (2021). College students in the united states : Characteristics, experiences, and outcomes. Stylus Publishing, LLC. https://ebookcentral.proquest.com/lib/montana/reader.action?docID=6579128

Röbken, H. (2004). The Historical Development of Business Schools. In *Inside the "Knowledge Factory"* (pp. 27-48). Deutscher Universitätsverlag, Wiesbaden.

Rohr, S. L. (2012). How Well Does the Sat and GPA Predict the Retention of Science, Technology, Engineering, Mathematics, and Business Students. *Journal of College Student Retention: Research, Theory & Practice*, *14*(2), 195–208. https://doi.org/10.2190/CS.14.2.c

Rury, J., & Harper, G. (1986). The trouble with coeducation: Mann and women at Antioch, 1853–1860. *History of Education Quarterly*, *26*(4), 481-502.

Sablik, T. (2013, November 22). *Recession of 1981–82*. Federal Reserve History. Retrieved April 20, 2022, from https://www.federalreservehistory.org/essays/recession-of-1981-82

Sanders, L., & Burton, J. D. (1996). From retention to satisfaction: New outcomes for assessing the freshman experience. *Research in Higher Education*, *37*(5), 555-567. https://doi.org/10.1007/BF01724938

Schertzer, C.B., & Schertzer, S.M.B. (2004). Student Satisfaction and Retention: A Conceptual Model. *Journal of Marketing for Higher Education,* 14(1). 79-91. https://doi.org/10.1300/j050v14n01_05.

Schlehofer, M. M., Casad, B. J., Bligh, M. C., & Grotto, A. R. (2011). Navigating public prejudices: The impact of media and attitudes on high-profile female political leaders. Sex roles, 65(1), 69-82. Thelin, J. R. (2019). A history of American higher education. JHU Press.

Schlossman, S., Sedlak, M., & Wechsler, H. (1998). The "new look": The Ford Foundation and the revolution in business education. *Selections*, *14*(3), 8-28.

Schertzer, C. B., & Schertzer, S. M. (2004). Student satisfaction and retention: A conceptual model. *Journal of Marketing for Higher Education*, *14*(1), 79-91.

Seidman, A. (Ed.). (2012). *College student retention: Formula for student success*. Rowman & Littlefield Publishers, Incorporated.

Seidman, A., Astin, A. W., Berger, J. B., Bibo, E. W., Burkum, K. R., Cabrera, A. F., Crisp, G., Gansemer-Topf, A., Hagedorn, L. S., & LaNasa, S. M. (2012). *College Student Retention : Formula for Student Success.* (2nd ed.). Rowman & Littlefield Publishers.

Seidman, A. (2018). *Crossing the Finish Line – How to retain and graduate your student*. Rowman & Littlefield Publishers, Incorporated.

Seidman, A. (2005). Minority student retention: Resources for practitioners. *New directions for institutional research*, *2005*(125), 7-24.

Sexton, D. L., & Bowman-Upton, N. (1990). Female and male entrepreneurs: Psychological characteristics and their role in gender-related discrimination. Journal of Business Venturing, 5(1), 29–36.

Sexton, P. C. (1976). Women in Education. Perspectives in American Education.

Slater, J. M. (1960). Influences on Students' Perception and Persistence in the Undergraduate College. *The Journal of Educational Research*, *54*(1), 3–8. http://www.jstor.org/stable/27530367

Smerek, R. E., & Peterson, M. (2007). Examining Herzberg's theory: Improving job satisfaction among non-academic employees at a university. *Research in higher education*, *48*, 229-250.

Smith-Barrow, Delece. (2017, October 17). *Determine college fit as nontraditional student - usnews.com*. Retrieved December 3, 2022, from https://www.usnews.com/education/best-colleges/articles/2017-10-17/determine-college-fit-as-nontraditional-student.

Spady, W. G. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, *1*(1), 64-85.

Spady, W.G. Dropouts from higher education: Toward an empirical model. *Interchange* 2, 38–62 (1971). https://doi-org.proxybz.lib.montana.edu/10.1007/BF02282469

Sorber, N. (2018). *Land-Grant Colleges and Popular Revolt: The Origins of the Morrill Act and the Reform of Higher Education.* Cornell University Press.

Sorensen, E. (1991). Gender and Racial Pay Gaps in the 1980s: Accounting for Different Trends. Final Report. Researching Women in the Workplace.

Soria, K. & Stebleton, M. (2012). First-generation students' academic engagement and retention, Teaching in Higher Education, 17:6, 673-685, DOI: 10.1080/13562517.2012.666735

Specialty certificates. Montana State University: Mountains and Minds. (n.d.). https://www.montana.edu/business/curriculum/certificates.html

Straker, R. (1963). Horace Mann and others; chapters from the history of Antioch College. Yellow Springs, Ohio: Antioch Press.

Stoltzfus, T. (2010). *The Calling Journey: Mapping the Stages of a Leader's Life Call - A Coaching Guide*.

Sumner, H. L. (1910). The Historical Development of Women's Work in the United States. *Proceedings of the Academy of Political Science in the City of New York*, *1*(1), 11–26. https://doi.org/10.2307/1171693

Summerskill, J. (1962). Dropouts from College. In N. Sanford (Ed.), *The American college: A psychological and social interpretation of the higher learning* (pp. 627–657). John Wiley & Sons, Inc.. https://doi.org/10.1037/11181-019

Sweet, J. (2021, October 25). History of women in the Workplace. Stacker. Retrieved February 20, 2022, from https://stacker.com/stories/4393/history-women-workplace

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, *2*, 53–55. https://doi.org/10.5116/ijme.4dfb.8dfd

Thelin, J. R. (2019). *A history of American higher education*. JHU Press.

Tinto, V. (2006). Research and Practice of Student Retention: What Next? *Journal of College Student Retention: Research, Theory & Practice*, *8*(1), 1–19. https://doi.org/10.2190/4YNU-4TMB-22DJ-AN4W

Tinto V. Through the Eyes of Students. Journal of College Student Retention: Research, Theory & Practice. 2017;19(3):254-269. doi:10.1177/1521025115621917

Tinto, V. (2023). Reflections: Rethinking engagement and student persistence. *Student Success*, *14*(2), 1-7.

Toossi, M. (2002, May). *A century of change: The U.S. Labor Force, 1950-2050*. Retrieved April 20, 2022, from https://www.bls.gov/opub/mlr/2002/05/art2full.pdf

Twenge, J. M. (1997). Attitudes toward women, 1970–1995: A meta-analysis. *Psychology of Women Quarterly*, *21*(1), 35-51.

Urdan, T.C. (2017). *Statistics in Plain English* (4th ed.). Routledge. https://doi.org/10.4324/9781003006459

U.S. Bureau of Labor Statistics. (2021, April 1). *Women in the labor force: A databook : BLS reports*. U.S. Bureau of Labor Statistics. https://www.bls.gov/opub/reports/womens-databook/2020/home.htm

U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Outcome Measures component final data (2017–2019) and provisional data (2020).

U.S. Department of Education. National Center for Education Statistics. Bridging the Gap: Academic Preparation and Postsecondary Success of First-Generation Students, NCES 2001–153, by Edward C. Warburton, Rosio Bugarin, and Anne-Marie Nuñez. Project Officer: C. Dennis Carroll. Washington, DC: 2001.

U.S. Department of Education, National Center for Education Statistics, Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence, and Attainment, NCES 2001–126, by Susan Choy. Washington, DC: 2001.

U.S. Department of Education. (n.d.). *What are graduation, retention, and transfer rates?* Federal Student Aid. Retrieved January 21, 2023, from https://studentaid.gov/help/graduation-retention-transfer-rates

US Department of Education (ED). (2021, August 25). *Family educational rights and privacy act (FERPA)*. Home. https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html

Van Ours, J. C. (2015). The Great Recession was not so great. *Labour Economics*, *34*, 1-12.

Vokić, N. P., Obadić, A., & Ćorić, D. S. (2019). Gender Equality in the Workplace: Macro and Micro Perspectives on the Status of Highly Educated Women. Springer.

Warburton, J., Smiley, J., & Hilker, C. (2000). First-Generation College Students: Characteristics, Experiences, and Cognitive Development. *Journal of College Student Development,* 41(5), 554-564.

Webb, J. G. (2009, November 30). The evolution of women's roles within the university and the workplace. Forum on Public Policy Online. Retrieved February 18, 2022, from https://eric.ed.gov/?id=EJ913097

Wheeler, P.R. (2001). The Myers-Briggs Type Indicator and Applications to Accounting Education and Research. *Issues in Accounting Education*, *16*, 125-150.

Woody, T. (1929). A history of women's education in the United States (Vols. 1-2). New York, NY: Octagon Books, Inc.

World Employment Social Outlook Women. (2018). International Labour Organization. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---public/documents/publications/wcms_619577.pdf

Wyckoff, S. C. (1999). The academic advising process in higher education: History, research, and improvement. *Recruitment & Retention in Higher Education*, *13*(1), 1-3.

Young, G. (2022, September 22). *8.8% Fortune 500 CEOs are women - the highest of all indices - according to the Women CEOs in America Report 2022*. https://www.proquest.com/docview/2716450866?parentSessionId=hD%2BhhTcELhIfYsPS5%2BHZr7uEytiduI80hpB8iSdhDEg%3D&pq-origsite=primo&accountid=28148&sourcetype=Wire%20Feeds.

Young-Jones, A. D., Burt, T. D., Dixon, S., & Hawthorne, M. J. (2013). Academic advising: does it really impact student success?. *Quality Assurance in Education, 21*(1), 7-19.

Zafar. (2013). College Major Choice and the Gender Gap. The Journal of Human Resources, 48(3), 545–595. https://doi.org/10.3368/jhr.48.3.545

Zucker, A. J. (2000). *The history of Harvard University* (Order No. 1400830). Available from ProQuest One Academic. (304678637). https://www.proquest.com/dissertations-theses/history-harvard-university/docview/304678637/se-2?accountid=28148

APPENDIX

JAKE JABS COLLEGE OF BUSINESS STUDENT SATISFACTION SURVEY FALL 2021

Jabs Freshman Survey - Fall 2021

Start of Block: Jabs Freshmen Survey

Q1

The Jake Jabs College of Business & Entrepreneurship congratulates you on making it half-way through your first semester of college. We know this hasn't been easy but admire the resiliency you have shown.

We are asking you to complete this survey to share your overall experiences within Jabs college. The more you can tell us, the better we can enhance the Jabs experience for all students.

Completing this survey will take less than 10 minutes. There are no foreseeable risks associated with completing this survey.

If you have any questions, complaints, or if you feel you have been harmed by this research please contact Brenda Truman, Assistant Dean of Student Services at bstruman@montana.edu. Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. You may also contact the IRB if you have questions, complaints, or concerns which you do not feel you can discuss with the investigator. The MSU IRB may be reached by phone at 406-994-4707.

Participation is voluntary, and you can stop at any time. Your participation or non-participation will not affect your status as a Jabs student.

By proceeding you are giving your consent to participate.

Thank you.

End of Block: Jabs Freshmen Survey

Start of Block: Overall Exp and Sense of Belonging

Q2 Please provide your Student GID Number: Example: -02345678

Q3 Please tell us about your overall satisfaction with your experiences so far in school.

	Extremely dissatisfied (1)	Dissatisfied (2)	Slightly dissatisfied (3)	Neither satisfied nor dissatisfied (4)	Slightly satisfied (5)	Satisfied (6)	Extremely Satisfied (7)
Your overall experience at MSU (1)	○	○	○	○	○	○	○
Your overall experience in Jabs college (2)	○	○	○	○	○	○	○

Quality of instruction you received in Jabs college (3)	○	○	○	○	○	○	○
Your decision to study business within Jabs (4)	○	○	○	○	○	○	○

Q4 Please indicate the extent to which you agree or disagree with the following statements about the **Jake Jabs College of Business & Entrepreneurship**.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I feel I am a member of this college (1)	○	○	○	○	○	○	○
I feel a sense of belonging to Jabs college (2)	○	○	○	○	○	○	○
I do not see myself as part of Jabs college community (3)	○	○	○	○	○	○	○

When someone criticizes Jabs college, it feels like a personal insult. (4)	○	○	○	○	○	○	○
I am very interested in what others think about Jabs college (5)	○	○	○	○	○	○	○
What I talk about Jabs, I usually say "we" rather than "they" (9)	○	○	○	○	○	○	○

This college's successes are my successes (10)	○	○	○	○	○	○	○
When someone praises Jabs, it feels like a personal compliment. (11)	○	○	○	○	○	○	○
If a story in the media criticized the school, I would feel embarrassed. (12)	○	○	○	○	○	○	○

Q5 What option are you studying in business (select all that apply)?

- ☐ Accounting (1)
- ☐ Finance (2)
- ☐ Management (3)
- ☐ Marketing (4)

Q6 Thinking about **the *curriculum*** you've experienced so far, how satisfied are you with each of the following:

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
There is too much repetition in the course content (1)	○	○	○	○	○	○	○
Overall, the courses I took were challenging (2)	○	○	○	○	○	○	○
There is too much group work in my courses (3)	○	○	○	○	○	○	○

Overall, the classes I took were boring (4)	○	○	○	○	○	○	○
Class size is too big (5)	○	○	○	○	○	○	○

Q7 What was the most impactful and/or valuable ***course*** you have taken so far in Jabs?

Q8 Thinking about **your entire experience with *faculty* within the JJCBE**, how satisfied are you with each of the following

	Extremely dissatisfied (1)	Dissatisfied (2)	Slightly dissatisfied (3)	Neither satisfied nor dissatisfied (4)	Slightly satisfied (5)	Satisfied (6)	Extremely satisfied (7)
Professors' interest in subject (1)	○	○	○	○	○	○	○
Professors' help in achieving your professional goals (2)	○	○	○	○	○	○	○

Emotional support and encouragement you received from professors (3)	○	○	○	○	○	○	○
The general quality of faculty instruction (4)	○	○	○	○	○	○	○

Q9 Who has been the ***most influential faculty member*** during your time at MSU?

End of Block: Curriculum and Professors

Start of Block: Diversity & Inclusion

Q10 How satisfied or dissatisfied are you with the overall college climate/environment that you have experienced within Jabs College

- ○ Extremely Satisfied (1)
- ○ Satisfied (2)
- ○ Slightly Satisfied (3)
- ○ Neither Satisfied nor Dissatisfied (4)
- ○ Slightly Dissatisfied (5)
- ○ Dissatisfied (6)
- ○ Extremely Dissatisfied (7)

Q11 I am treated fairly and equitably in Jabs College

- ○ Strongly agree (1)
- ○ Agree (2)
- ○ Somewhat agree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat disagree (5)
- ○ Disagree (6)
- ○ Strongly disagree (7)

Q12 For the next few questions, select one option between each set of adjectives that best represents how you would rate Jabs based on **your direct experiences**:

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Hostile	○	○	○	○	○	○	○	Friendly
Racist	○	○	○	○	○	○	○	Non-Racist
Homogeneous	○	○	○	○	○	○	○	Diverse
Sexist	○	○	○	○	○	○	○	Non-sexist
Homophobic	○	○	○	○	○	○	○	Non-homophobic
Elitist	○	○	○	○	○	○	○	Non-elitist
Competitive	○	○	○	○	○	○	○	Cooperative

Q13 How many courses have you taken at this college that included the following?

	None (1)	1-2 (2)	2-3 (3)	4 or more (4)
Opportunities for intensive dialogue between students with different backgrounds and beliefs (4)	○	○	○	○
Materials/readings about Gender/Gender identity (5)	○	○	○	○
Materials/readings about Race/ethnicity (6)	○	○	○	○

Opportunities for guest speakers to talk about the importance of diversity, equity, or inclusion within the world of business (7)	○	○	○	○

Q14 During your time at Jabs, how often have **YOU** experienced discriminatory events because of your:

	Never (1)	1-2 times (2)	3 or more times (3)
Ability or disability status (1)	○	○	○
Racial or ethnic identity (2)	○	○	○
Sex (3)	○	○	○
Sexual orientation (4)	○	○	○
Gender identity or gender expression (5)	○	○	○
Veteran status (6)	○	○	○
National origin (7)	○	○	○
Age (8)	○	○	○
Religion (9)	○	○	○
Height or Weight (10)	○	○	○

Political orientation (11)	○	○	○
Social class (12)	○	○	○

Q15 Please select how strongly you agree or disagree with the following statements:

	Extremely difficult (1)	Difficult (2)	Slightly difficult (3)	Neither easy nor difficult (4)	Slightly easy (5)	Easy (6)	Extremely easy (7)
It is easy for me to see the world from someone else's perspective (1)	○	○	○	○	○	○	○
I am open to having my own views challenged (2)	○	○	○	○	○	○	○
I can easily work cooperatively with diverse people (3)	○	○	○	○	○	○	○

I am not able to easily discuss or negotiate controversial issues (4)	○	○	○	○	○	○	○
It is easy for me to be tolerant of others with different beliefs (5)	○	○	○	○	○	○	○

Q16 How satisfied or dissatisfied are you with the overall college climate/environment that you have experienced within Jabs College as it relates to diversity & inclusion?

- ○ Extremely Satisfied (1)
- ○ Satisfied (2)
- ○ Slightly Satisfied (3)
- ○ Neither Satisfied nor Dissatisfied (4)
- ○ Slightly Dissatisfied (5)
- ○ Dissatisfied (6)
- ○ Extremely Dissatisfied (7)

End of Block: Diversity & Inclusion

Start of Block: Advising and Resources

Q17 Who have you worked with most for your academic advising?

_____

Q18 During the last semester, how many times did you meet with your academic advisor?

	Never (1)	1-2 times (2)	3-4 times (3)	5-6 times (4)	7 or more times (5)
Meeting with your academic advisor (1)	○	○	○	○	○

Q19 Thinking about your entire experience with academic advising, how satisfied are you with each of the following?

	Extremely dissatisfied (1)	Dissatisfied (2)	Slightly dissatisfied (3)	Neither satisfied nor dissatisfied (4)	Slightly satisfied (5)	Satisfied (6)	Extremely satisfied (7)
General academic advising (1)	○	○	○	○	○	○	○
Your advisor as a mentor (2)	○	○	○	○	○	○	○
Availability of your advisor (3)	○	○	○	○	○	○	○
Quality of time spent with your advisor (4)	○	○	○	○	○	○	○

Q20 What could Jabs do to improve the quality of advising?

_____

Q21 Thinking back over your time with Jabs college, how many times do you think you used the ***Office of Student Services***? (The Office of Student Services provides new student orientation, general academic advising, admission to Jabs, degree certification, and policy clarification.)

	Never (1)	1-2 times (2)	3-4 times (3)	5-6 times (4)	7 or more times (5)
Office of Student Services (1)	○	○	○	○	○

Display This Question:

If Thinking back over your time with Jabs college, how many times do you think you used the Office o... != Never

Q22 Thinking about your entire experience with resources and facilities within Jabs, how satisfied are you with the ***Office of Student Services*** (OSS, Jabs 124)? (The Office of Student Services provides new student orientation, first and second year academic advising, admission to Jabs, degree certification, and policy clarification.)

	Extremely dissatisfied (1)	Dissatisfied (2)	Slightly dissatisfied (3)	Neither satisfied nor dissatisfied (4)	Slightly satisfied (5)	Satisfied (6)	Extremely satisfied (7)
Ability of office/staff answering my questions (1)	○	○	○	○	○	○	○
Remote Walk-In availability (2)	○	○	○	○	○	○	○
Remote Appointment availability (3)	○	○	○	○	○	○	○

General academic advising (4)	○	○	○	○	○	○	○

Q23 Thinking back over your time with Jabs college, how many times do you think you used the ***Bracken Business Communication Clinic***? (The BBCC provides coaching to improve students' writing, speaking, interviewing, and oral presentation skills.)

	Never (1)	1-2 times (2)	3-4 times (3)	5-6 times (4)	7 times or more (5)
Bracken Business Communication Clinic (1)	○	○	○	○	○

Display This Question:

If Thinking back over your time with Jabs college, how many times do you think you used the Bracken... != Never

Q24 Thinking about your experience with the Bracken Business Communication Clinic, how satisfied are you with the following?

	Extremely dissatisfied (1)	Dissatisfied (2)	Slightly dissatisfied (3)	Neither satisfied nor dissatisfied (4)	Slightly satisfied (5)	Satisfied (6)	Extremely satisfied (7)
Quality of feedback provided by coaches (1)	○	○	○	○	○	○	○
Scope of services available (2)	○	○	○	○	○	○	○
Availability of information about BBCC services (3)	○	○	○	○	○	○	○

Appointment availability (4)	○	○	○	○	○	○	○
Resources on the BBCC's website (5)	○	○	○	○	○	○	○

Q25 During your time in Jabs, how often do you think you interacted (e.g., attended events, sought out support, visited with staff) with the ***Bracken Center***?

(The Bracken Center provides job opportunities, internship opportunities, support for student organizations and clubs, and events like Meet the Recruiters.)

	Never (1)	1-2 times (2)	3-4 times (3)	5-6 times (4)	7 or more times (5)
Bracken Center (1)	○	○	○	○	○

Q26 Thinking about your experience with the Bracken Center, how satisfied are you with the following?

	Extremely dissatisfied (1)	Dissatisfied (2)	Slightly dissatisfied (3)	Neither satisfied nor dissatisfied (4)	Slightly satisfied (5)	Satisfied (6)	Extremely satisfied (7)
Meet the Business Recruiters/Accounting Recruiters Event(s) (1)	○	○	○	○	○	○	○
Assistance with information about employment (internship and career) opportunities (2)	○	○	○	○	○	○	○

Assistance with information on academic engagement opportunities (e.g., Student Clubs, Scholarships, Professional Development, and Study Abroad opportunities) (3)	○	○	○	○	○	○	○

Q27 Who has been the ***most influential staff member*** during your first semester at MSU?

Q28 ***During the past semester***, please indicate how often you:

	Always (1)	Very Frequently (2)	Frequently (3)	Occasionally (4)	Rarely (5)	Very Rarely (6)	Never (7)
Came late to class (1)	○	○	○	○	○	○	○
Missed class (2)	○	○	○	○	○	○	○
Failed to complete homework on time (3)	○	○	○	○	○	○	○
Felt depressed and/or anxious (7)	○	○	○	○	○	○	○
Sough personal counseling (8)	○	○	○	○	○	○	○

Engaged in the use of recreational drugs (9)	○	○	○	○	○	○	○
Engaged in the use of alcohol (10)	○	○	○	○	○	○	○

29 Please indicate average hours spent ***during a typical week*** in the past year doing the following

	Zero hours (1)	1-4 hours (2)	5-8 hours (3)	9-12 hours (4)	13-16 hour (5)	17-20 hours (6)	More than 20 hours (7)
Attending classes/labs (1)	○	○	○	○	○	○	○
Studying/homework (2)	○	○	○	○	○	○	○
Working a job for pay (3)	○	○	○	○	○	○	○

Q30 Have you joined a club or organization?

- Yes (1)
- No (2)

Display This Question:

If Have you joined a club or organization? = Yes

Q31 Please indicate which Jabs clubs and organizations with which you've participated.

- ☐ American Marketing Association (AMA) (1)
- ☐ Beta Alpha Psi (Accounting Club) (2)
- ☐ Enactus/Social Impact Club (3)
- ☐ Finance Club (4)
- ☐ International Business Club (IBC) (5)
- ☐ American Indigenous Business Leaders (AIBL) (6)
- ☐ LaunchCats (7)
- ☐ Management & HR Club (8)
- ☐ Toastmasters (MSU chapter) (9)
- ☐ Women in Business (10)
- ☐ Other (11) _____
- ☐ I haven't participated with any of these clubs/organizations (12)

End of Block: Jabs Resources

Start of Block: FIRST YEAR EXTRAS

Q37 What has been your most valuable experience during your first semester in college?

_____

_____

_____

_____

_____

Page Break

Q38 What could have made your Jabs college experience better in this first semester?

_____

_____

_____

_____

_____

Page Break

Q39 What is the probability that you will return to MSU next spring?

- Definitely will not (1)
- Unlikely (2)
- Somewhat unlikely (3)
- Neither likely nor unlikely (4)
- Somewhat likely (5)
- Likely (6)
- Definitely will (7)

Skip To: Q35 If What is the probability that you will return to MSU next spring? = Definitely will not
Skip To: Q35 If What is the probability that you will return to MSU next spring? = Unlikely
Skip To: Q35 If What is the probability that you will return to MSU next spring? = Somewhat unlikely
Skip To: End of Block If What is the probability that you will return to MSU next spring? = Neither likely nor unlikely
Skip To: Q36 If What is the probability that you will return to MSU next spring? = Somewhat likely
Skip To: Q36 If What is the probability that you will return to MSU next spring? = Likely
Skip To: Q36 If What is the probability that you will return to MSU next spring? = Definitely will

Page Break

Q40 Thinking back to the last question, why do you not plan on returning to Montana State University?

_____

Skip To: Q36 If Condition: Thinking back to the last q... Is Equal to. Skip To: What is the likelihood that you will .... Skip To: End of Block If Condition: Thinking back to the last q... Is Displayed. Skip To: End of Block.

Page Break

Q41 What is the likelihood that you will be a business major next semester?

- Definitely will not (1)
- Unlikely (2)
- Somewhat unlikely (3)
- Neither likely nor unlikely (4)
- Somewhat likely (5)
- Likely (6)
- Definitely will (7)

End of Block: FIRST YEAR EXTRAS

Start of Block: Demographics

Q42

Now please tell us a little bit about yourself.

What is your age?

_____

Q43 What is your gender/gender identity?

- ○ Female (1)
- ○ Male (2)
- ○ Transgender Female (3)
- ○ Transgender Male (4)
- ○ Gender Variant/Non-conforming (5)
- ○ Prefer not to answer (6)
- ○ Not listed (7) _____

Q44 What is your sexual orientation?

- ○ Heterosexual (1)
- ○ Bisexual (2)
- ○ Gay/Lesbian (3)
- ○ Queer (4)
- ○ Questioning (5)
- ○ Asexual (6)
- ○ Not listed (please specify) (7) _____
- ○ Prefer not to answer (8)

Q45 What religious family do you belong to or identify yourself most close to?

_____

Q46 Please indicate the racial or ethnic groups with which you identify (Check all that apply.)

- ☐ African American/Black (1)
- ☐ American Indian or Alaska Native (2)
- ☐ Asian/American/Asian (3)
- ☐ White (4)
- ☐ Hispanic or Latino/a (5)
- ☐ Native Hawaiian or Pacific Islander (6)
- ☐ Middle Eastern/North African (7)
- ☐ Other (Please specify): (8) _____
- ☐ Prefer not to answer (9)

Q47 Please indicate what, if any, of these ability statuses apply to you. (Check all that apply.)

- ☐ Attention Deficit/Hyperactivity Disorder (1)
- ☐ Asperger's/Autism Spectrum (2)
- ☐ Blind/Low Vision (3)
- ☐ Deaf/Hard of Hearing (4)
- ☐ Cognitive or Learning Disability (5)
- ☐ Chronic Illness/Medical Condition (6)
- ☐ Mental Health/Psychological Condition (7)
- ☐ Speech/Communication Condition (8)
- ☐ Other (Please specify) (9) _____
- ☐ None (10)

Q48 Are you a first-generation college student? (first in your family to attend a four-year institution)

- ○ Yes (1)
- ○ No (2)

Q49 Do you pay in-state or out-of-state tuition?

- ○ In-State (1)
- ○ Out-of-state (2)
- ○ WUE (Western Undergraduate Exchange) (3)

Q50 Are you a student-athlete?

- ○ Yes (1)
- ○ No (2)

Q51What could we do to help freshmen students feel more connected to the Jabs college?

_____

_____

Q52 Please use the space below to provide any additional ***comments about your first semester Jake Jabs College of Business & Entrepreneurship experience***.

_____

_____