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College choice, consumer behavior, and gender enrollment patterns: A mixed methods case study of Marathon University

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COLLEGE CHOICE, CONSUMER BEHAVIOR, AND GENDER ENROLLMENT PATTERNS: A MIXED METHODS CASE STUDY OF MARATHON UNIVERSITY

by

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Abstract

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COLLEGE CHOICE, CONSUMER BEHAVIOR, AND GENDER ENROLLMENT PATTERNS: A MIXED METHODS CASE STUDY OF MARATHON UNIVERSITY 2019-2020
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Gender and enrollment patterns in higher education have changed over the past 40 years, where women are now the majority of students enrolling in colleges and universities nationally each year compared to men (U.S. Department of Education, 2018b). Despite enrollment trends indicating a dramatic increase of female students at colleges and universities, Marathon University has experienced the opposite. The purpose of this concurrent, mixed methods case studies was to identify why female students are choosing not to enroll at Marathon University, despite relatively even rates of application and admission compared to male students. The intent of this study was to use college choice and consumer decision-making models to determine how women make decisions about enrollment at Marathon University, noting the marketized and privatized landscape of higher education today. Secondary institutional data of admitted students were analyzed through a multinomial logistic regression, while secondary open-ended accepted student survey results were analyzed through content analysis. After each initial analysis, the findings were compared and contrasted to determine the ways that qualitative survey results helped to explain quantitative institutional data about college choice between male and female students.

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Chapter 1

Introduction

Equality between genders[1] has been a pervasive issue throughout history and although great strides have been made, inequities for women still exist today (Tembon & Fort, 2008). Social, economic, and educational consequences occur when women do not have equal rights as men (Duflo, 2012; Grown, Gupta & Pande, 2005; International Center for Research on Women, 2005; Morrison, Raju & Sinha, 2007; Tembon & Fort, 2008). As a result, it is especially crucial for women to have the same opportunities as men in terms of education. In higher education, women historically were not granted the same access as men, but in the past 40 years, the gender gap in higher education enrollment has reversed and more female than male students are entering college annually (Goldin, Katz, & Kuziemko, 2006; Peter & Horn, 2005).

Today, 56% of incoming undergraduate students in higher education nationwide are female (U.S. Department of Education, 2018a; 2018b). Prior to this shift in the enrollment gap, issues of gender inequality, access to education, and post-collegiate outcomes for female students were pervasive in the literature regarding gender in higher education. Instead, the conversation has now changed to focus on increasing opportunities in higher education for male students as a result of current female advantages (DiPrete & Buchmann, 2013; Jacobs, 1996). Although the current trend indicates that the majority of enrolled students nationwide are women, this phenomenon

[1] The terms "gender" and "sex" will both be used throughout this study. Scholars often use the words interchangeably in research, not only in terms of labels, but also in terms of how each label is then defined. For the purpose of this study, a sharp distinction between the terms "gender" and "sex" will not be drawn, though this distinction may be considered important by some scholars (Lorber, 1994). Generally, the term "gender" will be used when referring to social implications, the phenomenon of decision-making, and discussion of differences between men and women. Discussion on data collection and analysis will use the term "sex" when referring to male and female data.

does not occur at all institutions. Fewer first-time, full-time, undergraduate female students than male students enroll each year at Marathon University, a four-year, public institution in the northeastern region of the United States. This enrollment pattern creates an issue in that the gender disparities among students yielding at Marathon University may have educational, economic, and social justice implications in a time of marketization and privatization of higher education (Kwong, 2000; Marginson, 2010).

Social Construct of Gender

Gender is a social construct that has societal implications for both men and women. Gender differs from sex, which is a biological differentiation based on a person's physical anatomy (Pelletier et al., 2016). Gender norms for both male and females are often defined at birth, including appropriate behavior, suggested personalities and characteristics, and different roles and responsibilities based on the gender category that the baby is assigned (Lorber, 2011). Lorber (2011) notes that all societies use gender classifications to categorize people as either a boy or a girl, and gendering is used throughout society and "legitimized by religion, law, science, and the society's entire set of values" (p. 319). These categories omit any individual talents, preferences, personalities, interest areas, and relationships that may exist and instead categorize an individual on the basis of their gender (Budgeon, 2014). Risman (2004) argues that men and women comply with these categories and continue to conform to gender norms and expectations. By placing themselves into gender categories, men and women will continue to see themselves differently and ultimately make different choices, have varying perspectives, and consider diverse options (Risman, 2004). These categories and the social construct of gender are oppressive when women do not see themselves as the

same and equal to their male counterparts (Risman, 2004). Gender as a social construct impacts people at an individual level as they personally develop, at a societal level with differing expectations for men and women, and at an institutional level when men and women have varying access to resources (Risman, 2004).

West and Zimmerman (1987) coined the term "doing gender," where men and women's behavior and actions are influenced by their gender on a daily basis. People are not born into a certain gender, but rather become that gender through societal influences and expectations of being masculine or feminine (de Beauvoir, 1949). Being masculine or feminine are ways in which gender is often displayed, however, this goes beyond just the physical look of a person to include gender confirming mannerisms, interactions, attitudes, and behaviors (West & Zimmerman, 1987). If an individual were to act in a way that is perceived to be opposite of their gender, this is seen as causing a break in the social routine of how gender should be displayed (West & Zimmerman, 1987). West & Zimmerman (1987) also argue that "doing gender" cannot be undone, since it is apparent in every social thread of society and relevant in all situations.

Lorber (1994) notes that "in a gender-stratified society, what men do is usually valued more highly than what women do because men do it, even when their activities are very similar or the same" (p. 33). This notion has many social implications. Beliefs in gender roles will cause judgements and attitudes that strongly favor men compared to women, which will continue gender inequalities in our society (Ridgeway, 2009). As a result, women may lack the opportunity and resources to have the same social chances and choices as men, including access to education and the economic opportunities that result from further education (Lorber, 1994).

Castro Martin (1995) states that although "substantial progress has been made worldwide… insufficient education still stands as a major obstacle to women's welfare, perpetuating unequal gender roles within the family, the workplace, and public life" (p. 188). Increasing divorce rates in the modern day also impact women's role in society, as "economic autonomy becomes not only a possibility but increasingly also a necessity in a world where divorce is an ever-present concern, caring parents will teach their daughters the value of education, careers, and independence" (Iversen & Rosebluth, 2010, p. 4; Rowland, 2004). Although women today do have increased access to higher education and make up the majority of students enrolling in higher education each year (U.S. Department of Education, 2018a; 2018b), the majors that men and women are choosing to study are very different and have substantial implications for their future earnings as a result (Iceland, 2014; Jacobs, 1996). Academic majors in engineering, computers, mathematics, and statistics are comprised of mostly men, compared to women making up the majority of students in academic programs like education, psychology, literature, and languages (Iceland, 2014). As a result, median earnings for professions based on the majors where men gravitate is about $80,000 annually, compared to $50,000 a year for women in the majors that they overwhelmingly populate (Iceland, 2014). The pay gap between men and women has decreased in recent years, however, women still lag behind men in terms of salary and earnings (Blau & Kahn, 2007).

Although gender imbalance and inequities certainly still exist today, as demonstrated in the aforementioned paragraphs, gender norms are changing. One hundred years ago before the initial women's and civil rights movements, women were unable to vote and denied the right of citizenship across many areas of the world, but

now, women have made considerable strides to close the gap in gender inequality (Dorius & Firebaugh, 2010). These more recent changes can be attributed to the second wave of the women's rights movement that was seen during the 1960s and 1970s, which included the creation of Title VII which prohibited employer discrimination on the basis of sex, race, religion, and nationality and the Title IX Act of 1972, which granted equal access to education for men and women (Eisenberg & Ruthsdotter, 1998). More recently, women are still fighting for equal rights in what is considered the third women's movement (Rowland, 2004). This third movement, also referred to as third wave feminism, differs from other women's rights movements of the past in that it focuses on the individual identity rather than the collective identity of women, rejects binary categories related to gender and sexuality (Mann & Huffman, 2005), and considers race, class, sexual orientation, and ideology to be central issues of the movement (Bronstein, 2005; Iannello, 2010). Today in the third movement, women are still pushing for equal rights, including reproductive rights and equal pay; however, equality for women has come a considerable way throughout history (Rowland, 2004). Despite the significant advances that have been made which created a profound impact for women's rights, the pursuit for complete equality between genders still remains (Rowland, 2004).

Gender Equality in Education

Gender equality does not just benefit women. Gender equality impacts the overall development of society (Tembon & Fort, 2008). Although great strides have been made towards greater gender equality in recent years, issues of gender inequality still exist around the world, including the United States (Tembon & Fort, 2008). When gender equality does exist, societies see benefits in their overall education, economic

development, financial earnings, poverty reduction, and health (Tembon & Fort, 2008). It is widely recognized that educating women positively impacts health, reduces gender inequalities, and empowers women by increasing their decision-making power, autonomy, and social movement and mobility (Grown et al., 2005; International Center for Research on Women, 2003). Education overall also increases literacy, cognitive development, and informational processing (Castro Martin, 1995). Education is seen as the most impactful way to increase women's empowerment and reduce societal gender inequality, and empowering women has a multiplier effect that impacts the greater society including the economy and development (UN Millennium Project, 2005; United Nations, 2014).

Societal gender inequalities not only impact the social structure, but also development and the economy. Empowerment of women can accelerate economic development and reduce inequities between men and women (Duflo, 2012). When women are educated and able to do skilled labor, the labor market increases (International Center for Research on Women, 2003). Additionally, equality for women can lead to more women obtaining an education, which impacts the economy through "increased income-earning potential, ability to bargain for resources within the household, decision-making autonomy, control over their own fertility, and participation in public life" (UN Millennium Project, 2005). Morrison et al. (2007) note that "increases in opportunities for women lead to improvements in human development outcomes, poverty reduction, and …potentially accelerated rates of economic growth" (p. 1). An increase in female earnings and control over resources reduces poverty rates and increases children's educational attainment and overall wellbeing (Morrison et al., 2007).

Historical context of gender in higher education. The shift in gender in higher education enrollment began in 1965, but prior to then, women struggled to have access to higher education at an equal rate as their men counterparts and higher education was originally not inclusive of women (Mortenson, 1992; Rudolph & Thelin, 1991). As previously noted, gender equality in education and enrollment in higher education is important for both the field of education and the larger society. However, throughout history and today, gender gaps in education exist. In order to gain an understanding of the context of the gender gap in enrollment in higher education, it is important to note the historical context in which it exists. In the past 40 years, the gender gap relating to enrollment in higher education has reversed (Peter & Horn, 2005). Colleges and universities in this country were originally created in colonial times with the purpose of educating men for the pastorate, as it was thought that women were intellectually inferior and they did not need education for their vocation, which at the time was often working in the home (Rudolph & Thelin, 1991). From the start of the 20th century until the early 1970s, men were the dominant gender enrolled in American colleges and universities, with male students outnumbering female students 2.3 to 1 in 1947 at the end of World War II (Goldin et al., 2006). However, between 1970 and 1997, the number of traditional-aged female students attending higher education institutions increased from 2.5 million to 4.2 million, resulting in a 68% increase (U.S. Department of Education, 1999). By the late 1980s, male and females were equally represented in enrollment to college at a 1 to 1 ratio and continuing to climb each year (U.S. Department of Education, 1995).

By the early 1990s, more women than men had attained bachelor's degrees (Mortenson, 1995). In fact, the amount of undergraduate students in higher education in 1980 was a female majority of 52%, with that rate continuing to grow to 56% in 2001 (Peter & Horn, 2005). This trend still continues today, with 11.2 million females enrolled at college in Fall 2018 compared to 8.7 million males, making up 56% of the total incoming undergraduate students at colleges and universities nationwide (U.S. Department of Education, 2018a). The number of females enrolled in higher education is also expected to continuously increase by 2026 to 13 million students compared to 9.7 million male students (Hussar & Bailey, 2018). This shift in enrollment has created the new gender gap seen today, where women outnumber men in higher education enrollment nationwide.

Gender and Enrollment

Many academic studies about college choice consider the changing gender gap in higher education enrollment, and the vast majority refer to the gender gap where women comprise the majority of students in higher education, whereas this study seeks to fill the gap around instances where males are the majority of students enrolling (Barone, 2011; Baum & Goodstein, 2005; Bergerson, Heiselt, & Aiken-Wisniewski, 2013; Bishop, 1992; Conger, 2015; Conger & Dickson, 2017; DiPrete & Buchmann, 2013; Evers, Livernois, & Mancuso, 2006; Goldin et al., 2006). The enrollment shift in the past 40 years can be attributed to high school girls improving in their standardized test scores and math and science courses compared to boys (Goldin et al., 2006), an increase in labor market opportunities for women (Conger & Dickson, 2017; Goldin et al., 2006), and women earning higher grades in high school than men (Conger, 2015; Conger & Dickson, 2017).

Additionally, changing admission policies such as test optional admission (Conger & Dickson, 2017), varying state policies (Perna & Titus, 2004), and family culture regarding education impact women students more than men, which contributes to an increased number of women enrolling in higher education (Bergerson et al., 2013).

As a result, a new achievement gap for men is often referred to in both the scholarly literature and popular media, often suggesting that affirmative action is needed to combat the changing enrollment gap for men (Baum & Goodstein, 2005). The national phenomenon of the gender gap occurring in the United States can also be seen internationally as well, including in Canada, Australia, France, the United Kingdom, and Italy (Evers et al., 2006).

Enrollment trends in New Jersey. In addition to changes in enrollment seen in the last 40 years, the overall landscape of higher education today is also changing. No longer are four-year, private liberal arts institutions considered to be the premiere option for students, as almost 46% of undergraduates attended a two-year community college as of 2008 (Staley & Trinkle, 2011). Public, state-funded institutions nationwide have seen a decrease in federal and state funding, causing many public colleges and universities to think of innovative ways to generate revenue, which often leads to the conception of academic capitalism where institutions operate as corporate entities that provide a service rather than a public good (Kwong, 2000; Slaughter & Rhodes, 2003). Public institutions in particular have been impacted by decreased state funds, which increases the competition for students with private institutions (Dill, 1997). In the state of New Jersey, state support for four-year public colleges and universities even decreased by $63 million in 2008 (Di Ionno, 2009).

New Jersey is comprised of 11 four-year public institutions, 15 four-year private institutions, and 19 two-year community colleges. In terms of enrollment, gender trends at four-year public institutions are consistent with national trends across all institutions, indicating that 55% of students enrolled are female (National Student Clearinghouse, 2016). Within the state of New Jersey, enrollment data is mirrors national trends regarding women enrolling in higher education. In 2017, almost 52% of students enrolling in higher education institutions, including four-year public and privates, two-year community college, and proprietary institutions, were female (IPEDS, 2017). Consistent with the state-wide and national data, 53% of first-time, full-time, undergraduate students enrolling in four-year, public institutions in New Jersey were also female (IPEDS, 2017).

The state of New Jersey, however, is the top exporter of students in the country with almost 28,000 students leaving New Jersey to pursue higher education in another state each year (U.S. Department of Education, 2018c). Lawmakers are hoping to combat the issue of outmigration by surveying high school seniors in the state to determine why they do not choose to pursue their education at a college or university in New Jersey (Monaghan, 2018). Sandlier (2016) notes "56% of first-year undergraduates going on to a four-year degree-granting postsecondary institution did so outside of New Jersey," (p. 2) resulting in a "brain drain" that is costing the state billions of dollars each year (New Jersey Business & Industry Association, 2016). Contributing factors of the outmigration of students can be attributed to the high cost of four-year public colleges and universities in the state, which has the fourth highest price of tuition and room and board in the nation (New Jersey Business & Industry Association, 2016). Other factors could include the

branding, promotion, and education of colleges and universities in the state to attract and retain its students (Sandlier, 2016).

While there has been a national increase of women in higher education including the overall state of New Jersey, a troubling trend within the state shows that at some institutions, the gains for women in enrollment have been reversed. Within the state of New Jersey, males account for 47% enrolled first-time, full-time, undergraduate students at four-year, public institutions, while 53% are women (IPEDS, 2017). This is comparable to nationwide enrollment trends, where 56% of first-time, full time undergraduate students are female and 44% are male (U.S. Department of Education, 2018b). Only two public four-year institutions within New Jersey have gender trends for enrollment that are majority male, which is opposite of what is being seen both in New Jersey and nationwide today (IPEDS, 2017). The purpose of this study is to explore this reversal at one public, comprehensive, four-year institution, Marathon University. Marathon University is one of the few institutions in the state where female enrollment is less than that of male students (IPEDS, 2017).

Problem Statement

In the past forty years, the gender gap relating to enrollment in higher education has reversed. Colleges and universities were originally created with the intention of solely educating men and through the early 1970s, men were the dominant gender enrolling in higher education each year (Goldin et al., 2006; Rudolph & Thelin, 1991). In 1965, the gender gap began to shrink until the early 1990s when more women than men had earned bachelor's degrees (Mortenson, 1992). In fact, the number of undergraduate students in higher education in 1980 was a female majority of 52%, with that rate

continuing to grow to 56% in 2001 (Peter & Horn, 2005). Today, women still outpace their male counterparts enrolling in higher education each year, with 56% of incoming students at colleges and universities nationwide being female (U.S. Department of Education, 2018b). Despite enrollment trends indicating a dramatic increase of female students at colleges and universities in recent years, Marathon University has experienced the opposite. At Marathon, first-time, full-time male and female students apply and are admitted at relatively even rates, yet the amount of female students yielding and enrolling are dramatically lower than that of their male counterparts. In the last five years alone, about 40% of total first-time, full-time students enrolled at Marathon were female, compared to the national average of 56% (U.S. Department of Education, 2018b).

While extensive literature exists surrounding the topic of women outnumbering men in college enrollment, limited research has been conducted when men are the majority of students enrolling on a college campus (Barone, 2011; Baum & Goodstein, 2005; Bergerson et al., 2013; Bishop, 1992; Conger, 2015; Conger & Dickson, 2017; DiPrete & Buchmann, 2013; Evers et al., 2006; Goldin et al., 2006). Research regarding college decision-making and choice models also exists, including the way in which students make decisions about where to attend college, the variables that impact admission, and the student decision-making process. Standardized test scores, such as the SAT and ACT, serve as predictors of college performance and are evaluated in the admissions process (Baron & Norman, 1992; Bielby, Posselt, Jaquette, & Bastedo, 2014). GPA and high school grades (Bielby et al., 2014; Conger, 2015; Goldin et al., 2006), merit scholarship awards and financial aid (Avery & Hoxby, 2004), and income and socioeconomic status (Hossler & Bontrager, 2014) are other variables that are often

considered in regards to college choice. Additionally, social and cultural capital (Klevan, Weinberg, & Middleton, 2016; Perna, 2006), the impact of STEM (Bielby et al., 2014), and proximity to home (Chen & Zerquera, 2018) have been analyzed. Despite extensive research on college choice, gaps in the literature about the influence of gender on the college decision-making process exist, and research is limited on if certain variables influence men and women differently when deciding where to attend college.

Understanding the college decision-making process is crucial for strategic enrollment managers, admissions counselors, higher education leadership, and policy makers. The lack of research on enrollment trends that do not favor a female enrollment majority and an understanding of the college-decision making variables that impact male and female students may continue gender inequities that are prevalent in society today. Without a true understanding of the process in regards to gender, gender inequities may continue to exist in the field of higher education, and specifically within the state of New Jersey. A better understanding of women's college choice decision-making as it impacts enrollment may help combat the outmigration of students from the state and, in turn, increase enrollment at New Jersey institutions.

Purpose Statement

The purpose of this concurrent, mixed methods case study was to identify factors impacting female enrollment at Marathon University by investigating quantitative data generated from institutional research and qualitative open-ended admitted student surveys of enrolled and non-enrolled students to explore these results in more detail. The case study design provided for an in-depth analysis of the social phenomenon of how women makes decisions about college choice (Yin, 2014). This methodology has an explorative

nature that allowed for immersion into the particular case (Meyer, 2016). The mixed methods approach was used within the case study analysis to provide multiple ways of seeing the study through both quantitative and qualitative analysis and then integrated the findings of both (Creswell & Plano Clark, 2018). In the quantitative phase of the study, a multinomial logistic regression was performed on institutional data about enrolling first-time, full-time students at Marathon University to test college choice decision-making theories and to assess whether certain individual characteristics predict the choice to attend Marathon University. The qualitative phase was conducted to help explain the quantitative results by exploring admitted students choice qualitatively. Although many studies examine the increase of female enrollment in higher education, this study explains why females are enrolling at a lower rate than males at Marathon University (Baum & Goldstein, 2005; Bergerson et al., 2013; Conger, 2015; Conger & Dickson, 2017; Goldin et al., 2006).

Research questions. To guide this study, the following mixed methods research questions were used:

1. What predicts the differences between females who enroll compared to females who do not enroll, and males who enroll and males who do not enroll at Marathon University?
    a. Academic program
    b. GPA
    c. Standardized test scores
    d. Ethnicity
    e. Net cost

f. Distance from home

2. How do female students make decisions about attending or not attending Marathon University compared to male students attending and not attending Marathon University?
3. In what ways do qualitative survey results help to explain the quantitative institutional data about college choice between male and female students?

Definitions of Terms

For the purpose of this study, the terms listed below are defined as the following:

- Admit: a student whose application was accepted for admission by an institution is considered to be admitted. The term "admit" will be used synonymously with "accept" in this study.
- Applicant: a student who has submitted an application to be considered for admission at a college or university.
- College choice decision-making process: the process by which a student makes a decision about where they want to attend college (Kim, 2004). May also be referred to as "college choice" in this study. College choice is also the third stage of Hossler & Gallagher's (1987) model which includes predisposition, search, and choice.
- Deposit: confirmation of the student's enrollment at an institution is required with a financial deposit. A student who deposits at an institution signifies that they will attending.

- Enrolled: matriculation of a student in college, often demonstrated by a deposit confirmation and course registration. This term will be used synonymously with “matriculated” throughout this study.
- FAFSA: acronym for the Free Application for Federal Student Aid, which is the application students use to apply for need-based financial aid, including grants, work-study, and loans.
- Female: a binary term used to identify the biological and physiological differences in genitalia and reproductive organs that determine sex (Lorber, 1994). For the purpose of this study, the term “female” will be used when referring to data, analysis, and collection.
- Financial Aid: financial aid is based on financial need and may include government grants, loans, scholarships, and work-study opportunities. Students must submit a FAFSA, the Free Application for Federal Student Aid, and be enrolled full-time to be considered for financial aid.
- First-time student: a student who has never attended college before and is entering college immediately following high school. Students who attend college over the summer directly after high school and begin college in the fall semester will also be considered first-time students.
- Full-time student: a student considered to be enrolled full-time at Marathon University has more than 12 credit hours a semester. Full-time students at Marathon University pay a flat semester rate up to 17 credit hours and are eligible for financial aid.

- Male: a binary term used to identify the biological and physiological differences in genitalia and reproductive organs that determine sex (Lorber, 1994). For the purpose of this study, the term "male" will be used when referring to data, analysis, and collection.
- Man: a binary, social construction of gender that is learned through "teaching, learning, emulating, and enforcement" (Lorber, 1994, p. 17). For the purpose of this study, the term "man" will be used when referring to gender and social implications.
- Matriculated: a matriculated student is enrolled in an institutional degree program after acceptance and is eligible for financial aid. This term will be used synonymously with "enrolled" throughout this study.
- Melt: phenomenon when incoming students at an institution ultimately do not attend, despite having submitted a deposit and confirmed enrollment. This often occurs over the summer months before the fall semester begins, and can also be referred to as "summer melt."
- Non-matriculated: non-matriculated students, often called non-matrics, are not enrolled in an academic program at the institution but may still take classes. The classes the student takes when they are non-matric will not count towards a degree, however, if the student later enrolled at the institution, those credits would count towards their degree. Non-matric students are not eligible for financial aid.
- Woman: a binary, social construction of gender that is learned through "teaching, learning, emulating, and enforcement" (Lorber, 1994, p. 17).

For the purpose of this study, the term "woman" will be used when referring to gender and social implications.

- Yield: the number of admitted students who decide to enroll at an institution. This value is often displayed as a percentage.

Theoretical Framework

Social science theories related to college choice were used to inform the research design and overall study (Creswell, 2014). Hossler & Gallagher's (1987) three stage model of college choice provided a framework for the college choice decision-making process and Blackwell, Miniard, & Engel's (2001) consumer decision process model was used to determine how female students as consumers think, evaluate, and act on their college choice decisions.

College choice model. Although many theories and models about college choice exist, Hossler & Gallagher's (1987) seminal model of college choice, which is a three-step process that includes predisposition, search, and ultimately choice, served as the primary college choice model of this study. The main focus of this model is on the final stage of choice.

Having knowledge of the college decision-making process of a student is crucial in order to gain understanding on why fewer female students than male students are yielding at a particular institution. Hills (1964) first discussed college choice as it relates to decision making, noting that students have different courses of action where different events occur, and each event also has a different value. Students ultimately choose their institution based on the expected value that they attribute with each interaction they have with the institution, ultimately creating a college choice decision-making process (Hills,

1964). Kotler's (1976) seven-step model relates college choice to market research, including decision to attend, information seeking and receiving, specific college inquiries, application, admission, choice, and registration. One of the first explicit models on college choice was developed by Chapman (1981) and it posits that a student's college choice is dependent on their own individual characteristics and external factors, including significant people, institutional characteristics, and the college's effort and outreach to the student. Since Chapman's initial model, other college choice models have been created that expand on the foundational model, including Hossler & Gallagher's (1987) three-phase model of predisposition, search, and choice, Hanson & Litten's (1982) model of predisposition, exploration, and application, and Jackson's (1982) three-phase model of preference, exclusion, and evaluation.

Today, Hossler & Gallagher's (1987) model is most widely used in regards to college choice and each step of the model has been extensively expanded upon and evaluated. The predisposition phase includes a student's decision to continue onto college after high school and is often influenced by the student's socioeconomic status, parental influence, and peers (Adams, 2009, Bers & Galowich, 2002; Hossler & Gallagher, 1987; Hossler & Maple, 1993). In the search phase, students work to find information about colleges and universities that will ultimately lead them to make a choice on where to attend, which is the final stage of the model (Hossler & Gallagher, 1987; Schmit, 1991; Smith & Fleming, 2006). The final stage of the college choice process consists of the student ranking different institutions and evaluating their choices, eventually making a decision on which college or university they will attend (Hossler & Gallagher, 1987; Kim, 2004). Hossler & Bontrager (2014) also note that there are three different

approaches to the college choice theory, including economic, sociological, and information processing approaches. These approaches were considered when analyzing college choice models and the college decision-making process.

Consumer behavior model. The current landscape of higher education includes globalization, privatization, and marketization of our country's colleges and universities. Institutions of higher learning are forced to operate as businesses, where students are the consumers and the ultimate goal is to graduate as many students as possible at the lowest cost (Kwong, 2000; Marginson, 2010). As a result, colleges and universities need to see their students as consumers. While many models on consumer behavior exist, the Blackwell et al. (2001) model for consumer behavior was used for this study as it relates to the student as a consumer during their college choice decision-making.

Blackwell et al.'s (2001) consumer behavior model is comprised of a seven step process and takes into consideration internal and external factors that influence the decision-making process (Wiese, Van Heerden, & Jordaan, 2010). Students who make decisions about where to attend college will engage in all seven stages of the process, including problem and need recognition, search for information, evaluation of different alternatives, selection, consumption, post-selection evaluation, and divestment (Blackwell et al., 2001; Wiese et al., 2010). Considering each stage of this model and comparing it against the different variables that students consider when choosing a college will lend insight to the overall college decision-making process from the perspective of the student as a consumer. Comparing consumer behavior of men and women will also be fundamental to this study. Shank & Beasley (1998) found that men and women do make decisions differently when it comes to deciding where to attend

college, and gender differences were evident when exploring different attributes and characteristics related to the college choice-decision making process. Additionally, as consumers, men and women have different decision-making styles (Bakewell & Mitchell, 2006). The model of consumer behavior, in comparison to the differences noted in gender and college decision-making variables, are further explored in Chapter 2, along with Hossler & Gallagher's (1987) model of college choice.

Delimitations

All research studies, including this one, have certain delimitations and limitations. The following address how scope, role of the researcher, and methodology all impacted the study and suggest alternatives to mitigate these challenges.

Scope of the study. Although the topic of college choice is very broad, the scope of this study was delimited by researching enrollment trends at one particular institution, Marathon University, using one seminal model of college choice, and focusing on full-time, first-time, undergraduate female students from the Fall 2018 cohort. Specific variables that related to college choice, which emerged from the literature review and my own experiential knowledge, were focused on.

National trends for the past 40 years indicate that female students make up close to 60% of the undergraduate student population enrolling in higher education each year, demonstrating a shift in enrollment where women now outnumber men (U.S. Department of Education, 2018b). This trend, however, is not occurring at Marathon University, as female students make up about 40% of first-time, full-time students enrolling each year. Rather than considering national trends or multiple institutions nationwide, this study was limited by considering enrollment at one institution, in line with a case study design that

explores a case of an intrinsic nature. Limiting the scope of the study in this way had limitations, as this study did include other institutions with similar enrollment profiles and has implications for transferability and generalizability. However, if the scope of this research were to be expanded, disadvantages in obtaining enrollment data from other institutions and potentially conflicting findings based on the institutional profile itself would exist. An advantage to looking at one institution was the ability to obtain institutional data and obtain a deeper understanding of this issue.

Next, the focus of this study was narrowed by using Hossler & Gallagher's (1987) seminal model on college choice, which served as the college choice theoretical foundation that guided the research. Though many models and findings about college choice exist, Hossler & Gallagher's (1987) three phase model of predisposition, search, and choice is the most widely regarded and utilized today. For the purpose of this study, the last phase of the model was of particular interest and elements of the student being predisposed to attend college or what their search process entailed were not considered. By delimiting the scope of this study to only look at the choice phase, an in-depth understanding as to why women's actual decision-making process and why more women choose not to attend Marathon than men was obtained. Limiting the study to focus on the this perspective of the theory was important, because female and male students apply to Marathon at relatively even rates of about 50% male and 50% female applications each year, but female students inevitably do not choose to enroll at the same rate. The predisposition and search phases of Hossler & Gallagher's (1987) model did not provide the information needed about the actual decision-making of women, which is why the final choice phase served the main focus.

Use of the literature and reflection of my experiential knowledge determined the variables that were used to examine the impact of college-choice decision making in full-time, first-time, undergraduate female students. By not looking at every variable that exists as it relates to the college decision-making process for the quantitative analysis, the scope of the study was able to be narrowed. Standardized test scores, such as the SAT and ACT, serve as predictors of college performance and are evaluated in the admissions process (Baron & Norman, 1992; Bielby et al., 2014). GPA and high school grades (Bielby et al., 2014; Conger, 2015; Goldin et al., 2006), receiving merit scholarship awards and other financial aid (Avery & Hoxby, 2004, U.S. Department of Education, 2018a), and net cost are other variables that were analyzed. Additionally, the impact of STEM (Bielby et al., 2014) and proximity to home (Chen & Zerquera, 2018) were also considered. Although many variables exist related to college-choice, limiting the number of variables helped in not overwhelming the study with too many options that were not relevant. For example, literature exists on father absence and the nonmarital birth rate contributing to the growing gender gap in enrollment, attributing the lack of a father figure to why less male students are enrolling in college each year (Doherty, Willoughby, & Wilde, 2016). While social capital and influences are important to college choice, this variable did not apply directly to the study and was excluded from the research. Use of a comprehensive list of variables instead of an exhaustive list of every variable that exists in relation to college choice does provide limitations to the findings.

Research design. While mixed methodology has many strengths, including the ability to conduct multiple types of studies to provide different types of results, this methodology also has its challenges (Creswell & Plano Clark, 2018). Researchers using a

mixed methods approach need to be familiar with both qualitative and quantitative research methods, including data collection, instrumentation, and analysis, and often need extensive resources and time for both studies (Creswell & Plano Clark, 2018). To combat this limitation, the scope of this study was limited in order to keep the research manageable in terms of time and resources available. Limitations of mixed methods research can also include difficulties in connecting the individual quantitative and qualitative studies in a meaningful way (Creswell & Plano Clark, 2018). Yin (2006) notes that if each quantitative and qualitative method is conducted in isolation, the results will be separate and may complement each other, however, they will not truly be mixed methods. It was imperative to triangulate data through various collection strategies, which was done by using quantitative institutional data, qualitative survey results, and a combined mixed methods analysis (McNiff & Whitehead, 2011; Stringer, 2014). Having multiple data sources also allowed the findings to have validity and authenticity (McNiff & Whitehead, 2011).

Mixed methods researchers need to consider threats to credibility and validity when conducting their studies, as various threats can exist in research (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009). Validity in mixed methods research refers to how the researcher understands the participants' views and if their views are represented accurately in quantitative data analysis (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009). For this study, institutional data analysis does not represent the actual views and decision-making of the students enrolling at the institution. Although the qualitative approach of analyzing accepted student surveys helped give voice to the

quantitative data, it is possible that the data analysis still misunderstood a student's actual views and perspectives.

Teddlie & Tashakkori (2009) state that a qualitative inference is credible when "there is a correspondence between the way the respondents actually perceive social constructs and the way the researcher portrays their viewpoints" (p. 295). Researchers can increase their credibility in qualitative research by being transparent about all steps of their study, including the theory, methodology, data collection, sample, interpretation of findings, and future implications (Teddlie & Tashakkori, 2009). To avoid issues of credibility, it would be beneficial for the researcher to incorporate member checking to determine if the themes and representations in the data are accurate (Teddlie & Tashakkori, 2009). Additionally, sharing the research and findings with a colleague who is not involved in the study allows for peer debriefing, which helps the researcher identify bias that may have occurred (Teddlie & Tashakkori, 2009). For this study, the research and findings were shared with a colleague who was not familiar with the study of college choice and they identified biases or misrepresentations that existed in the work.

Although using a case study approach for this research study was suitable, as it allows the researcher to study a specific and complex phenomenon in-depth, the researcher needs to be mindful that the case should not be considered in isolation, but within the larger, real-word context (Yin, 2013). Case studies can also have issues of generalization, since the study was conducted in a single instance and the small sample cannot be generalized to a larger population (Yin, 2013). Although this limitation is legitimate, the purpose of this study was to analyze the female enrollment issue at Marathon University in-depth, which would be sacrificed if a case study model was not

used. Additionally, analytic generalization should be used where the findings from this case study can be applied to future case studies, rather than abstract theories (Yin, 2013). As the researcher, I was mindful that the findings serve as a working hypothesis for future research and imply that other case studies should be done in the future to further evaluate the phenomenon (Yin, 2013). To mitigate any challenges in the evaluation of findings at the end of this study, I ensured that the research questions that drive the early part of my study were "why" and "how" questions that related to the events and actions that took place over time, which also coincides with the concurrent mixed methods approach that was used (Yin, 2013).

Gender & college choice decision-making. Inconclusive research and literature regarding gender as it relates to college-choice decision-making is another limitation of this study. This study focused on the enrollment trends related to gender at Marathon University, yet previous research does not agree on how gender relates to the overall college decision-making process, since some studies report that gender does not have an impact on college choice (Avery & Hoxby, 2004; Cho, Hudley, Lee, Barry, & Kelly, 2008; DesJardin, Dundar, & Hendel, 1999; Hossler et al., 1989; Hossler & Stage, 1992; Perna, 2000), while others indicate that women are more inclined to apply to college than men (Perna & Titus, 2004; Weiler, 1994). Although there does not seem to be a consistent understanding between men and women and their overall college choice process, this study assumed that gender may have an impact on the variables that men and women each consider important when engaging in the final stage of choice and ultimately choosing a college or university to attend, which was a potential limitation (Chapman, 1981; Hanson & Litten, 1982; Hao & Bonstead-Bruns, 1998; Hemsley-Brown

& Oplatka, 2015; Hossler, Schmit, & Vesper, 1999; Iceland, 2014; Lockheed, 1982; Paulsen & St. John, 2002; Peter & Horn, 2005; Rosenfeld & Hearn, 1982; Stricker, Rock, & Burton, 1991; Wiese et al., 2010). Additionally, much of the literature that discusses gender in relation to college choice is not recent, which provided a limitation since modern day implications of higher education were not considered in previous studies relating gender to college choice.

Role as the insider researcher. This study could not be conducted without considering my role as the researcher, including my experiential knowledge and worldview. Without framing this study with my own experiences and perspectives, I would have been unable to thoroughly review the literature and design a study to explore the enrollment issue at Marathon University. The overall research problem and statement guided the entire dissertation study, which was developed from my direct experiences, knowledge, and worldview. By considering my own biases, assumptions, and worldview, this dissertation study is uniquely my own. Additionally, I would not have the background and first-hand knowledge that I do when analyzing my topic if I did not consider my individual perspectives.

I first became interested in admissions, enrollment, and access while working as a student tour guide at my undergraduate institution. As I learned more about strategic enrollment management, I became passionate about issues surrounding access and equity in higher education, which continued during my graduate work at the University of Pennsylvania (Penn). While at Penn, I took a class called *Access & Choice* with Dr. Laura Perna that increased my interest in issues surrounding the college choice decision-making process and access in higher education. After graduation, I obtained my first job

as an Admissions Counselor and began volunteering at a non-profit organization working with underserved high school students to help provide opportunities for higher education.

I still currently work in admissions and strategic enrollment management, which enabled me to discover that the enrollment problem at Marathon University exists, and allowed me to be knowledgeable about the trends and process that occur regarding admissions. The assumptions I have regarding this topic originated from my work in strategic enrollment management, and I was mindful of my perspectives, experiences, and biases when I reviewed the literature, conducted research, and analyzed the findings for this study. I was also able to identify potential independent variables that could impact female enrollment at Marathon University due to my own experiences in higher education, in addition to the literature review.

Although my current work in strategic enrollment management has provided me insight on issues pertaining to enrollment, I was also mindful of my position as an insider researcher throughout this study (Coghlan, 2003). Insider researchers are members of the organization who work to research from within, as they understand how the organization works but intend to change certain aspects of it (Coghlan, 2003). Insider researchers are permanent members rather than temporary constituents and need to be mindful of their lived experience and how they relate to the organization, the duality of their role as a participant and facilitator, and political nature of the organization (Coghlan, 2003). Since insider researchers possess knowledge of the organization already, they need to avoid making assumptions rather than conducting investigations and being open-minded to different findings (Coghlan, 2003). It is also challenging for insider researchers to maintain relationships with other participants while still holding the role as a facilitator.

Finally, insider researchers can face challenges with politics in their organization in regards to ethics and power, but successful researchers always remember they are conducting research with people, rather than on people (Coghlan, 2003). As an insider researcher within my organization and study, it was imperative to be mindful of the characteristics and challenges that were presented as a result.

After much reflection and considering the different worldviews and perspectives as described by Creswell (2014) and Guba & Lincoln (1994), I determined that I am a constructivist researcher. As a constructivist, I develop an understanding of the world through social and historical constructions where I rely on the realities of different phenomena to learn (Creswell, 2014; Guba & Lincoln, 1994). For this research, I took on an active role as a learner and researcher and considered my own experiences when I analyzed the literature and findings (Creswell, 2014). I considered my own personal experiences as a female undergraduate student, my current professional role in enrollment management, and literature and research that I found regarding enrollment data and strategies that related to the research problem (Creswell, 2014).

Significance of Study

This study explored female enrollment patterns and decision-making processes at Marathon University using the theoretical framework of Hossler & Gallagher's (1987) model of college choice and consumer decision-making models (Blackwell et al., 2001). The following explored how the research from this study impacted policy, practice, and research in the field of higher education.

Policy. There are many policy implications of this study that should be considered. It is crucial for strategic enrollment managers and recruitment professionals

in higher education to have an understanding of prospective students' decision-making processes, especially if there are implications regarding gender. Leaders in strategic enrollment management should use this research to consider their own institutional policies and any repercussions that they may create. Having knowledge of the college choice process, decision-making, and factors that influence college choice will allow leaders in the field to better shape their policies to permit access and equity for both men and women, and ensure that existing policies do not compromise that. For example, policies on the distribution of merit scholarships based solely on academic success in high school with a strong emphasis on standardized test scores may inadvertently discourage women from attending an institution if awards for women are not comparable to men. Current literature is limited on gender differences in the college decision-making process, however, strategic enrollment policies could and should be created to achieve more equal and equitable undergraduate student populations in terms of gender.

Perna & Titus (2004) indicate that four different types of state public policy effect a student's college choice, including direct appropriations from the state to higher education institutions, financial aid, tuition costs, and elementary and secondary school level academic preparation policies. Additionally, the Title IX Act of 1972 policy for equal rights in education regardless of sex should also be considered when scrutinizing policies related to this study (Title IX, n.d.). Using Title IX as a guideline when considering policy implications for gender in admissions practices is crucial to providing equity to all students regardless of gender.

Practice. In practice, it is important for both men and women to have the opportunity to attend institutions of higher education. This study and its results can have

a positive impact on both colleges and universities, as well as the students they serve. Although the problem of gender imbalance in enrollment in this study does not necessarily relate to access to higher education in this instance, since male and female students applied at the same rate, have gender equity and balance in the institution's undergraduate population is crucial. In this case of Marathon University, fewer female students than male students attend the institution, however, nation-wide gender imbalances in enrollment still exist at a larger scale, but are more often skewed the opposite way. Ensuring that institutions are creating opportunities and environments that benefit both men and women is both important and morally just. Leaders within higher education institutions should consider their funding practices and consider any implications that may result in unfair funding for either gender. In practice, extensive amounts of funds are allocated for recruitment and marketing of prospective students, and considering the ways in which students make decisions about college choice is crucial. Reallocation of funds to provide a more equitable experience for women may be a consideration that a leader in higher education would also make as a result of this study.

Locally, implications from this study can impact practice at Marathon University. In order to increase yield of female students, leaders in strategic enrollment management may incorporate different marketing or communication plans for prospective men and women (Shank & Beasley, 1998). Admissions recruiters may consider implications of the college choice-decision making process in relation to gender, and adjust their practice accordingly. Different scholarship programs could be enacted and updates to the physical campus itself may also benefit the overall enrollment and undergraduate student population. It is beneficial for students to have diversity, including different genders,

races, ethnicities, and class, in their classrooms and schools, social interactions, and professional spaces, as this will allows students to develop the skills, thought processes, and interpersonal communication needed to be successful in an increasingly becoming diverse world (Hurtado, 2001). Hurtado (2001) notes that "a diverse student body provides students with important opportunities to build the skills necessary for bridging cultural differences and may cultivate their capacity for other important learning" (p. 188). As a result, increasing the number of female students yielding at Marathon University will enhance the overall institution and students that attend. It is important to gain an understanding of what is happening at Marathon University as diversity in higher education is crucial in order to provide rich educational experiences, strengthen communities, and increase the global perspective of society (ACE Board of Directors, 2012).

Research. Since the shifting gender gap in higher education in the last 40 years, research on male students outnumbering females is sparse, aside from studies about gender differences in elite colleges (Bielby et al., 2014). Many academic studies about college choice consider the changing gender gap in higher education enrollment, but the vast majority refer to the gender gap where women comprise the majority of students in higher education, whereas this study seeks to fill the gap in the research when males are the majority of students enrolling (Barone, 2011; Baum & Goodstein, 2005; Bergerson et al., 2013; Bishop, 1992; Conger, 2015; Conger & Dickson, 2017; DiPrete & Buchmann, 2013; Evers et al., 2006; Goldin et al., 2006).

In addition to limited research on the enrollment trends studied in this dissertation, limited literature exists surrounding the college-choice decision making

process and how it differs for male and female students (Shank & Beasley, 1998). Additional research should be conducted to determine how decision-making differences between genders impact college choice. Since this study is a mixed methods case study, it would be beneficial for future studies to include a larger sample beyond just one institution. Changing the setting of the study in future research would also allow researchers to determine whether location and demographics of students played a role in the decision-making process. Conducting a quantitative study looking at institutional data compared to national data could also be done, as well as a qualitative study where women could be interviewed or participate in a focus group to share their experiences when making a decision about college.

Overview

Chapter One of this research study provided an introduction of the study, including background information about college choice and decision-making, the purpose and significance of the problem, and research questions that guided the study. This first chapter includes a list of commonly used terms and the theoretical framework that served as the foundation of this study. Delimitations and scope of the study are also explored. Chapter Two presents an abridged literature review related to the historical context of gender and enrollment in higher education, the college-choice decision making process, and the related theoretical frameworks. Chapter Three explores the methodology used for this study, including the mixed methods approach, research questions, setting, sampling and participants, scope, data collection and instrumentation, and data analysis. Chapter Four includes an overview of the findings from this study. Chapter Five and Chapter Six present articles designed for publication in peer-reviewed journals about strategic

enrollment management, college choice, and consumer decision-making in higher education. The articles address the findings from the review of the literature, data collection and analysis, discussion, and implications of the results.

Chapter 2

Literature Review and Context of the Study

This chapter provides a discussion of the literature related to college choice and decision-making, using theoretical frameworks on college choice, consumer behavior, and decision-making. Literature reviews provide the foundation of a study and allow the researcher to advance their understanding of a topic by examining studies that have been done before, investigating their strengths and weaknesses, and understanding how the research fits together (Boote & Beile, 2005). The literature review "… sets the broad context of the study, clearly demarcates what is and what is not within the scope of the investigation, and justifies those decisions. It also situates the existing literature in a broader scholarly and historical context" (Boote & Beile, 2005, p. 4). Additionally, the literature review enables the researcher to delimit the research problem, find new methods of inquiry, gain insight about appropriate methodology, and determine the gaps that still need to be researched (Randolph, 2009). Within the literature review of this study, research on college choice is analyzed and synthesized, including personal and institutional factors related to college choice such as academic aptitude, socioeconomic status, ethnicity, influence of others, financial aid, and proximity to home (Boote & Beile, 2005). Additionally, the conceptual framework of consumer decision-making will be discussed, focusing on how both men and women make decisions. Finally, the context of Marathon University will be explored.

This literature review also identified key themes across different points of views and topical areas as they relate to college choice and consumer decision-making (Wentz, 2014). This chapter provides background information, insight, and seeks to provide understanding of the female enrollment trends at Marathon University. National

enrollment trends demonstrate a majority female population entering college each year, however, this dramatic increase of female students is not represented at Marathon University. In fact, the opposite is occurring where less women than men yield at the institution each year, despite relatively equal levels of application and acceptance. In the last five years, approximately 40% of the total first-time, full-time, undergraduate students who enrolled at Marathon University were female, compared to the national average of 56% (U.S. Department of Education, 2018b). This enrollment trend is not evident in transfer or graduate populations at Marathon University, and this study focused on first-time, full-time, undergraduate students as a result. Additionally, part-time and international student populations at Marathon University were too small to have significance in the enrollment problem and were excluded. This case study sought to identify why the first-time, full-time, undergraduate enrollment at this institution does not mirror national enrollment trends that demonstrate more women pursuing higher education than men. The research study also identified why first-time, full-time female students apply and are accepted at similar rates, but fail to yield at the same proportion as incoming male students. At a larger scale, this study is applicable to other institutions and the overall field because it seeks to provide an increased understanding of the inequities of gender in education that still exist and the societal implications that may result, an area which current research lacks to adequately address (Jacobs, 1996).

Since the gender demographics in higher education enrollment have changed in the last 40 years, there has been limited literature that explores the gender gap where male students outnumber female students enrolling in colleges and universities, aside from the gender differences in elite institutions (Bielby et al., 2014). Baum & Goodstein

(2004) note specific instances exist where male students receive preference over their female counterparts; however, this finding is only significant when male students are underrepresented in the applicant pool at an institution where the enrollment is predominantly female. Stereotypes about gender norms are also pervasive in the literature in regards to college choice and gender, such as females being more nurturing and predisposed to academic areas and occupations that are centered on care and less concerned with potential earnings than male students (Barone, 2011). This study serves as an opportunity to provide information for institutions whose enrollment does not reflect national gender trends of more women being enrolled, thus providing useful insight for strategic enrollment managers about admission policies, procedures, and marketing. Additionally, this study sought to contribute to gaps in the literature about college decision-making processes in regards to gender and socially embedded processes and beliefs (Jacobs, 1996).

College Choice Models

Understanding a student's college decision-making process is crucial when considering higher education enrollment, especially in relation to this study in order to determine why less female students than male students yield at Marathon University each year. "Effective strategic enrollment management depends on a better understanding of the timing and nature of students' search processes and knowledge about which student and institutional characteristics are most important in the student college choice process" (DesJardins et al., 1999, p. 118). Various models on college choice exist that seek to explain how individual student attributes and institutional characteristics impact a student's decision-making about where to continue their postsecondary education

(Hossler, Braxton, & Coopersmith, 1989). It is important to have a sound understanding of the specific needs and behaviors of students as they engage in college choice and consider their consumer behavior, as it will influence marketing, recruitment, and decision-making of strategic enrollment management professionals (Litten, 1982). Various types of models exist that analyze college choice, including economic, sociological, and information processing approaches, and a combined model of all approaches is often used to explain college choice (Hamrick & Hossler, 1996; Hanson & Litten, 1982; Hossler & Bontrager, 2014; Hossler et al., 1989; Iloh, 2018; McDonough, 1997; Park & Hossler, 2014; Paulsen, 1990; Perna, 2000; Vrontis, Thrassou, & Melanthiou, 2007). Each type of approach emphasizes different factors and variables that relate to the college decision-making process (Park & Hossler, 2014).

Economic model. The economic approach of the college decision-making process is considered by economists to include a human capital based decision that weighs the economic benefits against the cost of higher education (Hossler et al., 1989; Jackson, 1982; Manski & Wise, 1983; Park & Hossler, 2014; Vrontis et al., 2000). Two branches of this model exist, with one emphasizing institutional, statewide, and national enrollment analysis, and the other focusing on the individual student's characteristics in conjunction with their enrollment decision (Fuller, Manski, & Wise, 1982; Hossler et al., 1989). Focusing on the individual students' decision-making process, students consider maximizing their benefits by ensuring that attending a specific college will be worth the cost (Hossler et al., 1989; Jackson, 1982; Perna, 2006). This approach also equates the student's decision-making process to that of an investment, where a student may consider earning potential after graduation with a college degree compared to their potential if

they did not pursue higher education (Paulsen, 1990). Using a cost-benefit analysis allows students to make a decision that considers both the direct and indirect costs, including tuition, fees, books, and even losing friendships as a result of leaving home (Hossler etl al., 1999; Kohn, Mansk, & Mundel, 1976). Factors such as opportunity cost of a student's study time and the anticipated career earnings post-graduation all impact a student's college decision-making process (Bishop, 1977). Although this approach is seminal and college decision-making models have evolved more recently to consider additional factors, the economic model is still relevant today (Perna, 2006). It is important for students to consider the economic approach when engaged in the college choice process, since earnings for college graduates are higher, on average, than those of earners who only finished high school (Perna, 2000; Perna, 2006). Many studies within the economic approach attribute financial aid and cost to be a determining factor for students making a decision about college choice (Avery & Hoxby, 2004; Fuller et al., 1982).

The economic model of college choice also considers human capital and the investments that individuals make to enhance their own abilities in order to increase productivity (Becker, 1993; Paulsen, 1990; Perna, 2006). As students consider different characteristics of the college, they will create value judgements for each and ultimately decide if the institution will increase their human capital after assessing the cost and benefits (Long, 2004; Rubin, 2011). Avery & Hoxby (2004) note that students should evaluate their college choice through the human capital model by maximizing their benefits by choosing the lowest cost institution. To do so, students should consider the expenses of tuition, fees, and room and board, then determine the amount of scholarship

and aid against the value of consumption (Avery & Hoxby, 2004). The values could include the human capital earned from their on-campus experience, education, faculty interactions, library, and resources, among other benefits obtained at college (Avery & Hoxby, 2004). Students will "invest in education up to the point that the marginal cost of an additional year of schooling (foregone earnings plus tuition) is equal to its marginal benefit (the discounted stream of earnings attributable to another year of school)" (Rubin, 2011, p. 677). In the economic approach, the college decision is straightforward since it primarily considers the opportunity costs, noting that students should attend the college where their benefits exceed the overall cost (Avery & Hoxby, 2004).

This model has limitations, however, in that it solely considers cost and economic benefits in the decision-making process without taking other elements into consideration (Bishop, 1977; Perna, 2006). This approach assumes "that the relevant choice is between the cheapest of those feasible colleges and not attending college at all" (Bishop, 1977, p. 287). The economic model also indicates that not enrolling in higher education is a considered option for students in the decision-making process, however this is an assumption (Kohn et al., 1976). This approach is also more aligned with the third stage of Hossler & Gallagher's (1987) college choice model, choice, and does not take into consideration the first two steps of predisposition and search (Park & Hossler, 2014).

Sociological model. The sociological approach also focuses on educational aspirations that students have to pursue higher education, however unlike the economic approach, this model considers cultural and social capital more than the cost-benefit analysis of the aforementioned economic model (Jackson, 1982; Park & Hossler, 2014; Perna, 2006; Terenzini, Cabrera, & Bernal, 2001). Social and individual factors relating

to educational and occupational aspirations are considered within the sociological approach (Cosser & du Toit, 2002; Jackson, 1982; McDonough, 1997; Mustafa, Sellami, Elmaghraby, & Al-Qassass, 2018; Vrontis et al., 2007). These models are often considered status-attainment models, as students consider their socioeconomic status when making decisions about their future careers that could lead to increased social status attainment (Hossler et al., 1999; McDonough, 1997; Perna, 2006; Perna & Titus, 2004). Unlike the economic model, the sociological approach tends to focus more on the predisposition and search phases, while the economic approach is more aligned with the final phase of choice (Hossler & Gallagher, 1987; Park & Hossler, 2014).

Terenzini et al. (2001) state that "the sociological approach examines the extent to which high school graduates' socioeconomic characteristics and academic preparation predispose them to enroll at a particular type of college and to aspire to a particular level of postsecondary educational attainment" (p. 10). Social capital refers to the networks and connections that a student has, ultimately impacting their knowledge of educational opportunities and resources (Bergerson et al., 2013; Morrow, 1999). A student's social capital may have influenced their educational opportunities and aspirations from a young age, as variables like socialization, parental expectations, involvement, and education, family background, influences of others, and achievement can impact education attainment, aspirations, and college choice (Hearn, 1984; Park & Hossler, 2014; Perna, 2000; Perna, 2006; Sewell & Shah, 1968). Not only may sociological variables impact if a student is attending college and the institution they choose, but these factors may impact the type of institution, as students who are African-American, female, have parents who are low-income and have low education levels, and have a large number of

siblings, are less likely to attend highly selective institutions and can result in undermatching (Hearn, 1984; Hossler et al., 1989; Hoxby & Avery, 2013).

In regards to gender, "the stronger relationships of socioeconomic status and parental encouragement to the college plans of females than to those of males seem to reflect the differential pattern of role expectations from adult males and females in our society," as societal expectations for different students may have various college choice implications (Sewell & Shah, 1968, p. 564). When considering college choice from the sociological perspective, female students are often influenced by social influences more than males and consider the college choice suggestions of their family and friends (Bhayani, 2015; Hossler et al., 1989).

Although considering this approach has many benefits, limitations to the sociological model also exist. This approach considers the earlier stages of college choice models, predisposition and search, but is not as well suited to describe the final stage of choice, which is especially important in this study (Hossler et al., 1999; Park & Hossler, 2014). The sociological model alone is also limiting because it does not consider elements of the economic approach, such as cost, financial aid, and scholarships, which have a major impact on the college choice decision-making of a student (Hossler et al., 1999). To combat these limitations, using a combined approach that considers both economic and sociological models will allow researchers to incorporate attributes of each model that will allow for a more comprehensive analysis of college choice (Hossler et al., 1999; Perna, 2006).

Information processing model. Information processing approaches to college choice consider the way in which students obtain, process, and continuously make

decisions (Park & Hossler, 2014). This approach has not been fully developed, but does discuss how influence of others, social, and cultural capital impact college choice decision-making (Hossler et al., 1999). This approach can also relate to a student's habitus, which is considered to be a student's values and beliefs that are shaped by other members of the same group who hold similar interpretations (Bourdieu & Passeron, 1977; McDonough, 1997; Perna, 2006). The information processing perspective relates to the way in which students access information about colleges and universities, or lack access and resources (Park & Hossler, 2014). Although there are many implications for future research, especially related to the search phase of the college choice process, this approach will not be the focus of this study as its research and contributions are currently very limited (Park & Hossler, 2014).

Combined models. Combined models of college choice include economic and sociological approaches, and can be considered the fourth type of college choice approaches that exist (Cosser & du Toit, 2002; Hossler et al., 1989; Hossler et al., 1999; Park & Hossler, 2014; Perna, 2006; Vrontis et al., 2000). Considering strengths and weaknesses of the other college choice approaches allows the combined model of college choice to reflect the combination of different perspectives and complex factors (Cabrera & La Nasa, 2000; Perna, 2006). Significant benefits of the "…combined models is that the researcher can choose variables from either domain and concentrate on the sociological aspect of college choice as a process while maintaining the decision-making perspective of economics" (Hamrick & Hossler, 1996, p. 182). Rather than limiting the decision-making to one particular context, such as economic or sociological, the combined models allow those concepts to be integrated and consider various

constituents' perspectives and social, economic, and policy implications to the college choice process (Perna, 2006).

The five most popular combined models in relation to college choice include Chapman's (1981) model that considers both student and external characteristics, Jackson's (1982) three-stage model, Hanson & Litten's (1982) five-step process, Hossler & Gallagher's (1987) three-stage process that has been most widely cited in the literature and will be the focus of this study, and Perna's (2000) proposed combined conceptual model (Hossler et al., 1999; Park & Hossler, 2014). Prior to the emergence of these most notable models, Hills (1964) discussed college choice in relation to decision-making, noting that students will assign value to different institutions based on how well they believe they will do academically at each college. Kotler's (1976) seven-step model related college choice to market research, including decision to attend, information seeking and receiving, specific college inquiries, application, admission, choice, and registration. Today, the most widely used and cited model is Hossler & Gallagher's (1987) three-step model, though Iloh (2018) suggests that updating the college choice models for the modern day is necessary and required in order to best understand college choice and should include opportunity, time, and information (Bergerson, 2009; Iloh, 2018).

Chapman's model (1981). Chapman's (1981) model is unlike other college choice models in that it is not comprised of stages or steps, but instead focuses on the relationship between student characteristics and external factors like the influence of others, characteristics of the actual institution, and the institution's communication with students. Student characteristics consider socioeconomic status, aptitude on standardized

tests, and high school performance (Chapman, 1981; Hossler et al., 1999; Park & Hossler, 1989). External characteristics to be taken into consideration with student characteristics include the influence of others, especially parents, fixed college characteristics like cost, location, and campus environment that create an institutional image, and marketing communications from the institution (Chapman, 1981; Hossler et al., 1999; Park & Hossler, 1989). This model should not be confused with R. Chapman's (1985) model, which includes a five-stage theory of college choice, including pre-search behavior, search behavior, application decision, choice decision, and matriculation decision.

Although this model is seminal in terms of the many college choice models that exist, it lacks the ability to show a process of college choice that would be important in understanding how students make decisions, but does provide insight into variables that affect the process (Hossler et al., 1989). This model also fails to describe how students actually make a decision about where to attend college, though it does highlight the many variables that impact a student when making that choice. As a result, this model will not be the focus of this study, however, it did provide a foundation for future college choice decision-making combined models.

Jackson's three-stage model (1982). Jackson's (1982) combined model of college choice is comprised of three stages, including preference, exclusion, and evaluation (Hossler et al., 1999; Vrontis et al., 2000). The first stage of preference focuses on the sociological approach, in that a student's academic achievement and educational aspirations allow them to develop a preference to attend college (Hossler et al., 1999; Jackson 1982; Park & Hossler, 2014). This stage also includes family

background, although it is not ranked as important as academic achievement or the student's personal aspirations (Jackson, 1982). The second stage of exclusion incorporates the economic approach because students eliminate institutions from consideration due to location, cost, requirements, and offerings (Jackson, 1982). Jackson (1982) notes that in this stage, students may irrationally and incorrectly exclude an institution from their choice set based only on partial information, and if they had a more comprehensive understanding, may not have excluded that institution. Nonetheless, colleges and universities that a student excludes impact the choice set of institutions that the student will then consider (Hossler et al., 1999; Jackson, 1982). The final stage of Jackson's (1982) theory is evaluation, where a student considers the list of institutions that they are favoring and ultimately makes a choice about where to attend college by rating the options and characteristics (Hossler et al., 1999).

Jackson's (1982) model will not serve as the focus of this study, though it does have elements of both the economic and sociological approaches of college choice (Hossler et al., 1999). This model served as a foundation for other college choice models in the future, however, this model does not discuss the way in which students create their initial set of institutional choices (Hossler et al., 1999). This gap does not allow for an understanding of the entire college choice process, including where a student begins to search for institutions and how they form their list of potential choices. Additionally, this model lacks consideration for students who may not be predisposed to attend college and the impact that has on their college decision-making process.

Hanson & Litten's (1982) three phase model. Hanson & Litten (1982) created a three-phase model comprised of five steps to explain a student's college decision-making

process. This model, unlike others, considers how a student's gender impacts their decision-making process (Hanson & Litten, 1982; Hossler et al., 1989). Hanson & Litten (1982) do note that there is limited research on gender implications for college choice and that specific theories regarding gender and college decision-making do not exist.

The five steps within this model include having college aspirations, starting the search process, gathering information, sending applications, and enrolling (Hanson & Litten, 1982; Hossler et al., 1989; Hossler et al., 1999). These steps can be categorized into three stages, the first being the decision to go to college, the second stage including the search for colleges and creation of a criteria set, and the last stage is the process of applying and enrolling (Hanson & Litten, 1982; Hossler et al., 1999). The first stage considers variables like self-esteem and confidence where gender difference between men and women can be observed, as men were found to be more self-confident than women (Hanson & Litten, 1982; Hossler et al., 1989). The second stage of this model describes how students obtain information about college and engage in the search process, including influence of others, location, cost, and environment (Hanson & Litten, 1982; Hossler et al., 1989). Again in this stage, gender differences can be noted as women are more likely than men to apply earlier and be concerned with the environment of the institution (Hanson & Litten, 1982; Hossler et al., 1989). The final stage of this model includes application, admissions, and matriculation into a higher education institution and considers processes and policies of the given institution (Hanson & Litten, 1982).

While this model does incorporate elements of student characteristics and institutional features, combining elements from Jackson's (1982) and Chapman's (1981)

models, this model does not adequately consider the predisposition phase. It is, however, one of the first models to indicate that college choice is a continuous process, however, it does not consider the different variables within the model to be interrelated (Hossler et al., 1999). A benefit of this model in relation to this study is that it considers student characteristics, specifically gender (Hanson & Litten, 1982). Additionally, this model may need to be updated for today's students, as aspects of the search process have dramatically changed since the introduction of technology.

Perna's proposed combined conceptual model (2006). The newest combined model to be analyzed is the most recent construct of economic and sociological approaches, Perna's (2006) proposed conceptual model, which also draws upon a student's habitus. Habitus is considered to be a student's "system of values and beliefs that shapes an individual's views and interpretations" that is a set of subjective perceptions held by all members of the same group (Bourdieu & Passeron, 1977; McDonough, 1997; Perna, 2006, p. 115). By considering habitus, this college choice model also takes into consideration the way in which college choice decision-making may vary across race, ethnicity, and socioeconomic status, among other groups (Perna, 2006). Perna (2006) "found that measures of social and cultural capital improved the explanatory power of a traditional econometric model of college enrollment that included only measures of gender, race, financial resources, and academic preparation and achievement" (p. 116). Additionally, cultural and social capital impacted the decisions of African-American and Hispanic students more than their White counterparts (Perna, 2000; Perna, 2006). As a result, it is important to consider the habitus, social capital, cultural capital, and organizational context when analyzing college choice models (Perna,

2006). This proposed conceptual model suggests that a student's college choice is impacted by the individual's habitus, the school and community context, the higher education context, and the social, economic, and policy context (Perna, 2006).

This model seeks to fill the gap in the previous models on college choice that pertain mostly to traditional students and do not consider the modern day diversity of students enrolling in higher education (Paulsen & St. John, 2002). However, despite incorporating a model that aligns more with today's student, this updated model does not explain how factors of habitus, social, or cultural capital actually impact or influence a student's college decision-making process (Ra, 2011).

Hossler & Gallagher's (1987) three-phase model. Today, Hossler & Gallagher's (1987) model is most widely used in regards to college choice and each step of the theory has been expanded upon and evaluated in the literature (Bergerson, 2009; Iloh, 2018; Park & Hossler, 2014). As a result, this model will be used exclusively to guide this study.

Hossler & Gallagher's (1987) model is the most popular of any college choice model because it simplified the steps seen in previous work from Chapman (1981), Jackson (1982), and Hanson & Litten (1982) and focused on the student rather than the institution throughout the college decision-making process (Hossler et al., 1989; Hossler et al., 1999; Hossler & Gallagher, 1987; Park & Hossler, 2014). This model condensed previous research into three stages, consisting of predisposition, search, and choice, and is seen as the foundation of all college choice models (Hossler & Gallagher, 1987; Hossler et al., 1989; Hossler et al., 1999; Park & Hossler, 2014).

The predisposition phase includes a student's decision to continue onto college after high school and is often influenced by the student's socioeconomic status, parental influence, and peers (Adams, 2009; Bers & Galowich, 2002; Hossler & Gallagher, 1987; Hossler & Maple, 1993). In this phase, the student makes the decision to attend a college or university rather than the alternative of not going to college and instead pursuing work or the military (Hossler et al., 1989; Hossler et al., 1999; Hossler & Gallagher, 1987). Characteristics of the student impact the predisposition stage, including socioeconomic status, ability and achievement, attitudes of parents and peers, parental encouragement, and involvement in extracurricular activities (Hossler & Gallagher, 1987). At the institutional level, attendance in high school, high school curriculum, status of high school, and proximity to a college campus also impact if a student is predisposed to pursue postsecondary education (Hossler & Gallagher, 1987).

In the search phase, students work to find information about colleges and universities that will ultimately lead them to make a choice on where to attend, which is the final stage of the model (Hossler et al., 1989; Hossler et al., 1999; Hossler & Gallagher, 1987; Park & Hossler, 2014; Paulsen, 1990; Schmit, 1991; Smith & Fleming, 2006). In the search phase, students seek to find information about colleges and universities (Hossler & Gallagher, 1987). During this phase, students begin to engage more with the institutions and develop their choice set, or a group of institutions that a student is interested in applying to and learning more information about (Hossler & Gallagher, 1987). All students engage in the search process differently, yet most high school students are irrational about their choices within the search phase when creating their choice set (Hossler & Gallagher, 1987; Jackson, 1982). Choice sets may include

attributes like selectivity, cost, distance from home, public or private, two-year or four-year, and size (Paulsen, 1990). When creating choice sets, students still may ultimately decide to pursue a non-college option (Hossler & Gallagher, 1987). It can be problematic for students to have a choice set that "mistakenly eliminate an institution which is potentially a good choice due to a lack of awareness of the range of institutions as well as the accurate information about the institutions. This may lead to a lack of satisfaction and non-persistence" (Hossler & Gallagher, 1987, p. 215). Although the search phase is often connected primarily to the student, it also has implications for institutions including timing for marketing and communicating with potential students throughout their search phase (Paulsen, 1990).

The search phase continues until the final stage of college choice occurs, which consists of the student ranking different institutions and evaluating their choices, ultimately making a decision about which institution to attend (Hossler & Gallagher, 1987; Kim, 2004; Paulsen, 1990). "During the choice stage, students compare the academic and social attributes of each college they have applied to and seek the best value with the greatest benefits" (Hossler et al., 1999, p. 150). College courtship procedures, or strategies that colleges use to attract students including their marketing, communication plans, and scholarship, culminate within the choice phase (Hossler & Gallagher, 1987). However, colleges and universities have limited control over this final phase, as the decision is ultimately up to the student (Hossler & Gallagher, 1987).

The focus of this study is on the final phase of choice, however, research is limited to explain choice in regards to variables like "gender, peer encouragement, high school quality, or labor market considerations" (Hossler et al., 1989, p. 265). This study

seeks to provide a better understanding of college choice and decision-making, especially among female students at Marathon University.

Variables Involved in College Choice

In addition to understanding college choice models and the way in which students make decisions about where to attend college, the variables that impact admission and the student decision-making process in the final choice phase also need to be considered for this study (DesJardins et al., 1999; Hossler et al., 1989; Hossler & Gallagher, 1987; Park & Hossler, 2014). Two types of variables relating to college choice exist, including characteristics of the student and characteristics of the institution (Hossler et al., 1989). Personal factors and student characteristics, such as socioeconomic status, academic aptitude, gender, ethnicity, proximity to home, and parent's education level, encouragement, and support, can be attributed to college choice (Cosser & du Toit, 2002; Hossler et al., 1989). Standardized test scores, such as the SAT and ACT, serve as predictors of college performance and are evaluated in the admissions process (Bielby et al., 2014; Baron & Norman, 1992). GPA and high school grades (Bielby et al., 2014; Conger, 2015; Goldin et al., 2006), merit scholarship awards and financial aid (Avery & Hoxby, 2004, U.S. Department of Education, 2018a), proximity to home (Chen & Zerquera, 2018), and income and socioeconomic status (Hossler & Bontrager, 2014) are other variables that should also be considered. These variables begin to be evaluated by students in the search phase of their college choice process, but are realized and used explicitly in decision-making in the final stage of choice (Hossler & Gallagher, 1987; Hossler et al., 1989).

Institutional characteristics can be both financial and nonfinancial (Hossler et al., 1989). Nonfinancial attributes can include location, reputation, quality of academic programs, and marketing techniques (Hossler et al., 1989). Financial attributes of college choice include the cost of attendance, scholarships, and financial aid opportunities for students (Hossler et al., 1989). These types of institutional characteristics are considered fixed, in that they are unlikely to change (Chapman, 1984; Hossler et al., 1989). Additionally, fluid institutional characteristics that include marketing initiatives, recruitment strategy, and changes to academic programs also contribute to and can influence a student's college choice (Hossler et al., 1989). This literature review will first consider personal characteristics of the student and then institutional attributes that impact a student's college choice decision-making process, while maintaining the primary focus on individual characteristics for the purpose of this study.

Personal attributes involved in college choice. Individual student characteristics contribute to how students decide where to attend college during the final phase of choice within the college search process (Hossler & Gallagher, 1987). Many studies have been done that look at college choice related to student attributes, however, few studies have been done that look at the combination of variables and the influence they have on college choice (Hossler et al., 1989). For the purpose of this study, individual student characteristics such as gender, academic aptitude, socioeconomic status, ethnicity, parental level of education and encouragement, proximity to home, and the timing of the college application process will be reviewed.

Gender. Since gender is the focus of this study, the first student characteristic to be discussed in this review will be the way in which gender impacts college choice

decision-making. Despite increased research regarding gender in relation to college choice, research findings are inconclusive and often contradictory (Hanson & Litten, 1982; Park & Hossler, 2014; Perna, 2006). As previously noted, more women than men are entering higher education each year as the gender gap in enrollment has reversed over the past 40 years, yielding extensive research about this phenomenon (Barone, 2011; Baum & Goodstein, 2005; Bergerson et al., 2013; Bielby et al., 2014; Bishop, 1992; Conger, 2015; Conger & Dickson, 2017; DiPrete & Buchmann, 2013; Evers et al., 2006; Goldin et al., 2006; Peter & Horn, 2005; U.S. Department of Education, 2018a; 2018b). Despite changes in enrollment patterns, some studies report that gender does not have an impact on college choice (Avery & Hoxby, 2004; DesJardin et al., 1999; Hossler et al., 1989; Hossler & Stage, 1992; Perna, 2000), while others indicate that women are more inclined to apply to college than men (Cho et al., 2008; Perna & Titus, 2004; Weiler, 1994).

Although there does not seem to be a consistent understanding between men and women and their overall college choice process, gender may have an impact on the variables that men and women each consider important when engaging in the final stage of choice and ultimately choosing a college or university to attend (Chapman, 1981; Hanson & Litten, 1982; Hao & Bonstead-Bruns, 1998; Hemsley-Brown & Oplatka, 2015; Hossler et al., 1999; Iceland, 2014; Lockheed, 1982; Paulsen & St. John, 2002; Peter & Horn, 2005; Rosenfeld & Hearn, 1982; Stricker et al., 1991; Wiese et al., 2010). The following personal and institutional characteristics will be discussed in greater detail later within this review, but it is important to note how gender as a variable can interact with other characteristics during the college choice decision-making process.

Academic aptitude and expectations. Gender differences in academic ability, including high school performance and standardized test scores, are often noted within the literature. Men tend to have significantly lower academic expectations than women, which may result from increased behavioral issues in the classroom and lower GPAs than women (Hao & Bonstead-Bruns, 1998). Compared to women, men also tend to have higher grades and scores in math specifically but lower scores in reading than women, and women are found to generally have higher class ranks than men (Hanson & Litten, 1982; Hao & Bonnstead-Bruns, 1998). Overall, women show higher grades academically in high school but lower standardized test scores than men (Peter & Horn, 2005; Stricker et al., 1991). It should also be noted that women are more likely to take the SAT, ACT, and GRE, which coincides with the enrollment trend of more women entering college each year nationally (Stricker et al., 1991). However, women also tend to lack the college-preparation courses that would allow them to be more successful on their standardized tests compared to men, have lower confidence in their math abilities, and higher test anxiety than men that can impact their standardized test scores (Stricker et al., 1991). While gender bias in standardized tests and testing in general have been found to be decreasing, instances where bias within the actual test that could favor either men or women can still exist, which may have an impact on the overall success of a student's test result (Lockheed, 1982; Stricker et al., 1991). Lockheed (1982) also notes that there are fewer differences between men and women's test scores when both genders have been adequately prepared academically, which is especially true in the instance of math.

Men may choose to attend college with the expectation that they will make more money if they attend, which also may influence the majors that men are more likely to

choose than women (Hanson & Litten, 1982). Women are considered to have more intrinsic motivation and goals when considering pursuing higher education, such as gaining an education and enhancing their skills, to become more cultured, and further develop their interests (Hanson & Litten, 1982). Women may also be motivated to continue to postsecondary education because obtaining a bachelor's degree has more economic and non-economic benefits for women than men, which may attribute to higher rates of female enrollment nationally (Perna, 2005; Perna, 2006).

There are also gender differences in the academic programs that men and women seek to pursue. Academic majors in engineering, computers, mathematics, and statistics are comprised of mostly men, compared to women making up the majority of students in academic programs like education, psychology, literature, humanities, and languages (Iceland, 2014; Stricker et al., 1991). As a result, median earnings for professions based on the majors where men gravitate is about $80,000 annually, compared to $50,000 a year for women in the majors that they overwhelmingly populate (Iceland, 2014). Women do enter college with more of a definitive idea of what they wish to study, but are more open to general education programs than their male counterparts (Iceland, 2014).

Socioeconomic status. Socioeconomic status as it relates to gender for the purpose of this study will not serve as a variable for consideration during the quantitative analysis of the research findings, as socioeconomic status is difficult to define and quantify. As an alternate, net cost will be examined. To put the interaction of socioeconomic status and gender into national context, women make up 60% of students within the lowest socioeconomic quartile, providing them with more barriers to higher education than students from higher socioeconomic backgrounds (Peter & Horn, 2005). Implications of

socioeconomic status as it relates to college choice overall will be discussed in greater detail later in this chapter.

Ethnicity. Ethnicity as it relates to gender for the purpose of this study will serve as a variable for consideration during the quantitative analysis of the research findings. It should be noted that nationally, the percentages of women from all ethnic and racial backgrounds are increasing in both enrollment and degree attainment in higher education (Peter & Horn, 2005). The relationship between different ethnic groups and college choice decision-making will be explored in greater detail later in this chapter.

Influence of others. Parents, peers, and counselors impact both men and women when making decisions about where to attend college (Hanson & Litten, 1982; Hossler et al., 1999). However, female students may be more dependent on their parents and more influenced by them when making a college decision (Hanson & Litten, 1982; Hossler et al., 1999; Lockheed, 1982; Rosenfeld & Hearn, 1982; Shank & Beasley, 1998). Additionally, female students generally talk more to their parents than male students and also consult more with friends about their plans for college than men (Hossler et al., 1999). Women do have more financial reliance on their parents than men do, which may also contribute to them being more influenced by their parents when making a college choice decision (Rosenfeld & Hearn, 1982). On the contrary, men are found to consult more with their teachers and counselors than women (Hanson & Litten, 1982).

College choice process timing. Research is also conflicted in regards to the timing of the college choice process. Some findings indicate that women begin and end the college choice decision-making process earlier than men (Hossler et al., 1989), yet other research finds that both genders start the process at the same start time but women

complete the application process earlier and apply for more early decision opportunities at selective institutions than men do (Hanson & Litten, 1982; Litten, 1982). If women do, in fact, make decisions about their college choice earlier than men, the implications of financial aid awards are especially important in the timing of their college choice process and institutions should consider releasing financial aid packages earlier in the process if they are interested in entering the final choice set for women (Rosenfeld & Hearn, 1982). However, additional and more current research should be conducted to explore gender differences in regards to the timing of the college choice process, as well as the information that men and women seek when engaged in the college search process (Hanson & Litten, 1982).

Institutional characteristics. The importance of different institutional characteristics, such as size, location, and academic programs offered, can also differ between men and women (Shank & Beasley, 1998; Wiese et al., 2010). Although all institutional characteristics that exist will not be discussed for the purpose of this study, with the exception of academic program, it should be noted that:

> Women are more likely to believe that a safe campus, a diverse student population, a favorable student-to-teacher ratio, a wide variety of course offerings, and a college that is located close to home are important characteristics. Men … are more likely to view a prominent athletic program as an important characteristic of a college. (Shank & Beasley, 1998, p. 66)

Men and women equally consider other institutional variables like campus life activities including quality of social life, aesthetics of the campus, on-campus housing opportunities, and extracurricular activities, though women are more concerned with the

academic quality of an institution (Cho et al., 2007; Dolinsky, 2010; Hemsley-Brown & Oplatka, 2015; Shank & Beasley, 1998; Wiese et al., 2010).

Proximity to home. Conflicting evidence between the genders regarding location of the institution and proximity to home also exists (Hanson & Litten, 1982), though it is most recognized that women desire to stay closer to home than men when choosing a college (Chen & Zequera, 2018; Hanson & Litten, 1982; Shank & Beasley, 1998). Students who tend to have a strong connection to home and their families, especially Hispanic students and women, prefer to attend a college closer to home as a result (Chen & Zequera, 2018; Shank & Beasley, 1998). The desire to be closer to home may also be related to the variables of parental influence and financial aid, which are more important to women during the college choice decision (Hanson & Litten, 1982; Hossler et al., 1999; Lockheed, 1982; Rosenfeld & Hearn, 1982; Shank & Beasley, 1998).

Financial aid. Current research is also inconclusive about the impact of financial aid on the different genders, however, there may be implications for scholarship awards and their effects on men and women. Paulsen & St. John (2002) recommend that additional research be conducted about how financial aid and cost impact gender differences, especially among higher income women during the choice phase, though other researchers determine that financial considerations impact women more than men when making their college choice decision (Rosenfeld & Hearn, 1982).

It is also suggested that higher income women have a different set of choice factors than higher-income men, and thus make different decisions that are most likely not financially motivated (Paulsen & St. John, 2002). Additionally, it is unclear to what extent financial aid impacts the likelihood of enrollment of female students, though

increased federal aid does increase male enrollment at private institutions (Chapman, 1981). It is thought that women have more of a financial reliance on their families than men and receive more financial support from their parents, and as a result, may be more impacted by influence of parents, educational expectations, and financial aid opportunities (Hanson & Litten, 1982; Lockheed, 1982). It can also be determined that women receive less overall financial aid than men, including grants, loans, and work-study opportunities, which makes their reliance on family support and financial aid when making a decision about college that much more important (Rosenfeld & Hearn, 1982). When isolated from gender, the following variables have an impact on the student college choice decision-making process.

Academic aptitude. Academic aptitude, including high school academic performance and standardized test scores, are often variables that are attributed to college choice decision-making (Anderson, Bowman, & Tinto, 1972; Chapman, 1981; DesJardin et al., 1999; Hearn, 1984; Hossler et al., 1989; Park & Hossler, 2014). Students use their academic aptitude to evaluate institutions in the search phase and ultimately make a decision about where to attend college based on an institution that will serve as the best academic fit (Chapman, 1981). Research posits that students choose an institution to attend where other students will have a similar aptitude, often choosing an institution with an average SAT scores about 100 points higher than their own (Chapman, 1981; Manski & Wise, 1983). Although academically prepared students are likely to choose to attend college, they do not necessarily choose an institution that is the highest-quality from their choice set, but instead consider other institutional characteristics (Manski & Wise, 1983). High ability students are more likely to attend selective institutions and

college and universities that are out-of-state (Hossler & Bean, 1990). As a result, higher achieving students may also consider the perceived quality of an institution when making a decision (Hossler & Bean, 1990). Conversely, students who are lower performing academically are more inclined to choose less competitive, in-state institutions (Hossler & Bean, 1990). It should also be noted that admissions processes favor students who perform well on standardized tests and have high academic achievement in their high schools, which often presents barriers for underrepresented students to achieve access to highly selective institutions (Astin & Oseguera, 2004).

High school performance. A student's performance in high school has many implications for the college choice decision-making process (Alexander & Eckland, 1977; Hossler et al., 1989; Leslie, Johnson, & Carlson, 1977; Park & Hossler, 2014). A student who performs well in high school may be encouraged more than their counterparts who are not succeeding in high school to attend college (Chapman, 1981). As a result, they may be more inclined to attend and move through the college choice process (Chapman, 1981; DesJardins et al., 1999). High achieving students in high school may also be more likely to enroll in college preparatory courses, take advanced-placement classes, and earn higher grades and GPAs (Alexander & Eckland, 1977; Leslie et al., 1977; Park & Hossler, 2014). The quality of a student's high school can also impact their performance and college choice process, as teacher qualification, availability of advanced courses, college counseling, access to technology, and increased budgets are closely related to college choice decisions (Park & Hossler, 2014). It is also undisputed that higher ability groups in high school applied to and considered more institutions than students who had lower academic ability (Hossler et al., 1989; Litten, 1982).

Additionally, students with high academic performance in high school valued the overall campus appearance and career outcomes less than lower achieving students, but both high achieving and lower achieving students regarded the importance of the college's cost the same (Litten, 1982).

Standardized test scores. Standardized test scores have historically been seen as an indicator of a student's future college success, however, these tests have recently come under scrutiny and been de-emphasized in many institutions' college admissions processes (Kobrin & Michel, 2006; Rothstein, 2004; Zwick, 2002). Standardized test scores do help to explain a student's enrollment behavior in their college choice decision-making process, however, standardized tests may not be the best predicator of a student's success once they get to college (ACT, 2015). Students who took the ACT and had their scores sent to an institution in their choice set tend to enroll at one of the institutions in that initial choice set, and 83% of students who meet all four ACT college readiness benchmarks, including English composition, social sciences, college algebra, and biology, enrolled at a 4-year public institution within their initial choice set that they sent a score report to (ACT, 2015). Additionally, "as the score level of the student increases, the incidence of strong interest decrease slightly in career outcomes and campus appearance" (Litten, 1982, p. 393).

Academic expectations. Academic expectations refer to a student's aspirations, judgement of their future performance in college, and provides an estimate of what the student will accomplish in the future (Chapman, 1981). Their academic expectations may be formed as a result of their parents' expectations and their own educational attainment, which often work in conjunction with each other (Conklin & Dailey, 1981; Stage &

Hossler, 1989). Additionally, students who are involved in high school with athletics and extracurricular activities have higher aspirations for their education than students who are not (Hossler et al., 1999; Stage & Hossler, 1989). This attribute also relates to the earlier stage, predisposition, in the college choice model (Hossler & Gallagher, 1987).

Socioeconomic status. Many studies have been conducted that include the impact of a student's socioeconomic status as it relates to their college choice decision-making process (Alexander & Eckland, 1977; Astin & Oseguera, 2004; Berkner & Chavez, 1997; Cabrera & La Nasa; Hearn, 1991; Hearn & Ochs Rosinger, 2014; Kim, 2004; Leslie et al., 1997; McDonough, 1997; Perna & Titus, 2004). In higher education today, economic stratification between high and low income students continues to increase, as a decreasing number of students from low socioeconomic backgrounds attend two-year public institutions and more students from higher socioeconomic statuses are enrolling in public and private four-year institutions (An, 2010; Chapman, 1981; Kim, 2004; Perna & Titus, 2004). Additionally, only 40% of low income students enroll in a college or university immediately after high school, compared to 84% of those students with family incomes over $100,000 (Engberg & Allen, 2011).

When analyzing socioeconomic status and college choice, it is important to be mindful of the way that socioeconomic status is defined and considered within individual studies. Frequently attributed to socioeconomic status is the composite that includes cost of the institution, financial aid and awards, and parental income and education level, though not all researchers measure socioeconomic status in the same way (Perna & Titus, 2004). Other studies may relate socioeconomic status to a student's habitus, social, and cultural capital (McDonough, 1997).

Despite extensive research being doing on socioeconomic status of students and how that impacts their college choice, research has not shown a consistent understanding of the way in which the socioeconomic status impacts their decision-making (Hossler et al., 1989). Some research has found that socioeconomic status is not strongly correlated to choice, while others indicate that socioeconomic status is a strong predictor of a student's decision to attend college and which college they ultimately choose (Berkner & Chavez, 1997; Leslie et al., 1977; McDonough, 1997; Park & Hossler, 2014). However, research has found that students from high socioeconomic backgrounds are more likely to apply to and attend more selective and competitive institutions than students from lower socio-economic backgrounds (Avery & Hoxby, 2004; Berkner & Chavez, 1997; Braxton, 1990; DesJardins et al., 1999; Hearn 1984; Hearn & Ochs Rosinger, 2014; Maguire & Lay, 1981; Weiler, 1994).

Additionally, research findings are inconclusive regarding the cost of attendance and financial aid's impact on college choice based on socioeconomic status. Some findings indicate that the cost of the institution that a student ultimately chooses to attend does not appear to be related to socioeconomic status (Braxton, 1990; Hossler et al., 1989; Paulsen, 1990), however, other findings note that the increasing cost of college does impact student decisions, especially those from lower socioeconomic backgrounds (Cabrera & La Nasa, 2000). There is consensus that financial aid has an impact on college choice, especially for students from disadvantaged backgrounds (Cabrera & La Nasa, 2000; Manski & Wise, 1983; Tierney, 1980).

Ethnicity. A student's ethnicity is also considered a characteristic impacting college choice decision-making. It has been found that the actual college decision-making

process is different for students depending on their ethnicity (Kim, 2004; Perna, 2000). When considering ethnicity and race, it is important to be mindful of how these variables coincide with and have implications when combined with other variables, such as socioeconomic status (Kim, 2004). Although increasing numbers of underrepresented students are entering into higher education each year, African American and Hispanic students are still underrepresented in colleges and universities today (Kim, 2004; Perna, 2000). Additionally, White students are more likely to attend their first choice college than students who are African American, Hispanic, and Asian American (Hossler et al., 1989; Kim, 2004).

Underrepresented students often have high educational aspirations to continue into college (Hurtado, Inkelas, Briggs, & Rhee, 1997; Park & Hossler, 2014), however, other research suggests that African American students "hold unrealistic goals and aspirations that are not supported by college behavior and academic achievement" and their ability is often not consistent with the number of applications they submit (Park & Hossler, 2014, p. 57; Perna, 2000). African American female students are more likely to enroll in college than males, which could also be attributed to parental expectations and encouragement, and African American students overall are more likely to attend a four-year institution than a two-year institution compared to their counterparts (Manski & Wise, 1983; Park & Hossler, 2014; Perna, 2000). Additionally, African American students may be more concerned with the cost of college and their ability to pay than students from other racial and ethnic backgrounds (Hemsley-Brown & Oplatka, 2013; Park & Hossler, 2015; Perna, 2000).

Hispanic students are more likely to be first generation than other students, which may impact their college choice decision-making process in regards to lower college aspirations, expectations, and academic achievement (Ceja, 2006; Park & Hossler, 2014). Hispanic students are also more likely to attend community college, and are overrepresented at two-year schools compared to White and African American students (O'Connor, Hammack, & Scott, 2010; Park & Hossler, 2014). They also tend to have lower parental involvement than White or African American students, which impacts their college decision-making process and decreases their level of financial understanding and information (Ceja, 2006; O'Connor et al., 2010; Perna, 2000; Santiago, 2007). Because parental involvement is lower than for other students, Hispanic students tend to rely on advice and suggestions from their peers and siblings (Ceja, 2006; Park & Hossler, 2014; Sokatch, 2006). They also are "attracted to less-selective institutions that are most likely 2-year institutions, public, less costly, have high dropout rates and are close to home" (Pérez & Ceja, 2015, p. 3; Santiago, 2007).

Asian American students tend to have higher academic expectations and influence from parents, although there is diversity within the Asian student population regarding college choice (Park & Hossler, 2014). Asian American students often tend to be categorized as one group, however, ethnic subgroups within the population have different social and institutional experiences that are often misrepresented with the designation of one, uniform racial group (Teranishi, Ceja, Antonio, Allen, & McDonough, 2004). Generally and often stereotypically, Asian American students' parents tend to have high academic expectations, aspirations, and involvement with their students (Kim & Gasman, 2011; Park & Hossler, 2014; Teranishi et al., 2004). Asian students also apply to college

at twice the rate of White students and have the highest expectations for degree attainment compared to students from any other background (DesJardins et al., 1999; Hurtado et al., 1997). They also apply to their first-choice institutions more and complete standardized tests earlier than other students, and financial aid is a strong influencer in their choice to attend their top choice college (Kim & Gasman, 2011; Park & Hossler, 2014).

Influence of others. Research is pervasive on the significant people in a student's life, such as parents, friends, and counselors, and their impact on the student's college choice decision-making process (An, 2010; Ceja, 2006; Chapman, 1981; Conklin & Dailey, 1981; Hossler & Stage, 1992; Hossler et al., 1989; Hossler et al., 1999; Litten, 1982; Manski & Wise, 1983; McDonough, 1997; Park & Hossler, 2014; Perna, 2000; Perna & Titus, 2004; Stage & Hossler, 1989). Education, involvement, and encouragement from parents and the influence of peers and counselors is one of the primary influencers found in the literature that impacts college choice (An, 2010; Ceja, 2006; Chapman, 1981; Conklin & Dailey, 1981; Hossler & Stage, 1992; Hossler et al., 1989; Hossler et al., 1999; Litten, 1982; Manski & Wise, 1983; McDonough, 1997; Park & Hossler, 2014; Perna, 2000; Perna & Titus, 2004; Stage & Hossler, 1989).

Parents. Parents remain the strongest influencer of college choice for students and attributes such as the parental level of education, involvement, expectations, and encouragement have significant effects on college choice (An, 2010; Conklin & Dailey, 1981; Hanson & Litten, 1982; Hossler et al., 1989; Hossler et al., 1999; Hossler & Stage, 1992; Litten, 1982; Manski & Wise, 1983; Perna & Titus, 2004; Stage & Hossler, 1989). Research uniformly determines that as levels of parental education increase, the rate at

which students apply and enroll in college also increases (An, 2010; Hossler et al., 1989; Hosslet et al., 1999; Hossler & Stage, 1992; Manski & Wise, 1983; Stage & Hossler, 1989). College-educated parents have a better understanding of the college process than parents who did not attend college since they have experience going through it themselves, and as a result, are more likely to value education and pass those beliefs along to their children (An, 2010; Hossler et al., 1999). Parents who went to college are also familiar with how the college system works and are able to better help their students prepare (Hossler et al., 1999). Additionally, students whose parents went to college begin working on their college applications earlier than students whose parents did not attend college (Litten, 1982). Although parental education overall is a strong indicator of a student's college decision-making, the father's educational level is the strongest influencer for both male and female students (Stage & Hossler, 1989). Additionally, students whose parents had lower levels of education, lower incomes, and more siblings were less likely to go to highly selective institutions (Hearn, 1984).

Parental involvement, expectations and encouragement are undisputed factors that are significant in college choice decision-making for students and these variables are often used interchangeably throughout the literature (Conklin & Dailey, 1981; Perna & Titus, 2004). It is universally determined that a student is more likely to attend a college that is a selective, four-year institution when their parents are involved, expect them to attend college, and encourage them throughout the college process (Conklin & Dailey, 1981; Hossler et al., 1989). Though parental encouragement and expectations may have more of an impact on the earlier stage of predisposition, parental influence nonetheless has an impact on the student's ultimate decision on where to attend college (Hossler et

al., 1989). Conversely, students who are low-income, have low academic achievements, and whose parents have lower levels of education saw parental expectations begin to decline throughout their time in high school, even when the parents had high expectations at the start of their student's freshman year (Hossler et al., 1999).

Peers & siblings. Although students in the college decision-making process may consult their peers and friend groups, this factor is not as significant on the overall college choice decision as parents, especially within the final choice stage (Bhayani, 2015; Hossler & Gallagher, 1987; Hossler et al., 1989; Hossler & Stage, 1992). It has been found that the college choices of a student's friends may have an impact on their college choice process, however, parental influence is still much greater throughout the college choice decision-making process (Chapman, 1981; Fletcher, 2012; Park & Hossler, 2014). Students whose friends are also applying to colleges are more likely to enroll themselves, and students whose classmates aspire to attend college are also more likely to attend (Fletcher, 2012; Hossler & Gallagher, 1987; Manski & Wise, 1983). It should be noted that peers can influence a student's choice set, in that students may feel influenced by social norms of acceptable choices when determining where to attend college (Fletcher, 2012). Female students may also be more susceptible to influence by peer groups and social influence than their male counterparts (Bhayani, 2015).

Research is limited on the impact that siblings have on a student's college decision-making process and ultimate choice (Goodman, Hurwitz, Smith, & Fox, 2015). Despite limited research, it can be concluded that younger siblings are more likely to follow their older siblings decisions about college and choice of institution, as one-fifth of younger siblings will enroll in the same institution as their older sibling (Goodman et

al., 2015). Additionally, a younger sibling's decision about college is more likely to mirror their older sibling's choices when the two siblings have similar academic achievements, gender, and age (Goodman et al., 2015).

Counselors. High ability students view their high school counselors as a source of information throughout the college decision-making process more so than lower ability students (Litten, 1982). High school counselors had a positive impact on students to attend more selective institutions than those students who did not have the opportunity to work with a college counselor (Avery, 2010). Parents still impact students more than any other constituent group and are the predominant influencer on students making a college choice decision, as one-third of students who receive college counseling did not follow the advice from their counselors (Avery, 2010).

College choice process timing. Within the college choice decision-making process, it is often difficult to know when students are making decisions about where to attend college (Park & Hossler, 2014). Research is limited on the timing in which students engage in the choice process aside from attributes of gender and ethnicity in relation to timing (Park & Hossler, 2014; Perna, 2006). An estimated timeline of the college choice decision-making process considers predisposition to occur between the seventh and tenth grade, search stage to happen during the tenth through twelfth grades, and the final stage of choice being made in the eleventh and twelfth grades (Hossler et al., 1999; Perna, 2006).

However, it can be determined that if students start to consider the choice process later in their high school career, they are more inclined to attend a two-year institution rather than a four-year college or university (Hossler et al., 1999; Park & Hossler, 2014).

Additionally, students can decide on their first-choice college as early as ninth grade, however, their decision is often not followed through and is subject to change (Litten, 1982; Park & Hossler, 2014; Stage & Hossler, 1992). Higher ability students with increased standardized test scores begin the application and college choice process earlier than students who have lower academic ability (Litten, 1982). Additionally, higher achieving students decide where they want to apply in the fall semester of their senior year of high school, whereas lower achieving students create their choice sets later in their high school career (Litten, 1982). By senior year, college-bound students do decrease the initial number of institutions from their choice sets as they begin to develop more realistic lists for consideration on where to attend (Hossler et al., 1999).

Conflicting research exists regarding gender differences and the timing of the college choice process. Hossler et al. (1989) note that women begin and end the college choice process earlier than men, yet other research finds that women and men engage in the process at the same start time but women do complete the application process earlier than men and apply for more early decision opportunities at selective institutions than men do (Litten, 1982). Additional and more current research should be conducted to explore gender differences in regards to the timing of the college choice process.

College visits. Though not necessarily considered an individual characteristic of a student, the decision to visit a college campus and the impact of that visit can influence a student's college choice decision. Throughout the college recruitment process conducted by institutions, including college fairs, high school visits, campus visits, Open House events, communication plans, and marketing campaigns, the campus tour remains one of the most important factors when students make a college choice (Chapman, 1981; Hesel,

2004; Secore, 2018). In fact, 65% of students indicate that the visit to campus is very influential in their decision-making process, and African American students indicated that a campus visit or tour ranked higher as a source of information than their White counterparts (Hesel, 2004; Litten, 1982).

Students from both high and low socioeconomic backgrounds note the importance of visiting a campus before making a decision about their college choice (McDonough, 1997). Higher socioeconomic students, however, are often able to make multiple college visits or see the same campus numerous times, whereas students from lower socioeconomic backgrounds may face barriers when visiting a campus (McDonough, 1997). While on a visit, higher socioeconomic students often ask more specific and different questions than their lower socioeconomic counterparts, in part because they may have parents with a college education and experience, different expectations, and know the value and understand the importance of considering habitus when selecting an institution to attend (Litten, 1982; McDonough, 1997). Campus visits allow students to know how it feels to be a current student at that institution and see what their life as a student would be like (Okerson, 2016; Secore, 2018). Therefore, a student's visit to campus and the outcome of that visit can also be considered in relation to college choice.

Institutional attributes involved in college choice. Research finds that institutional attributes, such as tuition, financial aid availability, special academic programs, academic reputation, size, and social atmosphere are important aspects that students consider when making a decision about college choice (Hossler et al., 1989). Initiatives like marketing, communication, and off-campus programming can also be considered as fluid institutional characteristics (DesJardins et al., 1991; Hossler et al.,

1989; Kwong, 2000). While these characteristics are important in college choice, as students who base their college choice on perceived status and prestige consider the brand of the institution rather than the actual quality, they are especially important to consider in higher education today with the increase of marketization and privatization (Brennan & Patel, 2012). Overall, institutional characteristics are considered to be fixed and static, though it is possible for changes to be made over a long period of time, and are elements that are within in the institution's control (Litten, 1982). As a student progresses through the predisposition, search, and choice phases of the college choice model, institutional factors become increasingly important (Hossler et al., 1989).

For the purpose of this study, student characteristics will serve as the focus and institutional characteristics will be considered secondarily. Since this study is designed to determine why female students are choosing not to enroll at Marathon University, despite relatively even rates of application and acceptance, the emphasis of this study will be on the student. However, it is important to consider how student and institutional characteristics interact since student characteristics can have an impact on how institutional characteristics are interpreted, which can help to better understand a student's overall college choice decision-making process (Paulsen, 1990). For example, it can be determined that an institution becomes less attractive to students when tuition, room and board, and distance from home increase (Paulsen, 1990). When considering this finding against student characteristics, it should be noted that the impact of those institutional characteristics becomes greater when the student is low income and has a lower academic aptitude (Paulsen, 1990). Conversely, the importance of these

characteristics lessens when the student is from a higher socioeconomic background and has higher academic ability (Paulsen, 1990).

Because male and female students at Marathon University apply and are admitted at even rates, it will be assumed that both genders already considered institutional characteristics like academic programs, reputation, size, and social atmosphere of the institution when engaged in the predisposition and search phase. Additionally, the size of an institution is considered to be an inconclusive variable when impacting college choice and will not be considered in this study (Weiler, 1994). When in the final phase of college choice, students may consider the institution's proximity to home and financial implications, which will vary in importance based on the student's attributes and the way in which institutional and student characteristics interact (Paulsen, 1990).

Proximity to home. Because the focus of this study centers on female student choice and decision-making, the notion of proximity to home is appropriate to consider rather than location because it combines the institutional characteristic of location to the student characteristics. Although some research has found distance and proximity to home to be inconclusive when considering college choice variables, especially in how they relate to socioeconomic status (Chapman, 1981; Terenzini et al., 2001), more substantial amounts of research do find this variable to be important to students in the college choice decision-making process (Chen & Zerquera, 2018; DesJardins et al., 1999; Goodman et al., 2015; Hemsley-Brown & Oplatka, 2015; Hossler et al., 1989; Turley, 2009).

A student's proximity to an institution also has implications on their application and college choice process, as the farther away a student is from an institution, the less

likely they are to have information about that college or university (DesJardins et al., 1999). Additionally, the cost of attendance tends to increase as institutions get farther away from the student's home, which has a substantial impact on lower income students (Chapman, 1981; DesJardins et al., 1999; Paulsen, 1990). Attending a college close to home has many benefits for a student, including opportunity to commute, saving money on food and rent, and attending either a community college or public institution that offers in-state costs to reduce the financial burden of higher education (Turley, 2009). Additionally, students who have a strong connection to home and their families, especially Hispanic students and women, prefer to attend a college closer to home (Chen & Zequera, 2018; Shank & Beasley, 1998). Proximity to a college campus will also increase the likelihood that a student from a lower socioeconomic background will pursue higher education (Goodman et al., 2015).

Financial considerations. Similar to considering proximity to home instead of location, rather than considering just the cost of the institution, financial aid and scholarship will instead be the focus of this institutional attribute as it combines both institutional characteristics of tuition, fees, and room and board but also considers the student characteristics and their financial needs (Hossler et al., 1989). This relationship, however, is complex (Hossler et al., 1989). Cost is often considered a factor earlier in the college search process within the predisposition and search phases, as students create a choice list based on institutions with a cost that is appropriate to them (Chapman, 1981). As a result, students focus less on the actual cost when choosing a college to enroll in during the choice phase (Hossler et al., 1989). High income students may find cost to not be a barrier and apply to institutions irrelevant of cost, while lower income students

consider cost when creating their choice set (Chapman, 1981). However, student characteristics of financial need combine with cost to result in financial aid and scholarship, which does have implications for students based on their socioeconomic background (Avery & Hoxby, 2004; Chapman, 1981; St. John, Paulsen, & Starkey, 1996). Additionally, the privatization of higher education today has resulted in increased tuition and cost-sharing of students to create high tuition and high aid with an emphasis on student loans environment that makes it difficult for many students and their families to afford higher education (Heller, 1997; Johnstone, 2003; Kwong, 2000; Paulsen & St. John, 2002).

The amount and type of financial aid impacts whether a student will ultimately choose to attend a higher education institution based on their ability to pay, though often understanding the concepts of financial aid can be complicated and confusing for a student (Maski & Wise, 1983; Park & Hossler, 2014). Although all students are sensitive to tuition costs and as tuition increases, enrollment decreases (Heller, 1997; Leslie & Brinkman, 1988; Tierney & Venegas, 2009), low income students are most affected by financial aid and are found to apply to institutions that offer them assistance financially (Manski & Wise, 1983; Park & Hossler, 2014). As a result, low income students are more likely to respond to grant and financial aid opportunities and, in turn, choose an institution that is providing them with financial assistance to gain access (Hossler et al., 1989; Park & Hossler, 2014; Tierney, 1980). Terenzini et al. (2001) note that

> … Private institutions do level the playing field for lowest-SES students by proactively meeting their college-related financial needs. Finances, perceived to be an insurmountable barrier for lowest-SES students aspiring to private college

> attendance, are actually the point of access when private institution financial aid packages can overcome students' inability to pay. (p. 17)

As private institutions begin to offer students more financial aid, a student's likelihood to attend a private college or university also increases (Hossler et al., 1989; Tierney, 1980). It should be noted that increases in financial aid can be attributed to a student's choice of attending a particular college rather than just access to college overall (Tierney & Venegas, 2009). Financial aid can also be a deciding factor when students are making a choice between multiple schools within their choice set (Hossler et al., 1989).

Although it is widely recognized that as financial aid increases for students, their choice in enrolling in college will also increase, the relationship between financial aid and student characteristics is complex (Heller, 1997; Hossler et al., 1989; Tierney & Venegas, 2009). For example, students from low socioeconomic backgrounds and African American students are the most impacted by changes in financial aid and cost, financial aid grants have greater sensitivity than loans or work-study when compared to enrollment, and community college students are more sensitive to tuition and aid than students at four-year colleges and universities (Cabrera & La Nasa, 2000; Heller, 1997). Today, there are low-income students who could qualify for aid but do not have the resources to know how to apply, are not academically prepared, or do not realize that they have the opportunity to attend based on financial aid (Hossler et al., 1989; Tierney & Venegas, 2009). Perna (2006) notes that:

> Inadequate knowledge and information about student financial aid may be a primary explanation for differences between students in their behavioral responses to what might objectively be viewed as similar dollar amount changes

in costs and benefits of college attendance. (Avery and Hoxby, 2004; Heller, 1997)

Therefore, lack of information regarding financial aid opportunities can impact a student's college choice process and access to attend college, especially for students from underrepresented backgrounds (Perna, 2006).

When considering financial aid in relation to student characteristics and institutional cost, it can be concluded that as the cost of higher education increases, enrollment and college choice of students decreases. However, it is important to be mindful of the ways in which student characteristics, such as socioeconomic status and academic achievement, impact the way in which financial aid can influence student college choice.

Decision-Making Conceptual Framework

In today's landscape of higher education, college choice cannot be understood without also taking into consideration consumer decision-making theories. Higher education, though not a product, is considered a service that is offered to students as customers (Moogan, Baron, & Harris, 1999). To understand college choice and decision-making, it is imperative to consider how marketization, privatization, and globalization impact colleges, universities, and their students (Geiger, 2012; Kwong, 2000). The impact of globalization in higher education, where economies are integrated worldwide, is also coupled with marketization, including the "adoption of customer-oriented attitudes and inter-institutional diversity, and emphasizes the importance of external relations, systems of quality assurance, inter-organizational competition, and marketing-led management" (Oplatka & Hemsley-Brown, 2012, p. 65). Colleges and universities are

forced to operate as businesses, where students are consumers and the ultimate goal is to graduate as many students as possible at the lowest cost (Kwong, 2000; Marginson, 2010). Decreasing federal and state resources force institutions to think of innovative ways to generate revenue, which often leads to the conception of academic capitalism where institutions work as corporate entities that provide a service rather than a public good (Hayes, 2018; Moogan et al., 1999; Slaughter & Rhodes, 2003). It should be noted that state government plays a primary role in higher education, especially with public schools like Marathon University, while the federal government historically maintains a secondary role (McGuinness, 2016; Mumper, Gladieuz, King, & Corrigan, 2016).

In the current times of globalization, Marginson (2010) posits that although higher education institutions are more political than in previous history, they are weaker overall and have increasing financial challenges. As a result of globalization and heightening competition at a global scale, institutions operate more like corporations where privatization and marketization have become commonplace (Kwong, 2000). Kwong (2000) notes that in these times of decreasing state resources, "school administrators have to look for financial resources; the marketplace with its money-making philosophy offers the best ideas" (p. 89). In the last two decades, federal and state funding across the country has declined for higher education institutions, and this trend is expected to continue (Kwong, 2000). In fact, Mitchell, Leachman, & Masterson (2016) note that "after adjusting for inflation, funding for public two- and four-year colleges is nearly $10 billion below what it was just prior to the recession" (para. 2). To combat declining financial support, institutions are finding ways to generate external revenue through innovative ideas like distance and online education, increasing recruitment and

enrollment of international students, and hiring of part-time faculty (Berman & Paradeise, 2016; Slaughter & Rhoades, 2003). Institutions are also responding to the market by increasing the competitiveness of student recruitment, conducting marketing activities, and catering to prospective students as consumers (Paulsen, 1990; Shank & Beasley, 1998).

Student as consumer. The trends of privatization, marketization, and globalization within higher education do not just affect institutions, but students as well. Unlikely earlier eras in higher education, the past 40 years have marked a new age in higher education where it is common for a student to be considered as a consumer (Bowden & Wood, 2011; Slaughter & Rhoades, 2005; Tight, 2013; Woodall, Hiller, & Resnick, 2014). Research indicates that "each year's students become more like academic shoppers or consumers (Riesman, 1980), preferring vocational, occupational, or professional courses over courses in the traditional arts and sciences" (Paulsen, 1990, p. iii). Factors contributing to this new consideration include cost-sharing between the student and the institution, massification of higher education with more people having experiences in colleges and universities throughout the course of their life, overall enhancement of academics and student life experiences, multiculturalism, and increasing competition amongst institutions to enroll students (Johnstone, 2003; Levin, 2001; Tight, 2013). This notion that students are consumers aligns with the economic approach to college choice, in that students are rational individuals who are making cost-benefit analyses of higher education and consider their own self-interest and investments to maximize the benefits of their education (Bowden & Wood, 2011; Hossler et al., 1989; Jackson, 1982; Kwong, 2000; Manski & Wise, 1983; Marginson, 2010; Nokkala, Heller-

Schuh, & Paier, 2012; Park & Hossler, 2014; Perna, 2006; Teixeira & Dill, 2011; Vrontis et al., 2000). Students as consumers want to receive the best value for their money and invest their resources in an institution that provides more benefits than cost and maximizes their utility (Nokkala et al., 2012, Teixeira & Dill, 2012; Woodall et al., 2014).

Institutions should be aware that students as consumers may fall within one of the eight different seminal consumer decision-making styles (Bakewell & Mitchell, 2003; Sproles & Kendall, 1986). Perfectionistic consumers look for the highest quality products and devote careful consideration and comparison to their decision-making (Bakewell & Mitchell, 2003; Sproles & Kendall, 1986). Brand conscious consumers are especially concerned with the expense of a product and often equate a higher price tag to the quality of an item and are focused on brand recognition (Bakewell & Mitchell, 2003; Sproles & Kendall, 1986). Novelty and fashion conscious consumers like innovative products that are trendy and enjoy trying new experiences, while recreational shoppers enjoy the search phase of decision-making and the activity of exploring their options (Bakewell & Mitchell, 2003; Sproles & Kendall, 1986). Price conscious consumers are concerned about cost and work to find the best value, while impulsive consumers are not concerned with the expense and do not plan ahead accordingly (Bakewell & Mitchell, 2003; Sproles & Kendall, 1986). Students who are overwhelmed by the amount of institutional options during the choice phase would be considered over-choice consumers, and often have a difficult time getting to the final stage of the college choice decision-making process where they ultimately need to make a decision about a college to attend (Bakewell & Mitchell, 2003; Sproles & Kendall, 1986). Finally, habitual and brand loyal consumers

favor a particular brand, or in the case of college choice, an institution, and express their loyalty by continuing to return to that product or service (Bakewell & Mitchell, 2003; Sproles & Kendall, 1986).

Strategic enrollment management professionals are also encouraged to consider prospective students as consumers and pay attention to what students actually want, rather than what the university is able to provide (Cardoso, Rosa, Tavares, & Amaral, 2012). If an institution considers their students to be clients and consumers, then the institution will need to incorporate marketing strategies to recruit students (Bowden & Wood, 2011; Cardoso et al., 2012; Shank & Beasley, 1998). In higher education today, it is not uncommon for colleges and universities to engage in market research to identify their student markets and competition, the image and brand of the institution, and relative market position compared to like colleges and universities to identify which qualities of the institution lead a student to enroll (Guilbalt; 2018; Hayes, 2018; Paulsen, 1990). Additionally, "an institution that has knowledge about the factors that influence students' application and enrollment decisions can increase the fit between the student and the institution" (Wiese et al., 2010, p. 151). Institutions can use student selection process information to develop marketing strategies designed to attract sufficient numbers of students with the desired academic, as well as non-academic, characteristics such as gender and ethnic orientation (Wiese et al., 2010). Hayes (2018) notes that institutions are "challenged to provide a service to its customers – students – in exchange for something of value – a college education and the experiences that accompany the education" and that marketing can help the institution determine what students are looking for and gauge their satisfaction (p. 104). If considering colleges and universities as service institutions,

then the satisfaction of the customer is crucial and institutions must constantly consider their students to be customers and strive to provide an excellent experience for them (Guilbault, 2018; Hayes, 2018).

For the purpose of this study, students engaged in college choice decision-making are be seen as consumers. This perspective allowed the study to consider the foundational models of college choice while remaining up-to-date with the current landscape of higher education. This unique perspective will also contribute to the research beyond just social cognitive and self-efficacy models, which are often seen in the literature, but by proposing the use of consumer behavior models and decision-making theories to better explain college choice for today's students (Hanson & Litten, 1982).

Student decision-making and college choice. In addition to college choice models, decision-making theories will guide the theoretical framework throughout this study. When considering the student as a consumer in an era of higher education where marketization, privatization, and globalization are prevalent, consumer behavior models and social cognitive theory will guide the research of this study, including decision-making and self-efficacy theories (Bandura, 1977; 1991; 2012; Bandura, Barbaranelli, Caprara & Pastorelli, 2001; Wiese et al., 2010; Wood & Bandura, 1989). Since the focus of this study is on Hossler & Gallagher's (1987) final phase in their college choice model, the stage of choice, decision-making theories are relevant and directly relate. Although Hossler & Gallagher (1987) discuss the method that students use to make an overall college decision, including predisposition, search, and choice, and the variables that a student considers, the research fails to consider how students actually make a decision. Johnson, Stewart, & Eberly's (1991) quantitative study of college freshmen at a

Midwestern university regarding their college decision-making process found that "only 10% of the students had made their choice of a college before their senior year in high school… Approximately 70% made their final choice during their senior year, and fewer than 20% waited until after high school graduation" to make their final decision on where to attend college (p. 85-86).

Students use college websites, catalogs and brochures, campus visits and college fairs, guidance counselors, parents, and their peers to learn about college options and build their choice set and then select one institution to attend (Avery, 2010; Dolinsky, 2010; Hossler & Gallagher, 1987; Hossler et al., 1999; Park & Hossler, 1989). Dolinsky (2010) found that the information that a student gathers during the search phase was overall sufficient to make a choice, however, information from colleges could be tailored to specific student's needs and characteristics. The way in which a student perceives the quality of the institution ultimately impacts the selection they make, and students select an institution that has attributes that the student prefers (Hossler & Gallagher, 1987). The actual decision-making process that a student uses to make their final selection is often not discussed in the current literature with the exception of a few studies (Wiese et al., 2010), and as a result, decision-making theories will be helpful in understanding the way in which students choose their institution in the last phase of the college choice model.

Gender implications of consumer decision-making. Comparing consumer behavior of men and women is fundamental to this study. Gender implications and consumer decision-making has been researched over the past 50 years, however, little research on consumer decision-making refers to college choice explicitly (Palan, 2001). Though often inconclusive, research finds that men and women do make decisions

differently, including when deciding where to attend college, and gender differences were evident when exploring different attributes and characteristics related to the college choice decision-making process (Bakewell & Mitchell, 2006; Chapman, 1981; Hanson & Litten, 1982; Hao & Burnstead-Bruns, 1998; Hemsley-Brown & Oplatka, 2015; Hossler et al., 1999; Iceland, 2014; Lockheed, 1982; Palan, 2001; Paulsen & St. John, 2002; Peter & Horn, 2005; Rosenfeld & Hearn, 1982; Stricker et al., 1991; Wiese et al., 2010).

Although higher education is seen as a service for purchase rather than as a product, women as consumers tend to spend more time enjoying the process of shopping and researching options, compared to men who tend to make shopping decisions more quickly (Bakewell & Mitchell, 2003; Hayes, 2018; Moogan et al., 1999). Men are often seen as more agentic and goal oriented, while women are socially oriented and communal (Bakewell & Mitchell, 2006; Iacobucci & Ostrom, 1993). As a result, women are believed to favor relationship formation and are more susceptible to the relationship marketing approach where a relationship between the consumer and the organizational brand occurs (Bowden & Wood, 2011; Iacobucci & Ostrom, 1993). This attribute coincides with the tendencies that women are more influenced by their parents, value the location, safety, and diversity of a campus, and prefer quality academic programs more than men (Bowden & Wood, 2011; Hanson & Litten, 1982; Shank & Beasley, 1998; Wiese et al., 2010).

When considering loyalty, trust, satisfaction, and commitment, which are all elements of successful marketing and brand recognition of an institution when viewing the student as a consumer, these aspects are especially important to women who gauge their relationships with the brand and institution when making a college choice decision

(Bowden & Wood, 2011). As a result, women tend to focus more on the relationship formation and connection to a university than men, though men and women both value loyalty (Bowden & Wood, 2011). Increased student satisfaction, trust, loyalty, and commitment to the institution can result in a student choosing the institution from their final choice set to attend (Bowden & Wood, 2011). Additional research indicates that despite women being more inclined to value relationship formation with an institution, both men and women do value creating an emotional bond, association, and brand consciousness prior to making a decision about where to attend college, which has implications for institutional marketing and communication styles (Bakewell & Mitchell, 2006; Bowden & Wood, 2011).

Decision-making models. Using decision-making models to frame this study is applicable as it allows college choice, gender implications, and the notion of the student as a consumer to all intersect. Many decision-making models exist, however, Blackwell, Miniard, and Engel's (2001) consumer behavior model will remain the focus of this study and be supported by social cognitive theory and self-efficacy (Bandura, 1977; Bandura, 1991; Bandura et al., 2001).

Blackwell, Miniard, & Engel's Consumer Behavior Model (2001). To truly understand the college choice process of a student, especially the student as a consumer, it is important to consider consumer behavior. Put simply, consumer behavior refers to the "activities that people undertake when obtaining, consuming, and disposing of products and service" and seeks to find understanding of why people purchase what they do (Blackwell et al., 2001). As noted previously in this study, students are consumers of higher education, which is a service and often comes with a large price tag (Johnstone,

2003; Slaughter & Rhoades, 2005; St. John, Paulsen, & Carter, 2005; Tight, 2013; Woodall et al., 2014). Consumer behavior can be categorized into four types, including information-processing, stochastic, experimental and linear, and large-system models (Bettman & Jones, 1972). Many theoretical models about consumer behavior exist, including consumer value theories that consider gratification, motivation, and values, behavioral theories that consider planned behavior, reasoned action, and technology acceptance models, and social commerce theories that include social capital, social cognitive theory, and other sociological models (Zhang & Beyoucef, 2016). Three classic decision making models include the utility theory based on expected outcomes, the satisfying model, and prospect theory which considers both value and endowment (Richarme, 2005). This study will focus solely on Blackwell et al.'s (2001) model of consumer behavior, as this foundational model captures how different internal and external variables impact the way in which a consumer thinks, evaluates decisions, and then acts (Blackwell et al., 2001).

Blackwell et al.'s (2001) consumer behavior model is comprised of a seven step process and takes into consideration internal and external factors that influence the decision-making process (Wiese et al., 2010). Students who make decisions about where to attend college will undertake all seven stages of the process, including problem and need recognition, search for information, evaluation of different alternatives, selection, consumption, post-selection evaluation, and divestment (Blackwell et al., 2001; Wiese et al., 2010). Considering each stage of this model and comparing it against the different variables that students consider when choosing a college will lend insight to the overall college decision-making process from the perspective of the student as a consumer.

The first stage of this model is need recognition (Blackwell et al., 2001). In this stage, the student would recognize their need to pursue higher education, which aligns with Hossler & Gallagher's (1987) initial stage of the college choice process, predisposition. Blackwell et al. (2001) posit that consumers are even willing to sacrifice in order to obtain their needs, which reflects the economic approach of cost-benefit analysis when considering college choice (Hossler et al., 1989; Jackson, 1982, Perna, 2006). The second stage of this model refers to the search for information where the consumer begins to actively seek out more information through various avenues. This stage directly relates to Hossler & Gallagher's (1987) second phase of search in their college choice model, where a student gathers information from market dominated sources like college websites, brochures, campus visits and college fairs and non-marketer sources, including the perspectives of others, such as parents, peers, and guidance counselors (Avery, 2010; Blackwell et al., 2001; Dolinsky, 2010; Hossler & Gallagher, 1987; Hossler et al., 1999; Park & Hossler, 1989).

The third phase of this model includes pre-purchase evaluation of alternatives (Blackwell et al., 2001). In this phase, the customer considers various options from the previous search stage, which would include considering the choice set that the student had created and evaluating the options of each institution (Blackwell et al., 2001; Hossler & Gallagher, 1987). Students would create criteria to evaluate their choices, however, as previously mentioned, students may lack the knowledge to adequately evaluate institutions and may irrationally exclude institutions from their choice set based only on partial information (Jackson, 1982). The fourth phase of Blackwell et al.'s (2001) model is purchase, where the consumer chooses one option over another. A student in this phase

ultimately picks one institution from the choice set they created, engaging in the final stage of Hossler & Gallagher's (1987) college choice model. When this occurs, the search phase is concluded.

The following stages of the Blackwell et al. (1987) model of consumer decision-making fall outside of Hossler & Gallagher's (1987) model, however, these next phases could impact enrollment, melt, and matriculation of a student depending on how the student engages in these next steps. The fifth step in the consumer decision-making model is consumption, where the consumer takes possession and ownership of the product if they are satisfied with it (Blackwell et al., 2001). The student as a consumer may show pride in their decision to attend the institution of their choice, actively enroll in orientation, schedule classes, and fully matriculate into that institution. If a student were to change their mind in the sixth stage of the consumer decision-making theory, post-consumption evaluation, than the student would end up not enrolling in the institution and instead "melt" (Blackwell et al., 2001). The post-consumption evaluation is important when considering enrollment, as choosing to attend a college and actually attending are very different behaviors. The final stage of this model is divestment, where the consumer needs to ultimately decide what to do with a product once they are finished with it (Blackwell et al., 2001). In terms of higher education and student college choice, this could be when a student graduates from the institution and chooses to be an active alum, donate to the institution, and stay involved as a graduate student.

Social cognitive theory. In addition to consumer decision-making behavior, social cognitive theory that includes self-efficacy is often attributed to college choice decision-making (Caprara, Fida, et al., 2008; Cook, 2017; Diaz McKechnie, 2012; Endres,

Chowdhury, & Alam, 2008; Gonzalez, 2007; Hackett, 1985; Jenkins, 2004; Mateo, Makundu, Barnachea, & Paat, 2014). Although this theory is often cited in college choice literature, it will not serve as the primary conceptual framework of this study. Bandura's (1977) social cognitive theory indicates that people manage their own psychosocial development by self-organizing, being proactive, and self-regulating. Through self-influence, human behavior is regulated and motivated (Bandura, 1991). Components of self-regulation include the ability to monitor one's own behavior and its effects, judge their own behavior in relation to personal values and the environment, and possess self-reaction (Bandura, 1977). As a result, people are able to have control over their own thoughts, feelings, motivations, and actions rather than just being influenced by external factors in the environment (Bandura, 1991). Bandura (1991) also notes that human functioning is "…regulated by an interplay of self-generated and external sources of influence" (p. 249).

Self-efficacy. The concept of self-efficacy is often utilized in college choice studies, as it is central to self-regulation and is defined as one's beliefs in their own abilities and what they are able to do (Bandura, 1977; 1991). Self-efficacy has a strong impact on the way in which people think, what affects their motivation, and how they act (Bandura, 1991). Self-efficacy is also a major contributor for how people make decisions, form aspirations, give effort, persevere, create thought-patterns, and cope with stress, challenges, and depression (Bandura, 1991). Attaining successes and failure can also be analyzed through self-efficacy, as people who believe they will be successful often are, compared to those who have low self-efficacy and do not achieve success as a result (Bandura, 1991). When people are able to better judge their capabilities and the goals

they set for themselves, the more they will be committed to their goals and better able to achieve them (Bandura, 1991). As a result, self-efficacy is a crucial component of decision-making, including academic and career development (Bandura, 1991).

This theory does not directly relate to college choice, though Bandura (1991) has conducted extensive research on self-efficacy as it relates to career development. Although career development is not the same as choosing where to attend college, there are many similarities in the two decision-making processes. Therefore, self-efficacy as it relates to career trajectory can be considered similar to college choice for the purpose of this study. Efficacy is used as a high predictor of career choices, trajectory, and educational attainment when other variables like actual ability, prior educational levels, and aptitude, are controlled (Bandura et al., 2001). Self-efficacy also impacts decision-making, since people do not consider all options when making a choice that they do not believe they will have ability in (Bandura et al., 2001). It also effects the way in which people collect information and consider characteristics, opportunities, and risks when engaging in a decision-making process (Bandura et al., 2001). This concept relates to the way in which students make decisions about college in the final choice phase of Hossler & Gallagher's (1987) model when they choose the college or university they will ultimately attend. Perceived academic self-efficacy is not only important in career choice and decision making, but also as students decide where to go to college, since the major they will pursue and the academic programs they are interested in are often based on a career outcome they wish to achieve (Perun, 1982).

There are few gender implications in relation to self-efficacy as it relates to career decision-making, and ultimately college choice. In Bandura et al.'s (2001) study, boys

were found to have significantly higher self-efficacy towards mathematics, geographic science, and careers in science, technology, engineering, and math (STEM) fields than girls. Conversely, girls had more self-efficacy towards academic motivation and scholastic aptitude, socializing and creating friendships, and careers in education and health-related industries (Bandura et al., 2001; Pastorelli et al., 2001). While there is no clear explanation as to these differences in self-efficacy by gender, the stereotypes and societal and psychological differences between males and females have implications that may explain differences in self-efficacy (Endres et al., 2008).

Context of Study

Marathon University is a mid-size, four-year, public institution in the northeastern region of the United States that is a predominantly White institution. Its main undergraduate campus is suburban and sits in a college town whose economy revolves around the institution. In recent years, Marathon University opened two medical schools and increased their focus on science, technology, engineering, and math (STEM) fields at the undergraduate and graduate levels. Additionally, the institution has been enhancing its relationships with other institutions to develop partnerships that work to recruit evolving student populations, including transfer and non-traditional students. Marathon University's mission focuses on student learning, research excellence, and service, which is complemented by the institution's foundation, including access, affordability, quality, and being an economic driver in the local community and state. The university offers robust athletics and student life programming, including clubs and organizations, leadership opportunities, various resource centers, and academic, social, and professional initiatives for its students.

Marathon University currently enrolls close to 20,000 total students, including 15,000 undergraduate and over 3,000 graduate and professional students. Each year, the institution receives about 15,000 applications for undergraduate admission for an incoming class of about 2,500 students. Men and women apply to Marathon University at equal rates, and are similarly admitted to the institution. Interestingly, for the past few years at Marathon University, first-time, full-time, undergraduate female enrollment and matriculation lags behind their male counterparts, as 40% of the incoming first-time, full-time, undergraduate class are female compared to 60% male, which is opposite of trends seen nationwide in the last 40 years (Peter & Horn, 2005; U.S. Department of Education, 2018b). As a result, the first-time, full-time undergraduate student population is 40% female and 60% male. The same enrollment trends in regards to gender are not seen in transfer or graduate students, and these populations will be excluded from the study. Additionally, part-time and international student populations at Marathon University will be excluded, as the size of this population is too small to be significant for the purpose of this study. The enrollment trend in regards to gender is uniquely a problem in first-time, full-time, undergraduate students and will be the focus of this study.

The university offers 100 different undergraduate academic programs and is continuing to increase its master's, doctoral, and professional degrees in addition to various undergraduate and graduate certificate programs. Applications to Marathon University have nearly tripled in the past 10 years alone. Popular academic programs include engineering, education, communications, business, and STEM-related fields. Marathon University's rankings have been climbing in both the region and nation, demonstrating their increasing enrollment, competitiveness, academic programs, and

outcomes. The university also recently became a designated research institution, emphasizing an increased interest in the STEM field and gaining national recognition.

Despite the increasing growth of the institution, Marathon University has maintained nominal tuition increases, allowing the public institution to stay affordable and provide access without cost-sharing at the expense of its students, which aligns with the overall mission of the institution (Johnstone, 2003). Campus infrastructure has grown dramatically in the past 10 years at Marathon University, as well, with the development of new academic buildings, residential living opportunities, and retail and entertainment space through public-private partnerships. Despite growing infrastructure and competitiveness academically, the university lacks a true brand that would help students to develop an image of the institution, whether or not it is an accurate assessment on the true identity of the school, which can have a lasting impact on the final phase of choice in their college decision-making process (Hossler et al., 1989).

Chapter 3

Methodology

The purpose of this concurrent mixed methods case study was to identify factors impacting female enrollment at Marathon University by investigating quantitative data generated from secondary, institutional research, and analyzing qualitative, open-ended survey results from accepted students. Using a pragmatic worldview and a mixed methods approach within the case study, I was able to explore student experiences with enrollment at Marathon University within the qualitative data that complemented quantitative findings and gave human voice to the secondary data analyzed. Using a case study research design provided an in-depth analysis of the social phenomenon of how women make decisions about college choice at one particular institution (Yin, 2014). The approach and variables used within this mixed methods case study were also derived from the college choice model (Hossler & Gallagher, 1987) and consumer decision-making model previously discussed (Blackwell et al., 2001).

Research Questions

The following three research questions guided the study of female enrollment trends at Marathon University:

1. What predicts the differences between females who enroll compared to females who do not enroll, and males who enroll and males who do not enroll at Marathon University?
    a. Academic program
    b. GPA
    c. Standardized test scores
    d. Ethnicity

e. Net cost

f. Distance from home

2. How do female students make decisions about attending or not attending Marathon University compared to male students attending and not attending Marathon University?
3. In what ways do qualitative survey results help to explain the quantitative institutional data about college choice between male and female students?

Rationale for and Assumptions of Mixed Methods Case Study Research

For this study, a mixed methods case study approach was used where quantitative data in the form of secondary, institutional data were compared to qualitative data found in accepted student survey results. Mixed methods research uses a combination of both quantitative and qualitative analysis as the methodology of a given research study and allows a researcher to collect both types of data from various perspectives to inform their findings (Creswell & Plano Clark, 2018; Onwuegbuzie & Leech, 2006). In addition to both quantitative and qualitative data collection, findings can be analyzed with a combination of methodologies with particular attention given to how both qualitative and quantitative data are integrated together. By using two approaches, the researcher is able to compensate for the weaknesses of one methodology with the strengths of the other (Creswell & Plano Clark, 2018). Ivankova, Creswell, & Sticks (2006) also indicate that both the quantitative and qualitative analyses should together provide a deeper understanding of the research problems within the study and allow for the triangulation of data by using multiple data sources (Teddlie & Tashakkori, 2009). This type of analysis is beneficial in a case study research design, as triangulating the data is key within a case

study to provide a deeper understanding of a complex issue (Baxter & Jack, 2008; Yin, 2014).

A mixed methods research approach was selected for this study for several reasons. First, mixed methods research allows for "multiple ways of seeing and hearing" and enabled this study to include varying perspectives about college choice decision-making (Greene, 2007, p. 20). Secondary institutional data alone would not provide the entire story of why female students are not yielding at the same rates as their male counterparts, yet incorporating qualitative survey results allowed the student's voice to be given to the data. Using just quantitative or qualitative methods would not sufficiently capture the complex social issue at the heart of female enrollment at Marathon University. "Triangulation of data sources, data types, or researchers is a primary strategy that can be used and would support the principle in case study research that the phenomena be viewed and explored from multiple perspectives," which allows the mixed methods approach to be both suitable and necessary when conducting this case study (Baxter & Jack, 2008, p. 556).

Secondly, mixed methods research was chosen for this study because it allowed for the integration of numbers and text (Tashakkori & Teddlie, 2010a). For this study, it was appropriate to consider quantitative data analysis because this methodology seeks to understand the views of an entire population, while using qualitative analysis was also important since it allowed the research to consider specific perspectives of individual students regarding college choice (Creswell & Plano Clark, 2018). Only using a single methodology would not provide a complete understanding of the college choice decision-making process at Marathon University, as using multiple data sources within a case

study. This aspect of mixed methods aligns with my pragmatic worldview, as the pragmatic epistemology is well suited for mixed methods research because merging both qualitative and quantitative data allows for a larger understanding of a specific issue for the researcher (Creswell & Plano Clark, 2018).

Third, a mixed methods approach was appropriate for analyzing this case study, as it allowed for an in-depth understanding of a specific human phenomenon (Creswell & Plano Clark, 2011). Case studies are often used to provide an in-depth and holistic investigation into an individual or organization, and a mixed methods approach enabled triangulation of data that provided a better understanding of female enrollment trends at Marathon University (Tellis, 1997). Because humans are complex, mixed methods research questions enabled the study to provide an understanding of what and how a social phenomenon is occurring, rather than just considering one aspect of the problem (Tashakkori & Teddlie, 2010b). College choice decision-making includes many different factors, and thus, a mixed methods approach was best suited. Looking at variables related to college choice, as derived from the literature on college choice and consumer decision making models, in addition to the student voice was imperative for a full understanding of female enrollment trends at Marathon University, including the consideration of individual student characteristics in addition to institutional attributes from a mixed methods approach (Blackwell et al., 2001; Hossler & Gallagher, 1987).

Research Design

In addition to the mixed methods research design, I used a case study approach to study the enrollment issue at Marathon University. A mixed methods case study design allows for the use of a core design, such as concurrent mixed methods, within the

framework of a single case (Creswell & Plano Clark, 2018). A case can be an individual, organization, or activity that has certain criteria, such as Marathon University in this study, and is the central focus of the study (Creswell & Plano Clark, 2018; Thomas, 2003). Since Marathon University is a specific example of certain enrollment trends that are occurring, using a single-case design approach allowed this study to logically complete in-depth research (Mills, Durepos, & Wiebe, 2010; Yin, 2014).

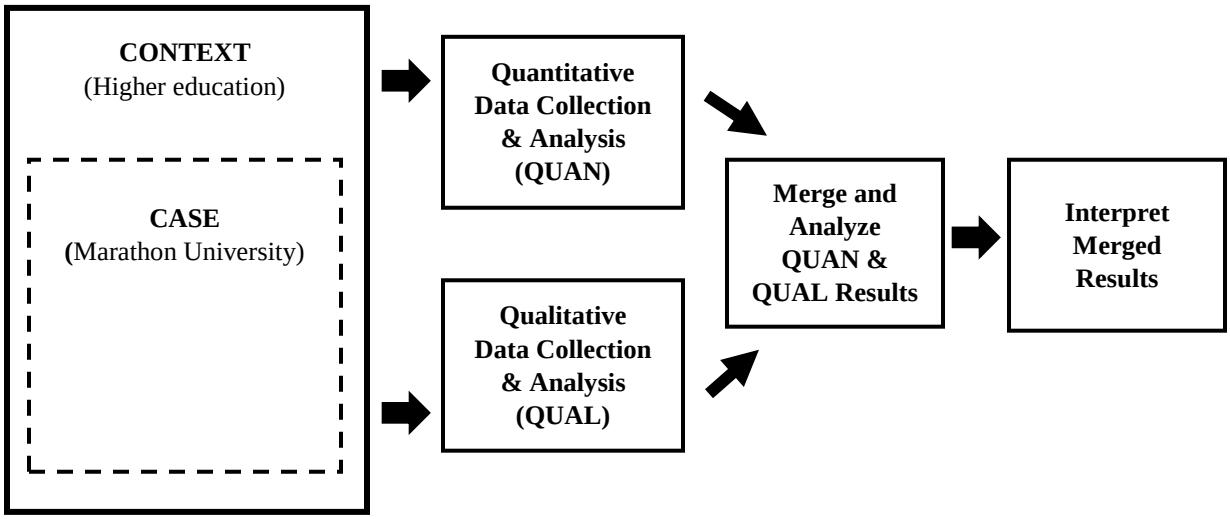

Figure 1. Case Study, Concurrent Mixed Methods Design: Single-Case Design (Yin, 2014).

Case studies seek to understand the "why" and "how" of a given problem and are exploratory in nature, which fit the needs of this study (Yin, 2014). Case studies allow for empirical inquiry that investigates a contemporary phenomenon, such as the current enrollment trend of female students at Marathon University (Yin, 2014). Case studies also use multiple data sources and triangulate the research, which is applicable and appropriate with mixed methods research since both quantitative and qualitative inquiry

are done (Yin, 2014). Since the problem of females enrolling at a lower rate than males at Marathon University is a complex issue, a case study approach was both suitable and necessary.

Concurrent mixed methods design was used for this study. In this research design, quantitative data was collected and analyzed parallel to the collection and analysis of qualitative data (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009). This research design is also known as simultaneous triangulation, parallel study, convergence model, and concurrent triangulation (Creswell & Plano Clark, 2018). Concurrent mixed methodology is often viewed as one of the first designs that epitomizes mixed methods, as the nature of this design is to separately collect and analyze both quantitative and qualitative data and merge the two databases together to compare or combine the findings (Creswell & Plano Clark, 2018). Mixed methods researchers, especially those engaged in a concurrent design, often employ a pragmatic worldview, as the design allows the research to merge their findings and gain a greater sense of understanding (Creswell & Plano Clark, 2018). This research design allows researchers to use both quantitative and qualitative analysis simultaneously to help demonstrate quantitative findings with qualitative findings, and vice versa, examine the relationship between predictive variables, and gain a complete understanding of their study (Creswell & Plano Clark, 2018).

Within the concurrent mixed methods design, researchers first simultaneously but separately collect both quantitative and qualitative data, analyze the two datasets, merge the results of both the quantitative and qualitative datasets, and finally interpret how the two sets of data compare, converge, or diverge from each other (Creswell & Plano Clark,

2018). By comparing both the quantitative and qualitative results, researchers are able to gain more robust results than they would have if only looking at one dataset alone (Creswell & Plano Clark, 2018). Although this methodological design can be challenging in that there may be differences in sample size, different types of databases, and contradictions of results, ultimately a major strength is that this style allows researchers to "give voice to participants as well as report statistical trends," which is especially important for this case study about female enrollment at Marathon University (Creswell & Plano Clark, 2018, p. 72).

Context

As noted at the end of Chapter Two, Marathon University is a mid-size, four-year, public, predominantly White institution in the northeastern region of the United States that enrolls about 20,000 total students. Marathon University's enrollment profile has becoming increasingly competitive, especially in recent years, and applications to the institution have nearly tripled in the past 10 years. Male and female students apply and are admitted to Marathon University at relatively equal rates, but female students yield at a much lower rate than male students. On average, female enrollment at Marathon University is about 40%, compared to 56% of enrollment for female students nation-wide.

Scope. National trends for the past 40 years indicate that female students make up close to 60% of the undergraduate student population enrolling in higher education each year, demonstrating a shift in enrollment where women now outnumber men (U.S. Department of Education, 2018b). This trend, however, is not occurring at Marathon University, as female students make up about 40% of students enrolling each year. Rather

than considering national trends or institutions nationwide, the study was limited to considering enrollment at one institution through a mixed methods case study approach to allow for a deeper understanding of the complex phenomenon occurring within the organization.

Next, the focus of this study was narrowed by solely using Hossler & Gallagher's (1987) seminal model of college choice to serve as the theoretical foundation that guided the research. Though many models and findings about college choice exist, Hossler & Gallagher's (1987) three phase model of predisposition, search, and choice is the most widely regarded and used today. For the purpose of this study, I was particularly interested in the last phase of the model and did not focus on if the student was predisposed to attend college or what their search process entailed. By delimiting the scope of this study to only look at the choice phase, I was able to learn more about female students' actual decision-making process and why more females choose not to attend Marathon University than males. I chose to limit my perspective of this model because female and male students apply and are accepted to Marathon University at relatively even rates of about 50% male and 50% female each year, but female students inevitably do not choose to enroll at the same rate. The predisposition and search phases of Hossler & Gallagher's (1987) model will not provide the information needed about the actual decision-making of female students, which is why I focused on the final choice phase.

I used the literature and my own experiential knowledge to determine the variables I examined that impact college choice decision-making in full-time, first-time, undergraduate students. By not looking at every variable that exists as it relates to the college decision-making process, I was able to narrow the scope of my study. Academic

program (Hossler et al., 1989), ethnicity (Kim, 2004; Perna, 2000), GPA (Bielby et al., 2014; Conger, 2015; Goldin et al., 2006), SAT scores (Bielby et al., 2014; Baron & Norman, 1992), net cost (Hossler et al., 1989), and distance from home (Chen & Zerquera, 2018; DesJardins et al., 1999; Goodman et al., 2015; Hemsley-Brown & Oplatka, 2015; Hossler et al., 1989; Turley, 2009) were independent variables used in this study. Throughout my research and review of the literature on college choice, I found other variables to be analyzed, but decided to limit the number of variables as to not overwhelm the study with too many options that were not relevant. For example, literature exists on father absence and the nonmarital birth rate contributing to the growing gender gap in enrollment, attributing lack of a father figure to fewer male students enrolling in college each year (Doherty et al., 2016). While social capital and influences are important factors in college enrollment, these variables do not apply directly to this study and were excluded from the research.

Quantitative Secondary Data

The initial quantitative analysis used secondary institutional data focusing on full-time, first-time undergraduate students at Marathon University. Higher education institutions typically collect extensive amounts of data, so using data that already exist for another purpose is often useful (Carter, 2003). Secondary data may be in the form of survey results or databases that exist at the federal, institution, or single-institution level (Carter, 2003). Researchers in education may consult data storehouses and academic archives to find appropriate secondary data to use in their studies (Kiecolt & Nathan, 1985). Glass (1976) notes that researchers using secondary data will be able to discover different findings within the numbers and tell a new story from the existing data

depending on the research questions and analysis approaches. When using secondary data, a researcher will still engage in the process of research analysis, including developing the research questions, identifying and obtaining the appropriate dataset, evaluating the data, and determining the findings from the data that relate to the purpose of the study (Johnston, 2014).

Secondary data refers to the type of data used rather than an analysis technique, and secondary data is often useful in research studies, especially within education (Carter, 2003). Secondary data can be reanalyzed for another purpose, and using secondary data to answer new research questions is useful, resourceful, and allows for increased comprehension and understanding of existing data sets that have yielded important findings (Glass, 1976). Using secondary data is just as viable an option in the process of inquiry as collecting primary data would be, especially when systemic procedures of analysis are followed (Johnston, 2014).

The secondary single-institution data used in this study were obtained from the Division of Information Resources and Technology and the Analytics, Systems, and Applications department at Marathon University. This division and department collect a wide range of institutional data, including information about student application, admission, enrollment, retention, satisfaction, and graduation. For this study, data including enrollment year, gender, admit type, academic program, GPA, SAT score, ethnicity, net cost, and proximity from home were analyzed.

The population studied in this data set did not include transfer students, part-time students, and graduate or professional students. The scope of this study was limited to only full-time, first-time undergraduates because this population represents traditional

students entering college directly from high school. Although there is seldom a "traditional" student in higher education today, most college choice models are based on "traditional" student populations, representing freshman students entering higher education directly after graduating from high school (Paulsen & St. John, 2002). Transfer student populations were also excluded from the study because they apply, are accepted, and enroll at equal rates by gender at Marathon University, which does not represent the problem being studied at the undergraduate freshman level. Graduate and professional students were not the focus of this study because this research was interested in the undergraduate student college choice decision-making process, so continuing education students were excluded from the research. Additionally, graduate and professional student populations enroll at a more traditional rate by gender, with 58% of enrolling graduate and professional students at Marathon University being female. Additionally, only full-time applicants and enrolled student statistics were considered, as this aligned with the college choice theoretical framework that guided the overall study. International students were also excluded from the data set as they make up less than 1% of the overall student population at Marathon University; only domestic student data were analyzed.

In addition to managing the student population analyzed in the secondary data set, I used the literature related to college choice decision-making and my experiential knowledge to identify certain independent, predictor variables to analyze for the quantitative inquiry phase. Considering different institutional and individual student characteristics related to college choice decision-making allowed me to identify various independent variables to use within this mixed methods case study. As a result,

independent variables included in this study focused on the student's academic program, GPA, SAT scores, ethnicity, net cost, and proximity to home.

For this study, secondary institutional data was appropriate to use because it provided extensive data on the student population at Marathon University that would have been challenging to obtain in any other way. Using secondary data also saved time and resources throughout this study, since the data already existed and I did not need to engage in creating data collection procedures and gather the actual data. My experiential knowledge, access to campus resources, and my position in strategic enrollment management allowed me minimize the limitations of using secondary data because I easily accessed the data sets and obtaining information was not a barrier in this study. Limitations to using secondary data can also include unsuitability of the dataset, however, that dataset used in this study did have the appropriate information I needed to analyze the research problems.

Secondary quantitative dataset. For this research study, the dataset used included Fall 2018 census data of first-time, full-time, undergraduate students. Census data considers the 21st day of the Fall 2018 semester, which also takes into consideration any melt that occurs from the time a student were to deposit until they enrolled. Using census data also allowed this study to consider static, concrete data that is captured consistently each year that can be later used for comparison in future research, rather than enrollment data that constantly changes. Student populations included in the data set were regular admit freshmen, special admit freshmen, and freshmen who applied for various access programs. Excluded from this dataset were transfer students, international students, and continuing education students. There were 14,030 freshmen applications for

Fall 2018, including 6,733 acceptances and 2,895 deposited students. In this dataset, 50% of applicants were male and 50% were female, 50% of acceptances were male and 50% were female, and 58% of deposits were male and 42% were female. Analyzed in this data set was the student's academic program, GPA, SAT score, ethnicity, net cost, and distance from home.

Independent predictor variables related to college choice decision-making used in this study included:

1. *Academic program* (Categorical): Academic majors were grouped together by Classification of Instructional Programs (CIP), as developed by the National Center for Education Statistics (NCES) for Integrated Postsecondary Education Data System (IPEDS) (2010). Over 80 majors exist at Marathon University and were grouped together based on CIP to form categories of academic programs that were either STEM or non-STEM related.
2. *GPA* (Continuous)*:* GPA, or grade point average, is a continuous variable extracted from a student's high school transcript for admission. All grade point averages are on a 4.0, unweighted scale. Scores above 4.0 were cleaned up, as they would display data entry error.
3. *Standardized test scores* (Continuous)*:* Standardized test scores include the Scholastic Aptitude Test (SAT). The maximum SAT score between Math and Critical Reading is 1600 with an optional Writing section for 2400. Students can submit either the SAT or American College Testing (ACT) for admission, but all ACT scores were converted to their SAT equivalent through the ACT/SAT concordance tables provided by ACT (2018).

4. *Ethnicity* (Categorical): Ethnicity, including African American, American Indian, Asian, Hispanic or Latino, Native Islander, White Non-Hispanic, and unreported, were grouped together by majority or minority categories. Ethnicity considered White Non-Hispanic and Asian students as majority and African American, American Indian, Hispanic or Latino, Native Islander, and unreported as minority, since White and Asian students have similar trends in higher education enrollment statistics (Shapiro et al., 2017).
5. *Net cost* (Continuous): Net cost is calculated by taking the cost of attendance at Marathon University and subtracting any grants or scholarships that the student received. This variable shows the price that the student will actually pay to attend, and does not include loans or work study.
6. *Distance from home* (Continuous): Distance from home was calculated by the number of miles from a student's home residence to Marathon University's campus.

Each of the six independent, predictor variables directly related to a different approach of college choice models, including economic, sociological, information processing, and combined approaches (Hamrick & Hossler, 1996; Hanson & Litten, 1982; Hossler & Bontrager, 2014; Hossler et al., 1989; Iloh, 2018; McDonough, 1997; Paulsen, 1990; Park & Hossler, 2014; Perna, 2000; Vrontis et al., 2007). The economic, sociological, and combined approaches were emphasized by the various predictor variables chosen within this study, although the information processing approach was not able to be measured by a quantitative, independent variable (Park & Hossler, 2014). The

information processing approach was explored through the qualitative analysis of open-ended accepted student survey results.

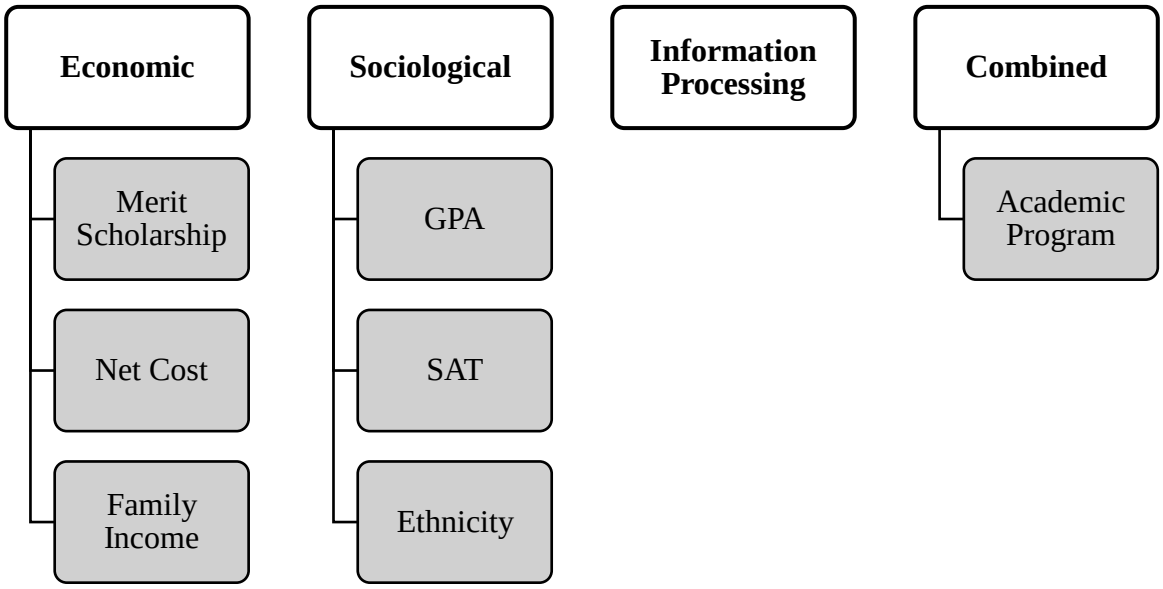

Figure 2. Independent Variables Related to College Choice Model Approaches (Park & Hossler, 2014).

Data cleaning procedures. Researchers must first obtain the data, prepare the data for analysis, and then explore the data to determine findings and interpret results (Creswell & Plano Clark, 2018). When using existing secondary data, it is important to prepare the data for analysis by cleaning the database and checking for any errors in data entry, recoding variables as necessary, assigning numeric values, and creating a codebook to organize all numeric codes (Creswell & Plano Clark, 2018). Data cleaning is often considered to include "detecting and removing errors and inconsistencies from data in order to improve the quality of data" (Rahm & Hai Do, 2000, p. 3).

Errors in datasets can exist due to data entry mistakes, invalid data, misspellings, integration issues, and duplicate information (Rahm & Hai Do, 2000). If errors exist, they can affect the validity and credibility of the data, analysis, and findings (Osborne, 2013). All data sets, whether primary or secondary, contain their own host of challenges and opportunities, and it is crucial that the researcher is aware of all complexities that the data presents when cleaning and analyzing the data (Osborne, 2013). Missing data can lead to skewed or invalid results, and cleaning the data prior to analysis is not only beneficial but necessary to prevent errors (Osborne, 2013). Data cleaning approaches can include data analysis to identify improper values, misspellings, missing data, duplicates, transformation, verification, and backflow of cleaned data to replace dirty data that previously existed (Rahm & Hai Do, 2000).

Since secondary data was obtained for this study, it is unclear if misspellings, data entry issues, or errors occurred. To best clean the secondary data set, outliers were analyzed, variables were recoded appropriately, and data were cleaned to either reflect categorical or continuous types. Ensuring that the data were clean and rid of errors was crucial during the quantitative analysis phase of this concurrent mixed methods study (Rahm & Hai Do, 2000).

Qualitative Data Collection

Simultaneous to the quantitative data analysis and collection, the qualitative strand of analysis was collected in accordance to the concurrent mixed methods procedure. Volkwein (2003) notes that new data collection activities should only be conducted after all existing data has been reviewed and analyzed. Common sources of existing institutional data can be admissions and student recruitment data, surveys of

prospective and incoming students, academic program reviews, student transcripts, and reviews of different offices, services, and programs (Volkwein, 2003). It is common for higher education institutions to frequently conduct surveys and assess particular programs, models, and goals, and existing data is often plentiful at colleges and universities (Volkwein, 2003). For this study, existing accepted student survey data were used for the qualitative exploration of the research questions. At Marathon University, an outside research corporation conducts accepted student surveys each year for the purposes of collecting information about where students choose to attend or not attend the university and why. Rather than creating a similar survey and administering it to accepted students, using existing survey data were more resourceful, accurate, and useful to the overall study. The accepted student survey is administered annually in June at the conclusion of each admissions cycle, and survey results are collected and analyzed in August. The survey is sent electronically to all accepted students at Marathon University, including both students enrolling and not enrolling at the institution.

Participants. For the qualitative portion of this study, I used purposive sampling of accepted students at Marathon University for the survey analysis (Teddlie & Tashakkori, 2009). Purposive sampling is incorporated to achieve representation and comparability within a population (Teddlie & Tashakkori, 2009). The existing accepted student survey at Marathon University was delivered electronically by the external research corporation to all 10,035 students who were admitted to the institution for the Fall 2018 semester, including students who are attending and those who do not enroll. Using purposive sampling of all accepted students at Marathon University, I focused on

four distinct populations, including males who enroll, males who do not enroll, females who enroll, and females who do not enroll.

Secondary qualitative dataset. A total of 10,035 surveys were administered and 3,208 responses were collected, for an overall response rate of 32%. The survey results showed that of the 3,208 responses that were collected, 1,474 of the responses were from students who decided not to enroll at Marathon University, which is 46% of the survey results. Of the 3,208 students who responded, 1,455 replied to the open-ended survey questions asked, meaning that 45% of students who responded to the survey filled out the open-ended questions. Of the 1,455 students who answered the open-ended questions, 599 responses were from students who did not matriculate into the institution, or 41% of the total students who answered open-ended questions. Out of the entire number of accepted students to receive the survey, almost 17% of respondents were non-enrolling students who submitted the open-ended questions. For comparison, College Board (2015) conducts comparable accepted student questionnaires to their clients in a similar format and received an average response rate of 50% for students who are enrolling in the institutions and 12% of students who are not enrolling in the institution. When looking only at public institutions' response rates to the survey, 29% of students enrolling and 7% of students who are not enrolling responded to the questionnaire (College Board, 2015). For public universities distributing the survey, the response rate was 27% for enrolling students and 7% for students who choose not to enroll (College Board, 2015). For the purpose of this study, the main focus was on non-matriculating students at Marathon University, who had a comparatively high response rate.

Instrumentation. An existing accepted student survey at Marathon University was used for the qualitative phase of analysis. The survey was electronically sent by the research corporation to all accepted students for the Fall 2018 semester in June and collected by August. Surveys were e-mailed to the e-mail address that the student used on their admission application. Survey results were cleaned so names and other identifiable questions that could be linked to a specific participant were removed. This sampling design is single stage, as individual accepted students were contacted directly to complete the survey (Creswell & Plano Clark, 2018).

Survey questions consisted of categorical and continuous scales where questions included ranking variables from most to least important, multiple choice questions, continuous questions, closed-ended questions with both ordered and unordered choices, and open-ended questions (Salant & Dillman, 1994). The survey included questions about timing of the decision, information sources used by the student, influence of the institution and influential people, sense of fit, academics and program of study, and finances and cost. For the purpose of this study, the open-ended questions were the focus of the qualitative analysis.

Open-ended survey questions given to all accepted students, including both enrolling and non-enrolling include:

1. In the final analysis, what ultimately led you to choose Marathon University? (Enrolling students, Open-ended).
2. In the final analysis, what led you to decide not to attend Marathon University? (Non-enrolling students, Open-ended).

Data Analysis

Data analysis in mixed methods research consists of separately analyzing the quantitative and qualitative data using the appropriate methods, and then integrating the results together for the final mixed methods analysis (Creswell & Plano Clark, 2018). It is crucial for a mixed methods researcher to have an understanding of both quantitative and qualitative approaches before considering the final mixed methods analysis (Teddlie & Tashakkori, 2009). Different data analysis procedures allow the researcher to "represent, interpret, and validate the data and results" (Creswell & Plano Clark, 2018, p. 209).

Quantitative secondary data analysis. Quantitative analysis using secondary institutional data obtained from Marathon University relating to enrollment was conducted in accordance to concurrent mixed methods analysis, while qualitative analysis was done simultaneously but separately. Once the raw data were obtained from the institution, they were inputted into SPSS to execute descriptive statistics and a multinomial logistic regression. Variables for analysis included academic program, GPA, SAT score, ethnicity, net cost, and proximity to home.

Descriptive statistics allow a researcher to organize and describe the data collected in a given population or sample (Frankfort-Nachmias & Leon-Guerrero, 2018). For this study, continuous descriptive statistics used include the four moments of data, including the mean, standard deviation, skew, and kurtosis. Categorical descriptive statistics used were frequency and counts, such as percentages and numbers.

A multinomial logistic regression produced the odds ratios that exist between male and female students both enrolling and not enrolling at Marathon University in relation to the key, independent variables. A logistic regression is a type of multiple

regression that estimates how multiple independent variables affect one dependent variable (Frankfort-Nachmias & Leon-Guerrero, 2018). A traditional, binary logistic regression predicts the probability of a categorical outcome, however, this study used a multinomial logistic regression that considers one outcome variable with multiple categories (Field, 2018). In this mixed methods case study, the multinomial approach to logistic regression was appropriate as there was one outcome variable, the intersection between gender and enrollment, that consisted of four categories, including females who enroll, females who do not enroll, males who enroll, and males who do not enroll (Field, 2018). Within this multinomial logistic regression, females who enroll served as the reference category (Meyers, Gamst & Guarino, 2017).

The conditional logistic regression model was appropriate to use when considering the college choice framework of this study, since it "exploits extensive detailed information on alternatives, can account for match-specific details, and allows for multiple alternatives" (Long, 2004, p. 277). Logistic regression has become a popular means of statistical analysis in the social sciences and higher education as it is used to determine an odds ratio of a relationship between a categorical outcome variable and other predictor variables; however, it does not suggest that the independent variables cause a particular outcome (Frey, 2018; Peng, Lee, & Ingersoll, 2010). This type of analysis is appropriate when describing and testing hypotheses about the relationships between a categorical outcomes variable, including those with multiple categories, and multiple predictor variables (Meyer et al., 2017; Peng et al., 2010).

Logistic regressions use categorical levels of measurement for the outcome variable (Frankfort-Nachmias & Leon-Guerrero, 2018). These categories are both

exhaustive and mutually exclusive, such as gender, race, or religion, and are not ranked (Frankfort-Nachmias & Leon-Guerrero, 2018). The intersection between gender and enrollment served as the dependent variable with categories of the outcome variable consisting of females who enroll, females who do not enroll, males who enroll, and males who do not enroll (Meyers et al., 2017). Variables identified throughout the literature review and my own experiential knowledge in relation to college choice, including academic program, GPA, SAT score, ethnicity, net cost, and proximity to home, served as independent variables. Logistic regression first reveals if there is anything significant between the outcome and predictor variables, and the effect size. If there is significance and effect size, statistical significance of each predictor will be displayed as an odds ratio. In addition to showing the odds ratio between variables, logistic regression is also able to measure associations and predict outcomes (Stoltzfus, 2011).

Qualitative survey analysis. While separately analyzing the quantitative dataset, qualitative accepted student survey results were concurrently analyzed in accordance to a concurrent mixed methods study. The survey results were first obtained from the electronic accepted student survey distributed at Marathon University, then content analysis was used to reveal the themes that exist, and finally compared with the quantitative findings from the secondary institutional data.

Content analysis is a qualitative research approach used to interpret meaning from text data through coding categories (Hsieh & Shannon, 2005; Zhang & Wildemuth, 2009). Three types of content analysis exist, including conventional, directed, and summative (Hsieh & Shannon, 2005). For the purpose of this study, a directed approach was used because this approach uses theory and other research findings to guide the

initial codes used in the analysis (Hsieh & Shannon, 2005). In this study, the quantitative, predictive variables served as the initial codes used in the directed content analysis. Qualitative content analysis allows researchers to classify large amounts of text data into like categories (Hsieh & Shannon, 2005). This type of analysis enables the researcher to find the content and contextual meaning of the text data through systemic classification, coding, and theming processes (Hsieh & Shannon, 2005).

The purpose of directed content analysis is to validate an existing theoretical framework and research (Hsieh & Shannon, 2005). This structured approach to analysis uses existing theories and prior research to create initial codes and categories, and then new codes can be developed when text cannot be categorized with the existing categories (Hsieh & Shannon, 2005). Researchers using directed content analysis can look at the frequency and descriptive statistics of existing and new codes to find meaning behind the qualitative data (Hseih & Shannon, 2005). A limitation to this data analysis includes bias, as researchers are using predetermined codes that may already support the given theory (Hsieh & Shannon, 2005). Despite its limitations, directed content analysis is overall beneficial because it uses existing theory, such as the college choice model and consumer decision-making model, to frame the analysis.

Zhang & Wildemuth (2009) note eight different steps of content analysis, including preparing the data, defining the unit of analysis, developing categories and coding schemes, testing the coding schemes on sample text, coding all text data, assessing the coding consistency, drawing conclusions from the coded data, and reporting the findings. I used descriptive coding throughout the content analysis process, using codes already derived from the college choice and consumer decision-making models, as

well as adding new codes and categories as needed during the analysis (Saldaña, 2013). Descriptive coding essentially considers a topic and uses a noun as a code to produce different categories throughout the qualitative analysis (Saldaña, 2013). The descriptive codes were then interpreted based on frequency and descriptive statistics within the content analysis (Hsieh & Shannon, 2005).

Mixing and Interpretations

The concurrent mixed methods approach has four common variants that have implications on the process of mixing and interpreting results, including parallel-databases, data-transformation, questionnaire, and fully integrated variants (Creswell & Plano Clark, 2018). For the purpose of this study, the parallel-databases variant approach was used, which is when two simultaneous strands of data are collected and analyzed separately and then brought together during the interpretation phase (Creswell & Plano Clark, 2018). The individual quantitative and qualitative results were brought together to be synthesized, compared, converged, and diverged (Creswell & Plano Clark, 2018).

In this study, I analyzed the findings from the multinomial logistic regression of the quantitative data analysis and compared it to the codes and themes obtained from the qualitative, content analysis of accepted student survey results. Analyzing secondary institutional data, in addition to reviewing the literature and prior research that has been done in the field in conjunction with researcher experiential knowledge, allowed different variables of college choice decision-making to emerge from the analysis that were both similar and different to the variables used in the quantitative phase. I compared the accepted student survey results to the quantitative findings from the secondary institutional datasets. I reviewed the survey findings and then coded the qualitative

responses from the accepted student survey and compared the findings with the different variables in the quantitative analysis (Creswell, 2014). The qualitative findings gave voice to the quantitative institutional data and supported and refuted different variables as having an impact on why female students are choosing not to enroll at the institution. Without using and integrating both quantitative and qualitative research approaches, this study would have lacked the deeper understanding about college choice decision-making in regards to gender that it was able to achieve.

Although mixed methods research methods have becoming increasingly well regarded in educational and social science research, a fundamental issue with mixed methods research is that true integration and mixing may not always occur (Bryman, 2007; Burke Johnson, Onwuegbuzie, & Turner, 2007). It is crucial for researchers to fully integrate, mix, and combine each stage of their mixed methods study in accordance to the approach they take (Bryman, 2007). Often, researchers may treat the quantitative and qualitative analyses as separate domains which detracts from the data and potential of additional findings (Bryman, 2007). Practical barriers and difficulties can arise when a researcher fails to fully integrate a mixed methods study, such as lack of intention, time, or resources (Bryman, 2007).

Mixed Methods Research Validity Measures

Validity in mixed methods research refers to how the researcher is able to address potential threats and understand the participants' views and if their perspectives are represented accurately in both the quantitative and qualitative data analysis (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009). Validity in mixed methods research also refers to the legitimacy, quality, and rigor of the study (Creswell & Plano Clark,

2018). Validity can impact the way in which the research was conducted, such as the design of the study and rigor of the procedures done, consistency across the entire study, and interpretive rigor (Creswell & Plano Clark, 2018). It is also important for a researcher to consider validity as it relates to the mixed methods approach that is being done (Creswell & Plano Clark, 2018). In the instance of this study, validity should be considered as it relates to the concurrent mixed methods approach.

Threats to validity within an concurrent mixed methods study can include failing to identify the important quantitative results, not elaborating on results that may be contradictory between the quantitative and qualitative phases, and not connecting the quantitative and qualitative approaches together (Creswell & Plano Clark, 2018). To decrease these threats and increase validity, the researcher should consider the many explanations for the results that occurred, regardless of if they are significant or non-significant predictors in the data analysis (Creswell & Plano Clark, 2018). The qualitative questions that are used should be probing and work to either refute or accept the previous quantitative findings (Creswell & Plano Clark, 2018).

To establish validity within this study, it was imperative that the quantitative and qualitative samples were both considered and were truly representative of Marathon University (Teddlie & Tashakkori, 2009). By using secondary institutional data that included all accepted students at the institution and then narrowed the focus on the relevant population allowed for the use of a large sample size of accurate data, and integration of both approaches. The accepted student survey used for the qualitative analysis was sent to a sample size of all admitted students, thus increasing validity with a large sample size. Since the survey responses were self-reported, threats to validity could

have occurred if the responses were not honest and accurate. Considering outside factors and other elements that may also impact the relationship between variables was also important in obtaining validity in this study (Teddlie & Tashakkori, 2009).

Roles of the Researcher

The role of the researcher, their identity, preferred paradigms, and worldview have an impact on the way in which research is conducted and analyzed (Burke Johnson et al., 2007). As a result, this study could not have been conducted without considering my role as the researcher, including my background, experiential knowledge, and worldview. Without framing this study with my own experiences and perspectives, I would have been unable to thoroughly review the literature and design a study to explore the enrollment issue at Marathon University. My direct experiences, knowledge, biases and assumptions allowed me to create a unique study that is based on my own background and individual perspective.

My personal background includes working in admissions as an undergraduate student, formal study of access, choice, and strategic enrollment management as a graduate student, and professional roles in multiple Admissions Offices. I currently have over eight years of professional experience in strategic enrollment management, which has enabled me to discover and understand the female enrollment issue that exists at Marathon University. My interest and passion in this study are beneficial, given the longevity of the research. Additionally, my own assumptions regarding the problem stem from my background and knowledge of college choice and strategic enrollment management. While being mindful of my own biases and assumptions, my personal interest and experience with this topic was beneficial to the overall study.

I was also mindful of my position as an insider researcher as a strategic enrollment management professional during this study (Coghlan, 2003). Insider researchers are members of the organization who work to research from within, as they know how the organization works but intend to modify certain aspects of it (Coghlan, 2003). Insider researchers are permanent members of the organization and need to be mindful of their own experiences and relationship to the organization, the duality of their role as a participant and facilitator, and the political climate (Coghlan, 2003). Because insider researchers possess certain knowledge prior to engaging in the study, they need to avoid making assumptions rather than conducting investigations and be open minded to all findings (Coghlan, 2003). It can be challenging for insider researchers to uphold relationships with their participants while still maintaining a role as the facilitator. Finally, insider researchers may experience challenges with politics in the organization in regards to ethics and power, but successful researchers always remember they are conducting research with people, rather than on people (Coghlan, 2003). As an insider researcher within my organization and study, it was crucial to be mindful of the various challenges and characteristics of the organization that I was studying.

After engaging in reflection and considering the different worldviews and perspectives as described by Creswell (2014) and Guba & Lincoln (1994), I determined that I am a pragmatic researcher. Mixed methods researchers are often pragmatic, in that they look to triangulate the data to increase their understanding of their findings and focus on the consequences of "real-world" research (Creswell & Plano Clark, 2018). As a pragmatic researcher, using quantitative and qualitative methods of inquiry allowed me to gain a robust understanding of the issue at Marathon University from multiple

perspectives and methodologies. Pragmatists focus on the questions and choose the best methodology to find an answer, which is often mixed methods (Teddlie & Tashakkori, 2009). Selecting a mixed methods methodology was the right fit for me as a researcher, as it satisfied my desire to consider multiple perspectives and put voice to the data collected, and suited the needs of this study. Pragmatists also focus on their own values and belief systems, which also accurately describes me as a researcher as I often considered my own experiential knowledge as a strategic enrollment management professional in relation to the literature, previous researching, and the findings from this study (Teddlie & Tashakkori, 2009). This worldview is also problem-centered, which accurately describes my view as the researcher focusing on the issue of female enrollment trends at Marathon University (Creswell & Plano Clark, 2018).

Ethical Considerations

It is crucial that a researcher is ethical when conducting quantitative, qualitative, or mixed methods research. When conducting research, researchers should be respectful of their research site, use confidentiality when handling sensitive information, disclose the purpose of the research to participants, and administer data collection procedures with as little variation as possible (Creswell & Plano Clark, 2018). Procedures should also be standardized throughout the study, especially if an instrument is administered multiple times (Creswell & Plano Clark, 2018). When reporting the data and findings, researchers must also be ethical in the way that their findings are generalized and how the reports are being presented (Collins, Onwuebbuzie, & Burke Johnson, 2012). For this study, for example, institutional data analysis does not represent the actual views and decision-making of the students enrolling at the institution. Although the qualitative approach of

analyzing accepted student surveys helped give voice to the quantitative data, it is possible that the data analysis still misunderstood a student's actual views and perspectives. As an ethical researcher, I was mindful not to equate the institutional dataset to the views and perspectives of the accepted student population.

In order to maintain confidentiality during the mixed methods data analysis, including quantitative analysis of secondary institutional data and qualitative analysis of existing survey results, compliance with the institution's Institutional Review Board was maintained (IRB) (Teddlie & Tashakkori, 2009). Although data used throughout this study was secondary and therefore a minimal risk project, all research practices were still in agreement with the IRB (Teddlie & Tashakkori, 2009). To do so, I went through the process of gaining IRB approval and used appropriate means to maintain confidentiality of all participants throughout the study. This included using pseudonyms to protect the identity of the institution and participants, eliminating identifying characteristics from the data set before analysis, assigning numerical categories to survey responses, and never identifying the actual location, name, or other identifiable characteristics that could be connected to this study. Knowing that case studies provide an in-depth analysis and understanding of a particular individual or organization, and in the instances of this study, Marathon University, I was mindful not to generalize my findings to other institutions (Yin, 2013). Although generalizability can be used for future research, I did not apply the findings of this case study to abstract theories or models on college choice, as doing so would have been unethical and lacked validity.

Chapter 4

Findings

The purpose of this concurrent mixed methods case study was to identify factors impacting female enrollment at Marathon University by investigating quantitative data generated from institutional research and analyzing qualitative, open-ended admitted student surveys, including both enrolled and non-enrolled student responses, to explore these results in more detail. A multinomial logistic regression was performed on the quantitative institutional data about first-time, full-time students at Marathon University to test college choice decision-making theories and to assess whether certain individual characteristics influence the decision to attend Marathon University.

The quantitative data student populations included in the secondary institutional data set for Fall 2018 were first-time, full-time freshmen applicants. Excluded from this dataset were transfer students, international students, and continuing education students. There were 14,030 freshmen applications for Fall 2018, including 6,733 acceptances and 2,895 deposited students. In this dataset, 50% of applicants were male and 50% were female, 50% of acceptances were male and 50% were female, and 58% of deposits were male and 42% were female. Analyzed in this data set was the student's academic program, GPA, SAT score, ethnicity, net cost, and proximity to home.

The qualitative phase included a directed content analysis of accepted student open-ended survey questions. After data cleaning was performed, survey responses were analyzed from 289 enrolled females, 271 not enrolled females, 399 enrolled males, and 234 not enrolled males. Participants in both the quantitative and qualitative analysis were first-time, full-time accepted students at Marathon University for Fall 2018.

This chapter provides an overview of the findings resulting from analysis of quantitative institutional secondary data and qualitative accepted student survey results. This overview of findings also serves as a transition to Chapters Five and Six, which are written as manuscripts to be submitted for publication.

Methodological Changes

Quantitative analysis. Quantitative analysis using secondary institutional data obtained from Marathon University relating to enrollment was conducted in accordance to concurrent mixed methods analysis, while qualitative analysis was done simultaneously but separately. Once the raw data were obtained from the institution, they were inputted into SPSS to execute descriptive statistics and a multinomial logistic regression. Variables for analysis included academic program, GPA, SAT score, ethnicity, net cost, and proximity to home.

Descriptive statistics that allow a researcher to organize and describe the data collected in a given population or sample were used (Frankfort-Nachmias & Leon-Guerrero, 2018). For this study, continuous descriptive statistics used include the four moments of data, including the mean, standard deviation, skew, and kurtosis. Categorical descriptive statistics were also used, including percentages and numbers.

A multinomial logistic regression produced the odds ratios that exist between male and female students both enrolling and not enrolling at Marathon University in relation to the key, independent variables. In this mixed methods case study, the multinomial approach to logistic regression was appropriate as there was one outcome variable, the intersection between gender and enrollment, that consisted of four categories, including females who enroll, females who do not enroll, males who enroll,

and males who do not enroll (Field, 2018). Within this multinomial logistic regression, females who enroll served as the reference category (Meyers et al., 2017).

When cleaning the data, only accepted first-time, full-time traditional freshmen students were considered, excluding transfer, international, and graduate students. Students who applied Test Optional and did not have test scores were eliminated, which deleted 104 records. Any incorrect or blank GPAs, gender, or ethnicity fields were also removed from the data set. Redundant variables were eliminated from the dataset to ensure repetition that would skew the regression analysis did not occur. Correlation analysis confirmed that all predictors had a Pearson correlation (r) below .7 (Table 4).

For this multinomial logistic regression analysis, females who did enroll at Marathon University served as the reference population compared against females who did not enroll, males who do enroll, and males who do not enroll. Dichotomous predictors included ethnicity and academic program as it related to STEM. Ethnicity considered the majority, or White Non-Hispanic and Asian students, against minority ethnicities, including African American, American Indian, Hispanic or Latino, Native Islander, and unreported, since White and Asian students have similar trends in higher education enrollment statistics (Shapiro et al., 2017). Academic programs were considered either STEM or non-STEM by the Department of Homeland Security's Classification of Instructional Programs taxonomy (2016). Continuous covariates used in this analysis were high school GPA, standardized test score, net cost, and distance from home. GPA was converted to a 4.0 unweighted scale during the application review process, standardized test score considered super-scored SAT scores and ACT equivalents, net cost determined what the student would need to pay out-of-pocket to

attend the institution after all scholarships and grant were applied, and distance from home considered how many miles from campus the student resided.

Qualitative analysis. Accepted student survey results were analyzed through content analysis for the qualitative phase of this study. Open-ended survey responses were coded with a priori descriptive coding for the first-cycle coding method, and then additional second cycle coding was implemented through pattern coding. This methodological change was added during data analysis to create themes and categories that related to the initial research questions through an a priori coding orientation, since preexisting categories already existed in the literature (Saldaña, 2016). The second cycle coding process used pattern coding, as this style is often used to classify and synthesize first cycle coding and group previous codes together by identifying themes (Saldaña, 2016). Pattern coding condenses large amounts of data into smaller quantities, allows for clarification of the data, and determines which categories pertained to the research questions. (Saldaña, 2016). First cycle codes were organized into relevant categories that were then explained through pattern coding and resulted in theming the data set. These themes reflected commonalities that were found in the data and helped reduce large amounts of data into smaller amounts of data (Saldaña, 2016). Commonalities, differences, and repetitions were found to form these themes in the data (Ryan & Russell Bernard, 2003).

Additionally, frequencies of second cycle coding were used to analyze the qualitative accepted student survey results. Frequencies in qualitative analysis can help to identify repeated words or ideas across participants to help the research develop themes (Namey, Guest, Thairu, & Johnson, 2008). It should be noted that frequencies are not

merely just counting words or themes, and that researchers use frequencies to consider the amount of times various ideas or themes were considered, rather than just a count of words (Saldaña, 2016). Using frequencies when looking at the qualitative accepted student surveys allowed various themes to develop based on specific student population, including females who enrolled, females who did not enroll, males who enrolled, and males who did not enroll. In this research analysis, I coded systematically to identify themes in the survey results, rather than just noting each time a participant mentioned a variable in their response. As a result, "the number of times a code is applied can be used as an indication of the salience of a theme or an idea across files, domains, or questions, depending on the analysis objective" (Namey, Guest, Thairu, & Johnson; p. 143). For this study, I was able to use the frequencies of the second-cycle codes to determine themes that existed in the survey results.

Upon completion of both first and second cycle coding, analysis of the data allowed for the creation of a code map seen in Table 7 (Saldaña, 2016). The code map presented the categories and themes that existed in the qualitative data after first and second cycle coding. Anfara, Brown, & Mangione (2002) indicate that code maps allow a researcher to communicate the findings of their data analysis in a way that is clear and visually appealing to the reader, and offer an explanation of how the analysis was done. Code maps also bring "order, structure, and interpretation to the mass of collected data" (Marshall & Rossman, 1999, p. 150).

Discussion of Findings

After analysis of quantitative institutional data, qualitative accepted student survey results, and mixed methods analysis of both, the following findings were revealed.

Quantitative findings. The quantitative analyses and findings helped to address the first research question in this study, "What predicts the differences between females who enroll compared to females who do not enroll, and males who enroll and males who do not enroll at Marathon University?" Variables that were used included, academic program and whether or not it was a STEM or non-STEM major, GPA, standardized test scores, ethnicity, net cost, and distance from home.

Descriptive statistics (Table 1) were used to organize, characterize, and summarize the data to gain an overall understanding of the continuous variables in the study. Frequencies of the categorical variables, academic program and ethnicity, are shown in Table 2.

Table 1

Descriptive Statistics of Continuous Variables

Variable	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
GPA	9744	2.00	4.00	3.6004	.43	-1.001	.345
SAT	9744	660	1600	1174.84	134.38	.393	-.176
Net Cost	8221	6946.5	53935	33037.76	4982.58	-.910	3.842
Distance to Home	9744	0	4908.14	65.38	139.62	15.61	319.19

Table 2

Frequencies of Categorical Variables

Variable	Frequency	Percent
Academic Program = STEM	3530	36.2%
Academic Program = Non-STEM	6214	63.8%
Ethnicity = Majority	7062	72.5%
Ethnicity = Minority	2682	27.5%

Mean and standard deviation helped to determine the descriptive statistics as related to each continuous variable (Table 3). For this multinomial logistic regression, four populations were represented, females who enrolled, females who did not enroll, makes who enrolled, and males who did not enroll. Females who enrolled served as the reference group. Dichotomous variables included the factors academic program and ethnicity. Continuous variables served as the covariates, which included GPA, SAT, net cost, and distance to home.

Table 3

Mean and Standard Deviation of Continuous Variables Within Each Population

	GPA	SAT	Net Cost	Distance from Home
Females Enrolled				
Mean	3.59	1124.21	30508.39	48.82
SD	.43	129.75	7583.26	76.86
Females Not Enrolled				
Mean	3.68	1163.33	33817.492	71.41
SD	.37	129.28	3336.64	160.25
Males Enrolled				
Mean	3.5	1169.78	31297.91	49.61
SD	.49	135.17	6730.77	58.053
Males Not Enrolled				
Mean	3.56	1202.96	34032.5	70.37
SD	.44	134.26	3351.62	152.96

To determine that the predictors being used were not too closely related for the multinomial logistic regression to run correctly, correlations between predictors were first considered (Table 4). If the Pearson correlation between two predictors was too closely related ($r > .7$), then those variables would essentially discount each other in the analysis.

Based on the correlation results, all predictor variables in this study were appropriate to use for the multinomial logistic regression analysis.

A multinomial logistic regression was used to examine the effect of six different predictor variables on the probability of males and females enrolling at Marathon University. Females who did enroll at the institution served as the reference group and dichotomous predictors included the factors academic program and ethnicity. Continuous predictor variables, or covariates, were included GPA, SAT, net cost, and distance to home.

Table 4

Pearson Correlations Between Predictors

	Academic Program	GPA	SAT	Ethnicity	Net Cost	Distance from Home
Academic Program	1	-.236*	-.295*	-.014	-.038*	.007
GPA	-.236*	1	.335*	-.103*	.004	-.057*
SAT	-.295*	.335*	1	-.199*	.152*	.04**
Ethnicity	-.014	-.103*	-.199*	1	-.086*	.044*
Net Cost	-.038*	.004	.152*	-.086*	1	.201*
Distance from Home	-.007	-.057*	.048*	.044*	.201*	1

*. Correlation is significant at the 0.01 level (2-tailed).

Results of the multinomial logistic regression indicated that the seven-predictor model provided a statistically significant prediction of success, -2 Log likelihood = 19808.749, χ^2 (18, N = 8221) = 1451.114, $p < .001$. The Nagelkerke pseudo R^2 indicated

that the model accounted for approximately 49% of the total variance. Prediction success for the cases used in the development of the model was modest, with an overall prediction success rate of 46.7% and correct prediction rates of 12.4%, 61.4%, 16.4% and 59.6% for females who enrolled, females who did not enroll, males who enrolled, and males who did not enroll (Table 5).

Table 5

Classification

Observed	Predicted				Percent Correct
	1 Females Enrolled	2 Females Not Enrolled	3 Males Enrolled	4 Males Not Enrolled	
1 Females Enrolled	127	485	150	262	12.4%
2 Females Not Enrolled	18	1763	54	1038	61.4%
3 Males Enrolled	103	443	237	662	16.4%
4 Males Not Enrolled	8	1099	57	1715	59.6%
Overall Percentage	3.1%	46.1%	6.1%	44.7%	46.7%

Table 6

Parameter Estimates from Multinomial Logistic Regression

	B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)
Females Not Enrolled							
Intercept	-7.277	.494	217.037	1	.000		
STEM Academic Program	-.161	.086	25.293	1	.061	1.175	.992, 1.390
GPA	.640	.102	39.151	1	.000	1.897	1.552, 2.318
SAT	.002	.000	27.669	1	.000	1.002	1.001, 1.002
Ethnicity (Majority)	-.436	.087	25.293	1	.000	.647	.545, .766
Net Cost	.000	.000	262.708	1	.000	1.000	1.000, 1.000
Distance from Home	.002	.001	3.669	1	.055	1.002	1.000, 1.004
Males Enrolled							
Intercept	-.655	.493	1.762	1	.184		
STEM Academic Program	.390	.094	17.144	1	.000	1.478	1.228, 1.778
GPA	-.961	.106	82.568	1	.000	.383	.311, .471
SAT	.003	.000	83.532	1	.000	1.003	1.003, 1.004
Ethnicity (Majority)	.257	.099	6.669	1	.010	1.293	1.064, 1.571
Net Cost	.000	.000	2.294	1	.130	1.000	1.000, 1.000
Distance from Home	-.003	.001	5.716	1	.017	.997	.995, .999
Males Not Enrolled							
Intercept	-7.103	.489	210.920	1	.000		
STEM Academic Program	.405	.087	21.813	1	.000	1.499	1.265, 1.777
GPA	-.549	.099	30.497	1	.000	.578	.475, .702
SAT	.005	.000	225.301	1	.000	1.005	1.004, 1.006
Ethnicity (Majority)	-.258	.089	8.401	1	.004	.773	.649, .920
Net Cost	.000	.000	244.851	1	.000	1.000	1.000, 1.000
Distance from Home	.001	.001	2.444	1	.118	1.001	1.000, 1.003

a. The reference category is females who enrolled.

Finding #1: Females who do not enroll are more likely to not enroll based on by academic program, GPA, and ethnicity compared to females who enroll. The top portion of Table 6 presents the regression coefficients, the Wald test, the adjusted odds ratio [Exp(*B*)], and the 95% confidence intervals (CI) for odds ratios for each predictor contrasting females who enrolled to females who did not enroll.

Compared to females who enroll, females who do not enroll are 1.9 times as likely to not enroll at the institution the higher their GPA is. Therefore, as a female student's GPA increases, their likelihood of attending Marathon University decreases. Females who do not enroll at Marathon University are 1.2 times as likely to be enrolled in a major that is STEM related compared to enrolled females. Females who do not enroll at Marathon University are also .647 times as likely to not enroll if they are either White Non-Hispanic or Asian in comparison to females who enroll. Therefore, female students who do not enroll at Marathon University are more likely to be in the ethnic majority. In this analysis, the predictor variables SAT, net cost, and distance from home did not impact the odds of a female who did not enroll compared to females who did enroll at Marathon University. Therefore, women are more likely to not enroll the higher their GPA is, if they are in a STEM major, and if they are White Non-Hispanic or Asian.

Finding #2: Applicants who enroll are more likely to be male based on their academic program, GPA, and ethnicity compared to females who enroll. The middle portion of Table 6 presents the regression coefficients, the Wald test, the adjusted odds ratio [Exp(*B*)], and the 95% confidence intervals (CI) for odds ratios for each predictor contrasting females who enrolled to males who enrolled.

Applicants who enroll are 1.5 times as likely to be male if they have a STEM related academic major. Additionally, applicants who enroll are .383 times as likely to be male the higher their GPA is. Those who enroll at Marathon University are 1.3 times more likely to be male if their ethnicity is in the majority of White Non-Hispanic or Asian. SAT, net cost, and distance variables did not impact the likelihood of applicants enrolling at Marathon University, regardless of gender. Therefore, applicants who enroll at Marathon University are likely to be male if they have a STEM related major, as their GPA increases, and are White Non-Hispanic or Asian.

Finding #3: Males who do not enroll are more likely to not enroll based on their academic program, GPA, and ethnicity compared to females who enroll. The bottom portion of Table 6 presents the regression coefficients, the Wald test, the adjusted odds ratio [Exp(*B*)], and the 95% confidence intervals (CI) for odds ratios for each predictor contrasting females who enrolled to males who did not enroll.

Compared to females who enroll at Marathon University, males who do not enroll are .578 times are likely to not enroll as their GPA increases. Males who do not enroll are also 1.5 times as likely to not enroll if their major is STEM related compared to enrolled females. If a male is applying for a STEM related program, they are more likely not to attend Marathon University. Males who do not enroll at the institution who are White Non-Hispanic and Asian are .773 times as likely to not attend the university compared to females who enroll. Predictor variables of SAT, net cost, and distance do not impact males who do not enroll at the institution. Therefore, males who do not enroll are more likely to not attend if they are in a STEM major, have an increased GPA, and are White Non-Hispanic, compared to females who enroll.

Finding #4: Certain variables had similarities across multiple groups, including academic program, GPA, and ethnicity. Variables that were consistently significant across all populations included academic program, GPA, and ethnicity. Compared to females who enrolled, females who did not enroll and males who did not enroll were both found more likely to not enroll if their major was STEM, as their GPA increased, and if they were White Non-Hispanic or Asian. Among applicants who did enroll at Marathon University, they were more likely to be male if their major was STEM, as their GPA increased, and if they were White Non-Hispanic or Asian.

Variables that were consistently not significant across all populations including applicants who enrolled and both females and males who did not enroll were SAT score, net cost, and distance from home. Based on prior research and experiential knowledge of college choice decision-making, it was surprising to find that there was no significance in these variables.

Qualitative findings. The qualitative analyses and findings addressed the second research question, "How do female students make decisions about attending or not attending Marathon University compared to male students attending and not attending Marathon University?"

Finding #1: Feelings are most important in college choice decision-making for women who enroll. Various themes emerged after conducting first and second cycle coding on the qualitative, accepted student open-ended survey results as seen in the second iteration of Table 7, including academics, Admissions Office influence, athletics, campus, campus life, diversity, feeling, future career & goals, influence of others, location, money, reputation, and visit experience. However, females who enrolled

focused on their feelings during college choice decision-making process more than other variables indicated.

Table 7

Code Map of Qualitative Accepted Student Survey Results

Research Question #2:		
How do female students make decisions about attending or not attending Marathon University compared to male students attending and not attending Marathon University?		
Third Iteration: Application to Data Set		
Themes found after first and second cycle coding indicate similar topics found in the college choice decision-making literature.		
Second Iteration: Second Cycle Pattern Codes		
Academics (A)	Diversity (F)	Location (J)
Admissions (B)	Feeling (G)	Money (K)
Athletics (C)	Future career & goals (H)	Reputation (L)
Campus (D)	Influence of others (I)	Visit (M)
Campus Life (E)		
First Iteration: First Cycle Descriptive Code		
A1. academic program	D15. new facilities	H5. career statistics
A2. ASCEND	D16. size	H6. co-ops
A3. classes	D17. updated labs	H7. graduate school
A4. courses	E1. autism support	H8. internship
A5. credits	E2. balance	H9. medical schools
A6. curriculum	E3. campus life	H10. opportunity
A7. easy	E4. extracurricular	I1. alumni
A8. faculty	E5. Greek	I2. family
A9. hands on	E6. health care	I3. influence of others
A10. Honors	E7. lack of disability resources	I4. legacy
A11. Not accepted into program	E8. research opportunities	I5. legacy at other school
A12. Not accepted to Engineering	E9. ROTC	I6. parents
	E10. social	I7. peers
A13. Not accepted to Honors	E11. student life	I8. people
	E12. students	I9. siblings

Table 7 (continued)

A14. quality education	E13. study abroad	I10. teachers
A15. research opportunities	F1. diversity	I11. women in STEM
A16. teaching style	F2. inclusive	J1. car
A17. Tutoring	G1. atmosphere	J2. commute
B1. Admissions Counselor	G2. better feeling elsewhere	J3. location
B2. award letter	G3. better fit elsewhere	J4. proximity to home
B3. communication from Marathon	G4. comfortable	J5. Marathon Boulevard
B4. lack of communication	G5. community	J6. town
B5. lack of information	G6. connection	K1. affordable
B6. only acceptance	G7. culture	K2. cost
B7. Marathon Choice	G8. enthusiasm	K3. endowments
B8. timing of acceptance	G9. environment	K4. financial aid
B9. transfer	G10. feeling	K5. more scholarship elsewhere
C1. athletics	G11. felt cared about	K6. price
C2. eSports	G12. fit	K7. scholarship
C3. not recruited	G13. friendly	K8. too expensive
D1. atmosphere	G14. home	K9. value
D2. campus	G15. lack of comfort	L1. brand
D3. campus	G16. lacked personal connection	L2. first choice
D4. campus size	G17. not special	L3. lack of prestige
D5. campus type	G18. personalized experience	L4. prestige
D6. class size	G19. safe	L5. rankings
D7. clean	G20. sense of belonging	L6. reputation
D8. convenient	G21. welcomed	L7. second choice
D9. food	H1. career goals	M1. camp
D10. growth	H2. career opportunities	M2. Hackathon
D11. housing	H3. career potential	M3. tour
D12. institutional type	H4. career preparation	M4. Visit
D13. lab facility		
D14. new buildings		

Note: Based on Anfara et al. (2002) and read from the bottom to the top.

Out of the four student populations analyzed, including females who enrolled, females who did not enroll, males who enrolled, and males who did not enroll, females who enrolled uncharacteristically compared to the others favored the feelings they had during the college choice decision-making process to ultimately choose to attend

Marathon University. The second cycle code, feeling, includes first cycle codes like sense of connection and feeling at home, comfortable, cared about, and special (see Table 8), and was the most prevalent theme in the population of females who enrolled (Figure 3).

Table 8

Comparison of Populations and Frequency of College Choice Decision-Making Factors Derived from Second Cycle Pattern Codes.

Females Enrolled	Frequency of Code	Females Not Enrolled	Frequency of Code	Males Enrolled	Frequency of Code	Males Not Enrolled	Frequency of Code
Feeling	174	Money	164	Money	157	Money	110
Academics	151	Academics	100	Academics	153	Academics	68
Money	137	Reputation	71	Location	83	Reputation	53
Influence of Others	99	Location	62	Influence of Others	71	Location	50
Location	94	Feeling	33	Campus	64	Influence of Others	32
Campus	78	Campus	32	Feeling	53	Feeling	31
Reputation	76	Admissions	27	Reputation	50	Admissions	25
Student Life	69	Influence of Others	22	Future Career Goals	34	Future Career Goals	24
Future Career Goals	57	Future Career Goals	20	Student Life	25	Campus	20
Visit	29	Student Life	15	Visit	18	Athletics	16

Figure 3. Weighted Word Cloud for Females Enrolled Second-Cycle Pattern Codes.

The other three populations focused on academics and finances as the top two characteristics that were considered when making their college choice decision (Figures 4, 5, and 6). Women who enrolled valued feeling over academic and financial considerations as seen in the other student populations, although they were still considerations when choosing to enroll or not enroll.

Women who enrolled at Marathon University had a strong sense of connection toward the institution and felt comfortable, safe, and at home, and that their choice was a good fit. It was important for female applicants to be able to feel a sense of fit and belonging, as another female who chose to enroll noted, “I felt very comfortable with the school and could see myself there for the next 4 years at least.”

Female students who enrolled at Marathon University also indicated the feelings they had while visiting the campus and that it would be home for them. The notion of being or feeling at home permeated their responses, with a female who enrolled noting, “I like the feeling of the campus, it’s home. I wanna be successful while being

comfortable." Another woman who chose to enroll stated, "It felt right the first time I visited, and every time we would come to visit, I would get excited." Additionally, female prospective students associated safety with feeling at home. Another female applicant wrote in the survey:

> I choose Marathon University because I feel like I belong. I am very proud to be accepted by a school that's very high in ratings academically. I also love the campus and the surrounding town, it is absolutely gorgeous and I would feel very safe and at home there.

Having a sense of familiarity when walking around campus and associating that feeling with the notion of being at home was important for women who chose to enroll at Marathon University.

When discussing these feelings towards the institution, women who enrolled often expressed their responses more distinctly and earnestly than the other population's responses. For example, one female who enrolled responded:

> Ultimately I made the decision to attend Marathon University because it was a perfect fit for me. It is not too far from my home, the programs offered are well known, and I feel safe and comfortable in Marathon's environment. Of the colleges I visited, Marathon easily felt more like home than any of the others, and it is the only college I did not question feeling like I fit in. I am excited to attend Marathon and am certain I have made the right decision choosing Marathon University.

Not only did women identify the need to feel safe, at home, and comfortable at the institution, but their responses overall reflected their expressive feelings related to familiarity of the campus.

Figure 4. Weighted Word Cloud for Females Not Enrolled Second-Cycle Pattern Codes.

Figure 5. Weighted Word Cloud for Males Enrolled Second-Cycle Pattern Codes.

Figure 6. Weighted Word Cloud for Males Not Enrolled Second-Cycle Pattern Codes.

Finding #2: Reputation of the institution is important for both non-enrolling men and women in college choice decision-making. Although the focus of this study was on why female students do not enroll at Marathon University despite relatively even rates of application and acceptance as male students, there is a difference between students who enroll and students who do not enroll, regardless of gender. Both men and women who did not enroll at Marathon University focused on reputation more so than their counterparts who did enroll (Table 8).

As noted previously, females who did not enroll, males who enrolled, and males who did not enroll identified financial consideration and academics for top consideration when making a decision about college choice. It can be noted that both females and males who did not enroll also considered the reputation of the institution when deciding not to attend. In this analysis, reputation includes brand, rankings, prestige, and whether or not the institution was their top choice (Table 7).

One male who chose not to attend Marathon University wrote the following about his decision:

> I decided against attending Marathon due to a personal barrier of "It's not good enough" and "I can do better." I'm sure many people have goals to attend the best colleges and that was mine, and Marathon was just not fit for me.

The reputation of the institution, including rankings and perceived prestige, were important to students making a decision about where to attend college, especially for students who chose not to attend.

Finding #3: Both men and women who did not enroll considered Admissions-related factors in their college choice decision-making process. In addition to reputation, both men and women who did not enroll at Marathon University considered their interactions with the Admissions Office when making their college choice decision, where both males and females who did enroll did not consider Admissions in their top factors regarding their decision (Table 8). This theme includes first cycle codes of timing of receiving the acceptance, interactions with the Admissions Office, and Admissions communications such as the acceptance or award letter (Table 7). Both men and women who chose not to enroll at Marathon University indicated negative interactions and experiences with Admissions, while Admissions interactions among both men and women who did enroll were not found as themes in their college choice decision-making process (Table 8).

Students who enrolled were made to feel special, included, and valued by the institution through communication with the Admissions Office and university constituents, essentially feeling like part of the university family. While feelings and sense of family with the institution were important to those who enrolled, conversely, students who did not have these same experiences or feelings did not see themselves as

part of the Marathon University family, and lacked familial connection and communication from the institution.

A female applicant who did not enroll stated that she "just didn't get the same sense of connection that I did from other schools. very little mail sent. nothing personal/targeted toward me specifically. even the acceptance letter was lacking bells and whistles" while another noted that:

> The faculty at another institution were very involved and genuinely caring throughout the enrollment and decision process. The opportunities they've offered me are far superior to any other college I've applied to. Like, they sent me a gosh darn bouquet of flowers.

Lack of communication with the institution and being made to feel special impacted another female applicant who did not enroll and she acknowledged:

> Marathon was initially one of my top choices until the acceptance letter came. There was no effort made to make it special. I actually thought I didn't get in because it came in a white envelope. All other acceptance packets I received were packets with great graphics, magnets and pages of information. Once I received that one page letter, I never heard from Marathon again.

In order to make a decision about where to attend college, this student wanted to feel that they were part of the university family. Without being made to feel as part of the family by Admissions Office and the institution, female students chose to enroll at another institution.

Finding #4: All populations noted financial considerations and academic program in their college choice decision-making process. Although women who

enrolled valued their feelings of comfort, home, safety, and sense of belonging the most, all four populations did indicate that financial considerations, including financial aid, scholarships, cost, and value, and academic program were important factors when making a college choice decision about Marathon University (Table 8). Males who enrolled, females who did not enroll, and males who did not enroll had the most frequency on academics and finances as important characteristics that were considered when making their college choice decision (Figures 4, 5, and 6). Women who enrolled valued feelings over academic and financial considerations as seen in the other student populations, although they were still considerations when choosing to enroll or not enroll.

Financial consideration and academic program either positively or negatively impacted student decision-making, respective of if the student enrolled or did not enroll. Academic program related to the actual major, college, courses, curriculum, classes, faculty, and research that the institution provided. Financial considerations included any decision-making that related to the cost of the institution, affordability, financial aid, scholarships, and value. A female who enrolled noted that the "scholarship awards I have received from Marathon University make college affordable" and another stated the university "offered me the most money and were the most affordable out of the other colleges. The other colleges were too expensive so it came down to just this one." Academic considerations were also important in addition to finances, as one female who enrolled stated, "the major that I wanted was available and attendance is affordable" and another wrote:

> After attending presentations for the Biology department, there were a lot of things I loved about the program. Particularly, the fact that the professor speaking

> stressed that there would be more than just studying and trying to pass. Hands-on learning and field work are very important to the method in which I learn. Marathon had the perfect fit for this. I was also impressed by the opportunity to study abroad in the Galapagos Islands.

Females who did not enroll also noted financial and academic variables to be important, but opposite than how females who did enroll perceived them. Females who did not enroll found Marathon University to be expensive, not offering competitive scholarships or financial aid, and unaffordable. Female applicants who did not attend also stated that their academic program of choice was not offered, was more competitive at another institution, or not available to them. A female applicant who chose to attend another institution noted that their school of choice was "more affordable and had the exact program I wanted" while another stated "Another school had a better program and Marathon did not offer me enough money." This notion was seen throughout responses from females who did not enroll, including:

> I loved other schools more. I was offered much more money at higher ranked schools. The programs at other schools were phenomenal and ranked well. I know I will be graduating from a school with a great education program and great reputation with lots of job opportunities and resources to get me hired.

Another female applicant chose not to enroll but stated that Marathon University initially was her top choice:

> I LOVED MARATHON. It was my absolute first choice and I visited and applied to a lot of schools. It felt like the perfect fit in a way no other school did. Unfortunately, I didn't receive any financial aid from the university being an out-

of-state resident and could not justify incurring that much debt when I had offers less than half the cost from other schools.

Students who enrolled and did not enroll reported similar responses in regards to financial consideration and academic program, regardless of gender. Women and men who enrolled had positive perspectives and experiences with the financial attributes of the institution and academic program offered, while women and men who did not enroll noted the opposite.

Integration of Findings

Integrating both the quantitative and qualitative findings helped to address the third research question in this study, "In what ways do qualitative survey results help to explain the quantitative institutional data about college choice between male and female students?" Since this was a mixed methods study, both the qualitative and quantitative findings supported, complimented, and expanded upon each other.

Quantitative data analysis identified six different variables that impacted college choice decision-making, including academic program, GPA, SAT score, ethnicity, net cost, and proximity to home. Most of these variables also emerged in the qualitative analysis of accepted student survey responses of both female and male students who enrolled and did not enroll. For example, predictor variables like academic program impacted the probability to attend or not attend for both men and women during the quantitative analysis. Qualitative findings supported these quantitative findings, showing that all four populations valued academics when engaging in a college-choice decision. Notably, it was also revealed that women who enroll place heavy emphasis on their feelings throughout the decision-making process, but also still considered academic

program heavily in their decision making compared to other variables (Table 8). As a result, academic program was both a major finding in the quantitative and qualitative data.

Receiving some type of financial assistance proved to be extremely important in the decision-making process across all populations in the qualitative analysis, however, net cost was not significant in the quantitative findings. Research suggests that financial considerations are paramount to students in making decisions about college, yet the quantitative findings suggest that other variables are also significant to students in the college decision-making process in addition to finances. The importance of receiving financial assistance was noted throughout the open-ended survey results for both men and women, and the cost and value of attending Marathon University impacted both men and women who chose to attend or not attend the institution. Although the integration of the quantitative and qualitative analyses suggest that finances are important, other variables should also be considered. The finding of the importance of financial considerations is consistent and supports the notion of marketization in today's higher education, where the student is seen as the consumer and often makes a cost-benefit analysis in their decision-making process.

Academic program was significant in both the quantitative and qualitative findings as a variable that both men and women considered when choosing to attend or not attend Marathon University. The prestige, reputation, and availability of the academic program either influenced students to attend or not attend the institution based on their perception of the program, either positively or negatively, as seen in the survey results. When looking at the quantitative findings related to academic program, females were 1.2

times as likely and males were 1.5 times as likely to not enroll, compared to females who enrolled, if their academic program was a STEM related major. Applicants who did enroll were 1.5 times as likely to be male if their major was STEM. The quantitative findings support the qualitative data that show how academic program is important in decision-making, however, the implications of STEM related programs should be considered. Women and ethnic minorities are still underrepresented in STEM majors and fields today, and research indicates that being female can serve as a negative predictor when choosing a STEM major (Moakler & Kim, 2014). Nationwide, women still earn proportionately less degrees in STEM than men despite receiving the higher percentage of bachelor degrees overall compared to men (U.S. Department of Education, 2019). In 2015, 58% of bachelor's degrees were awarded to females and 42% to males, yet only 36% of STEM bachelor's degrees were awarded to females compared to 64% awarded to males (U.S. Department of Education, 2019). Blackburn & Heppler (2017) recommend that higher education institutions focus recruitment efforts on women from STEM pipeline programs and provide inclusive marketing and recruitment strategies to yield women in STEM majors. This national data supports the quantitative findings that students who enroll at Marathon University are 1.5 more likely to be male if they are in a STEM related major.

Although certain variables like GPA and ethnicity were not mentioned explicitly by students in their qualitative survey responses and quantitative findings found these to be significant predictors, it could be argued that a student's GPA and ethnicity can be implied to relate to their feelings of home, comfort, and safety on a college campus, which was extremely significant among females who enrolled at Marathon University.

Although ethnicity was not mentioned explicitly by students in the open-ended, accepted student survey results, it could be argued that ethnicity does closely relate to and impact the way in which a student feels safe, comfortable, and at home on a college campus. Students, both men and women, may not have considered their own personal characteristics and how they impacted their college choice when reflecting on the elements that led them to choose to attend or not attend Marathon University, but these underlying characteristics may still factor into their decision-making. The quantitative data showed that compared to females who do enroll, GPA impacted applicants who enrolled and females and males who did not enroll, as females are 1.9 times as likely to not enroll as their GPA increases and males are .58 times as likely to not enroll as their GPA increases, compared to enrolled females. The GPA variable impacts females who do not enroll more significantly than males, however, this variable serves as a predictor for both populations compared to females who do enroll. Sense of belonging on campus and college choice can relate to a student's perceived academic self-concept and how they perceive their academic abilities, which supports the qualitative finding of the feeling of comfort, belonging, and safety that a student has at the institution (Wilson & Adelson, 2012).

Also within the quantitative findings, ethnicity served as a predictor for both men and women who chose to attend Marathon University. Again, a limitation to the qualitative data is that students did not outwardly state how their own identities impacted their decision-making when articulating what allowed them to choose or not choose to attend Marathon University, however, research shows that both ethnicity and academic performance in high school can contribute to a student's sense of belonging, feeling of

home, or safety at an institution (Johnson, 2012). Racial and gender stereotypes can contribute to a student's self of belonging, academic self-confidence, and performance, which could be reflected in the qualitative accepted student survey results about feeling safe and comfortable on the campus (Johnson, 2012). Not only may sense of belonging contribute to a student's decision-making on choosing an institution to attend, but also impacts their retention and success once they enroll at the institution (Museus, Yi, & Saelua, 2017). When considering the frequency of college choice decision-making factors from the pattern codes seen in Table 8 of the qualitative findings, the variable of feeling is far more significant in applicants who enrolled in the institution than those who did not. The quantitative findings also indicate that applicants who enrolled are 1.3 more likely to be male if they are White Non-Hispanic and Asian compared to enrolled females, which connects the notion that students who are in the ethnic majority felt more comfortable, safe, and had sense of belonging at Marathon University, a predominantly White institution, than those who were not.

Based on the literature review about college choice decision-making and personal and institutional characteristics that impact a student's decision-making, it was not surprising that these variables were also present in the qualitative findings. It was notable, however, that variables that could have been perceived to be more important based on the qualitative findings did not reflect to be as important based on the quantitative findings. For example, proximity to home was not a significant predictor of college choice in the quantitative analysis, but it was recognized by students within the qualitative findings. Proximity to home had relatively high frequencies of second cycle pattern codes in the

qualitative findings compared to other variables, but were not significant in the quantitative findings (Table 8).

Arguably the most significant finding to this overall study was the impact of feelings on women who do attend Marathon University. Feelings cannot be quantified, and feelings of home, safety, and comfort cannot be determined solely by looking at the quantitative results. The benefit of a mixed methods study is to allow both quantitative and qualitative data to help explain the social phenomenon that is occurring, and the qualitative data was able to put voice to the quantitative data that otherwise would have been missed. This finding is significant because it shows differences between gender and enrollment, and conveys the importance of sense of feelings when women ultimately choose the institution they will attend. Their feelings cannot be measured or articulated through the multinomial logistic regression. The depth of their survey responses and the description used in their answers cannot be measured through quantitative analysis. This finding alone shows the importance of the mixed methods survey design, as this major result would have been lost had this study only focused on quantitative, institutional data.

Conclusion

This chapter presented both quantitative and qualitative findings, and analyzed the integration of both methodologies together. The quantitative findings determined the probability of pre-defined variables impacting a student's college choice decision-making, while the qualitative findings gave voice to students on why they chose to enroll or not enroll at Marathon University. Predictor variables like academic program and ethnicity impacted the probability to attend or not attend for both men and women. Qualitative findings supported these quantitative findings, showing that all four

populations valued academics when engaging in a college-choice decision, but also revealed that women who enroll place heavy emphasis on their feelings throughout the decision-making process. Chapters Five and Six will present articles designed for publication in peer-reviewed journals about strategic enrollment management, access, and equity in higher education based on the findings from the review of the literature, data collection and analysis, discussion, and implications of the results.

Chapter 5

Finding the Fit: Gender, College Choice, and Consumer Behavior in University Enrollment

Abstract

While women have generally outpaced men in enrollment in higher education in the last 40 years, not all institutions reflect this trend. Enrollment strategies rarely take into consideration factors in the admissions process that could be impacted by gender. Furthermore, changes in federal and state funding have increasingly led universities to act in a marketized manner, often leading the institution to position the student as a consumer in order to sustain operations. When considered in conjunction, the student-consumer and student gender, new enrollment management practices may emerge that enable the university to survive and thrive in a new task environment. This qualitative case study uses secondary data from admitted student surveys to understand how women make decisions about college-choice at one institution, Marathon University, where men outnumber women in enrollment despite relatively even rates of application and acceptance. Findings suggest that women applicants to Marathon University noted affective factors related to familiarity and family when "finding the fit" during their undergraduate institution decision-making. They associated these feelings during their college choice decision-making with the admissions process. By considering these variables, strategic enrollment management professionals may better understand how students make decisions about where to attend college, especially women.

More women are going to college, outpacing men in admissions, persistence, and graduation at institutions across the country. A great deal of research about college choice has considered the changing gender gap in higher education enrollment, noting shifts in gender norms, access to higher education, and labor market expectations for women. As a result, much has been made of a new achievement gap for men, where pundits have suggested that affirmative action is needed to combat the enrollment gap for men (Mintz, 2019). As of 2018, 56% of first-time, full-time undergraduate students were women and 44% were men (U.S. Department of Education, 2018b). This phenomenon can also be seen outside of the United States, including Canada, Australia, France, the United Kingdom, and Italy (Becker, Hubbard, & Murphy, 2010; Evers et al., 2006).

The enrollment shift in the past 40 years can be attributed to higher standardized test scores, higher grades in high school, and increased labor market opportunities for women (Conger, 2015; 2017; Goldin et al., 2006). Additionally, changing admission policies (Conger & Dickson, 2017), varying state policies related to appropriations, tuition costs, and financial aid (Perna & Titus, 2004), and family culture regarding education have been found to profoundly impact women students, contributing to the rise in women's enrollment (Bergerson, Heiselt & Aiken-Wisniewski, 2013) despite historical barriers that continue to inhibit their access to social, educational, and economic opportunities (DiPrete & Buchmann, 2013; Jacobs, 1996).

This study sought to understand cases where men are the majority of students enrolling in higher education, despite equal rates of application and acceptance. The purpose of this study was to explore the gender reversal at one public, comprehensive, four-year institution, Marathon University. Understanding the college decision-making process is crucial for strategic enrollment managers, admissions counselors, higher education leadership, and policy makers at all institutions, thus the findings reported here have far-reaching implications for future research, policy, and practice. To this end, we explored personal student variables and discovered that gender does have implications when a student is engaged in the college choice decision-making process, impacting the way in which strategic enrollment management of today should consider consumer and student decision-making.

Background of the Study

In order to gain an understanding of gender[2] in enrollment in higher education, it is important to note the historical context in which it exists. In the past 40 years, the gender gap relating to enrollment in higher education has reversed, where today more women than men enroll in higher education each year (Peter & Horn, 2005). From the start of the 20th century until the early 1970s, men were the dominant gender enrolled in American colleges and universities, although this changed in the 1980s when women first outpaced men in enrollment in higher education (U.S. Department of Education, 1995). This trend still exists today, with women making up 56% of the total incoming undergraduate students at colleges and universities nationwide (U.S. Department of Education, 2018b).

To understand how students make decisions about where to attend college, personal and institutional variables should be considered. Personal factors and student characteristics include socioeconomic status, academic aptitude, standardized test scores, gender, ethnicity, proximity to home, and parent's education level, encouragement, and support (Baron & Norman, 1992; Bielby et al., 2014; Cosser & du Toit, 2002; Hossler et al., 1989). Institutional characteristics can be both financial and nonfinancial (Hossler et al., 1989). Nonfinancial attributes can include location, reputation, quality of academic programs, and marketing techniques (Hossler et al., 1989). Financial attributes of college choice include the cost of attendance, scholarships, and financial aid opportunities for students (Hossler et al., 1989).

[2] For the purpose of this study, it should be noted that gender differs from sex in that gender is a social construction with societal implications while sex is a biological differentiation based on one's physical anatomy (Pelletier et al., 2016).

Unlike earlier eras in higher education, the past 40 years have marked the emergence of a new task environment in postsecondary education; one in which it is common for a student to be considered as a consumer or academic shopper (Bowden & Wood, 2011; Riesman, 1980; Slaughter & Rhoades, 2005; Tight, 2013; Woodall et al., 2014). Factors contributing to this evolving consideration include cost-sharing between the student and the institution, massification of higher education, overall enhancement of academics and student life experiences, multiculturalism, and increasing competition amongst institutions to enroll students (Johnstone, 2003; Levin, 2001; Tight, 2013). Additionally, students as consumers want to receive the best value for their money and invest their resources in an institution that provides more benefits than cost and maximizes their utility, therefore contributing to their college choice decision-making (Nokkala et al., 2012, Teixeira & Dill, 2012; Woodall et al., 2014).

However, current research is inconclusive regarding the impact of gender on college choice decision-making (Shank & Beasley, 1998). Some studies report that gender does not have an impact on college choice (Avery & Hoxby, 2004; Cho et al., 2008; DesJardin et al., 1999; Hossler & Stage, 1992), while others indicate that women are more inclined to apply to college than men (Weiler, 1994). This study was specifically designed to explore how gender relates to college choice decision-making when considering students as consumers.

Theoretical Framework

When investigating how women and men, as consumers, think, evaluate, and act on their college choice decisions, two frameworks emerged as the most comprehensive:

Hossler & Gallagher's (1987) three stage model of college choice and Blackwell, Miniard, & Engel's (2001) consumer decision process model.

College choice model. Although many theories and models about college choice exist, Hossler & Gallagher's (1987) is most widely used in regards to college choice, and each step of the model has been extensively expanded upon and evaluated throughout the literature. This seminal model of college choice, which includes the stages of predisposition, search, and choice, serves as the primary college choice model for this study, with the main focus on the final stage of choice.

The first phase, predisposition, includes a student's decision to continue onto college after high school and is often impacted by the student's socioeconomic status, parental influence, and peers (Hossler & Gallagher, 1987). In the search phase, students find information about colleges and universities that will ultimately lead them to make a choice on where to attend (Hossler & Gallagher, 1987). In this last stage, which served as the focus of this study, students consider and evaluate their choices, ultimately making a decision on which college or university to attend (Hossler & Gallagher, 1987; Kim, 2004).

Consumer behavior model. Increasingly, institutions of higher learning are forced to operate as businesses with the ultimate goal to graduate as many students as possible at the lowest cost (Kwong, 2000; Marginson, 2010). As a result, it is important to consider consumer behavior and decision-making in the college choice process. While many models on consumer behavior exist, the Blackwell et al. (2001) model for consumer behavior, as it relates to the student as a consumer in the college choice

decision-making process, directly connects to Hossler & Gallagher's (1987) college choice model, as seen in Figure 7.

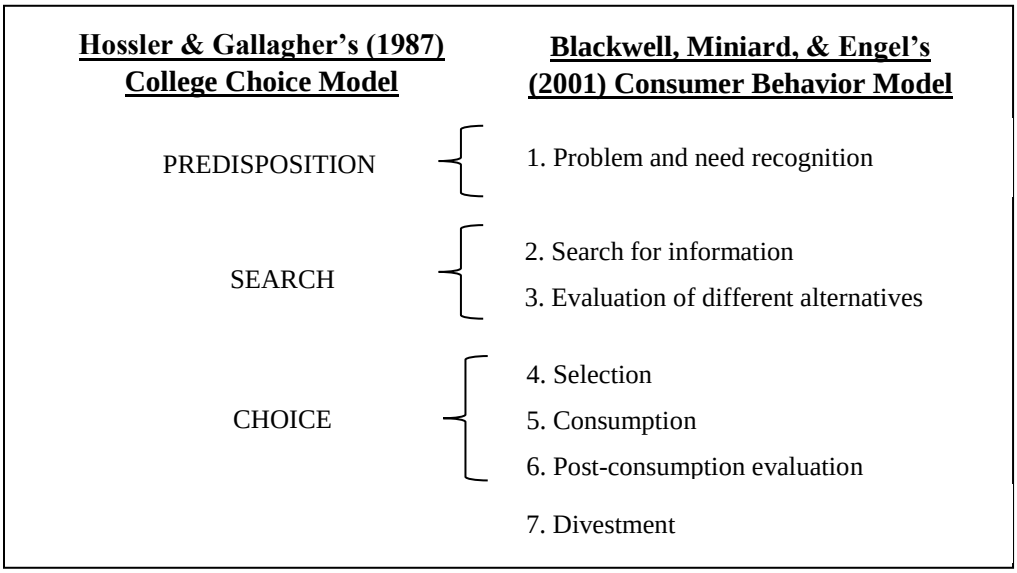

Figure 7. Connection between Hossler & Gallagher's (1987) Three-Stage College Choice Model and Blackwell, Miniard, & Engel's (2001) Consumer Behavior Model

Blackwell et al.'s (2001) consumer behavior model is comprised of a seven step process and takes into consideration internal and external factors that influence the decision-making process (Wiese et al., 2010). Students who make decisions about where to attend college will undertake all seven stages of the process, including problem and need recognition, search for information, evaluation of different alternatives, selection, consumption, post-selection evaluation, and divestment (Blackwell et al., 2001; Wiese et al., 2010). This model of consumer behavior directly relates to the three stages in Hossler & Gallagher's (1987) college choice model, as indicated in Figure 1. The predisposition stage of college choice coincides with problem and need recognition within the consumer behavior model, the search stage equates to searching for information and then evaluating

their choices, and the final choice stage compares to Blackwell et al.'s (2001) selection, consumption, and post-consumption evaluation. The only stage in the consumer behavior model that does not fit directly into the college choice model is divestment, although it could be argued that divestment occurs when a student graduates from the institution and chooses to be an active alum, donate to the institution, and stay involved as a graduate student.

Gender implications of consumer decision-making. Gender implications and consumer decision-making has long been studied, however, few inquiries on consumer decision-making refers to college choice explicitly (Palan, 2001). Though often inconclusive, research finds that men and women do make decisions differently, including when deciding where to attend college (Wiese et al., 2010).

Although higher education is seen as a service for purchase rather than as a product, women as consumers tend to spend more time enjoying the process of "shopping" and researching options, compared to men who tend to make shopping decisions more quickly (Bakewell & Mitchell, 2003; Hayes, 2018; Moogan et al., 1999). Men are often seen as more agentic and goal-oriented, while women may be perceived as socially-oriented and communal (Bakewell & Mitchell, 2006; Iacobucci & Ostrom, 1993). As a result, women are believed to favor relationship formation and are more susceptible to the relationship marketing approach where a relationship between the consumer and the organizational brand occurs (Bowden & Wood, 2011; Iacobucci & Ostrom, 1993). This attribute coincides with research that suggests that women are more influenced by their parents, value the location, safety, and diversity of a campus, and

prefer quality academic programs more than men (Bowden & Wood, 2011; Hanson & Litten, 1982; Shank & Beasley, 1998; Wiese et al., 2010).

When considering loyalty, trust, satisfaction, and commitment, which are all elements of successful marketing and brand recognition of an institution, women as student-consumers gauge their relationships with the brand and institution when making a college choice decision (Bowden & Wood, 2011). As a result, it can be assumed that women would tend to focus more on the relationship formation and connection to a university than men, though men and women both value loyalty (Bowden & Wood, 2011). Increased student satisfaction, trust, loyalty, and commitment to the institution can result in a student choosing the institution from their final choice set to attend (Bowden & Wood, 2011). Additional research indicates that, despite women being more inclined to value relationship formation with an institution, both men and women value creating an emotional bond, association, and brand consciousness prior to making a decision about where to attend college, which has implications for institutional marketing and communication (Bakewell & Mitchell, 2006; Bowden & Wood, 2011).

Methods

This study focused on first-time, full-time students accepted for the Fall 2018 semester at Marathon University, excluding transfer and international students. A case study approach was used because it allowed for an in-depth analysis of a single phenomenon that seeks to understand the "why" and "how" of a problem (Yin, 2014). A qualitative analysis was selected in order to interpret meaning from the open-ended accepted student survey results, and give voice to the student responses. Using purposive sampling of all accepted students at Marathon University, four distinct populations were

identified: men who enroll, men who do not enroll, women who enroll, and women who do not enroll. In the findings section, frequency of second-cycle codes are shown that are critical to understanding the factors that align with gender and enrollment according to the analysis.

An existing, secondary accepted student survey at Marathon University was used for this case study's analysis. This qualitative analysis was part of a larger, concurrent mixed methods case study that considered the accepted student survey results in addition to quantitative, secondary institutional data from the same student population of first-time, full-time admitted students for the Fall 2018 cohort at Marathon University. The survey was electronically sent to all accepted students for the Fall 2018 semester in June and collected by August. Surveys were e-mailed to the e-mail address that the student used on their admission application. Survey results were cleaned so names and other identifiable questions that could be linked to a specific participant were removed. This sampling design is single stage, as individual accepted students were contacted directly to complete the survey (Creswell & Plano Clark, 2018).

The overall survey included questions that consisted of categorical and continuous scales about timing of the decision, information sources used by the student, influence of the institution and influential people, sense of fit, academics and program of study, and finances and cost. For the purpose of this study, the following open-ended questions were the focus of the qualitative analysis:

1. In the final analysis, what ultimately led you to choose Marathon University? (Enrolling students).

2. In the final analysis, what led you to decide not to attend Marathon University? (Non-enrolling students).

Secondary qualitative dataset. A total of 10,035 surveys were administered by an outside firm contracted to the university to accepted first-year freshmen students and 3,208 responses were collected, for an overall response rate of 32%. Of the 3,208 students who responded, 1,455 replied to the open-ended survey questions asked, meaning that 45% of students who responded to the survey filled out the open-ended questions. Of the 1,455 students who answered the open-ended questions, 599 responses were from non-enrolling students and 856 were from enrolling students.

Participants. All accepted first-time, full-time students in Fall 2018 at Marathon University were included as participants of the accepted student survey. Of this population, 3,208 accepted students participated in the overall survey with 1,455 answering the open-ended questions being analyzed in this case study.

The scope of this study was limited to only full-time, first-time undergraduates because this population represents traditional students entering college directly from high school. Although there is seldom a "traditional" student in higher education today, most college choice models are based on "traditional" student populations, representing freshmen students entering higher education directly after graduating from high school (Paulsen & St. John, 2002).

Data analysis. After survey results were obtained, a content analysis strategy was employed to uncover findings about college choice decision-making. Content analysis is a qualitative research approach used to interpret meaning from text data through coding categories (Hsieh & Shannon, 2005; Zhang & Wildemuth, 2009). Qualitative content

analysis allows researchers to classify large amounts of text data into like categories and to find the contextual meaning of the text data through systemic classification, coding, and theming processes (Hsieh & Shannon, 2005).

A directed approach was used as theory and other research findings guided the initial analysis (Hsieh & Shannon, 2005). This structured approach to analysis uses existing theories and prior research to create a priori codes and categories, and then new codes can be developed when text cannot be categorized with existing categories (Hsieh & Shannon, 2005). Researchers using directed content analysis can look at the frequency and descriptive statistics of codes to find meaning within the qualitative data (Hsieh & Shannon, 2005).

Open-ended survey responses were coded with a hypothesis coding orientation using descriptive codes for the first-cycle coding and a second-cycle pattern coding method based on the theory driving the study. Descriptive coding essentially considers a topic and uses a noun as a code to produce different categories throughout the qualitative analysis (Saldaña, 2016). These descriptive codes were derived *a priori*, since student variables preexisted from the literature review (Saldaña, 2016). The second cycle coding process used pattern coding, as this style is often used to classify and synthesize first cycle coding and group previous codes together by identifying themes (Saldaña, 2016). Pattern coding condenses large amounts of data into smaller quantities, allows for clarification of the data, and determines which categories and themes pertained to the research questions. (Saldaña, 2016). The pattern codes were then interpreted based on frequency within the content analysis (Hsieh & Shannon, 2005).

Findings

Various categories related to college choice emerged after analyzing the accepted student surveys, including academics, Admissions Office influence, athletics, physical campus, campus life, diversity, feeling, future career & goals, influence of others, location, money, reputation, and visit experience. When considering the four populations that were analyzed, including females who enrolled, females who did not enroll, males who enrolled, and males who did not enroll, the most important variables to women who found Marathon University to be the right fit in their college choice decision-making process were affective in nature (Table 8A). Not only did women who enroll indicate that their feelings towards the institution were important, but their written survey responses as they related to their feelings were far more pronounced, robust, and descriptive than responses related to other factors, or from other populations.

In addition to the feelings that women who attended Marathon University had, it is also important to note that each population put heavy emphasis on the value of cost and academic programs that the institution offered. Both men and women who enrolled indicated that the cost and academics positively influenced their decision, while both populations that did not enroll demonstrated negative responses to the cost and academic programs that were available.

Table 8A

Comparison of Populations and Frequency of College Choice Decision-Making Factors Derived from Second Cycle Pattern Codes.

Females Enrolled	Frequency of Code	Females Not Enrolled	Frequency of Code	Males Enrolled	Frequency of Code	Males Not Enrolled	Frequency of Code
Feeling	174	Money	164	Money	157	Money	110
Academics	151	Academics	100	Academics	153	Academics	68
Money	137	Reputation	71	Location	83	Reputation	53
Influence of Others	99	Location	62	Influence of Others	71	Location	50
Location	94	Feeling	33	Campus	64	Influence of Others	32
Campus	78	Campus	32	Feeling	53	Feeling	31
Reputation	76	Admissions	27	Reputation	50	Admissions	25
Student Life	69	Influence of Others	22	Future Career Goals	34	Future Career Goals	24
Future Career Goals	57	Future Career Goals	20	Student Life	25	Campus	20
Visit	29	Student Life	15	Visit	18	Athletics	16

Fit as familiarity. Females who enrolled at Marathon University focused on their feelings during college choice decision-making process more so than the other three student populations identified, including females who did not enroll, males who enrolled, and males who did not enroll. Women who enrolled at Marathon University had a strong sense of connection toward the institution and felt comfortable, and that their choice was

a good fit. It was important for female applicants to be able to feel a sense of fit and belonging, as one female who chose to enroll noted, “I felt very comfortable with the school and could see myself there for the next 4 years at least.” Women who enrolled valued this feeling over academic and financial considerations as seen in the other student populations, although they were still considerations when choosing to enroll or not enroll.

Female students who enrolled at Marathon University also indicated the feelings they had while visiting the campus and that it would be home for them. The notion of being or feeling at home permeated their responses, with a female who enrolled noting, “I like the feeling of the campus, it’s home. I wanna be successful while being comfortable.” Another woman who chose to enroll stated, “It felt right the first time I visited, and every time we would come to visit, I would get excited.” Additionally, female prospective students associated safety with feeling at home. One female wrote, “It’s a safe environment offering many things I am interested in. I am eager to learn here, make new friends and memories within the next four years!” Another female applicant wrote in the survey:

> I choose Marathon University because I feel like I belong. I am very proud to be accepted by a school that's very high in ratings academically. I also love the campus and the surrounding town, it is absolutely gorgeous and I would feel very safe and at home there. Having a sense of familiarity when walking around campus and associating that feeling with the notion of being at home was important for women who chose to enroll at Marathon University.

When discussing these feelings towards the institution, women who enrolled often expressed their responses more descriptively than the other population's responses. For example, one female who enrolled responded:

> Ultimately I made the decision to attend Marathon University because it was a perfect fit for me. It is not too far from my home, the programs offered are well known, and I feel safe and comfortable in Marathon's environment. Of the colleges I visited, Marathon easily felt more like home than any of the others, and it is the only college I did not question feeling like I fit in. I am excited to attend Marathon and am certain I have made the right decision choosing Marathon University.

Not only did women identify the need to feel safe, at home, and comfortable at the institution, but their responses overall reflected their expressive feelings related to familiarity of the campus.

Fit as family. In addition to their sense of home at the institution, feeling part of the Marathon University family was crucial for women who decided to attend the institution. These students were made to feel special, included, and valued by the institution through communication with the Admissions Office and university constituents. While feelings and sense of family with the institution were important to those who enrolled, conversely, students who did not have these same experiences or feelings did not see themselves as part of the Marathon University family, and lacked familial connection and communication from the institution.

A female applicant who did not enroll stated that she "just didn't get the same sense of connection that I did from other schools. very little mail sent. nothing

personal/targeted toward me specifically. even the acceptance letter was lacking bells and whistles." Similarly, another female applicant noted:

> The faculty at another institution were very involved and genuinely caring throughout the enrollment and decision process. The opportunities they've offered me are far superior to any other college I've applied to. Like, they sent me a gosh darn bouquet of flowers.

Lack of communication with the institution and being made to feel special impacted another female applicant who did not enroll and she acknowledged:

> Marathon was initially one of my top choices until the acceptance letter came. There was no effort made to make it special. I actually thought I didn't get in because it came in a white envelope. All other acceptance packets I received were packets with great graphics, magnets and pages of information. Once I received that one page letter, I never heard from Marathon again.

In order to make a decision about there to attend college, students wanted to feel that they were part of the university family. Without relationship-building strategies engaged by the Admissions Office and other institutional stakeholders, female applicants chose to enroll at other institutions.

Discussion & Recommendations

The findings of this study provide preliminary evidence that college choice decision-making may be impacted by gender, especially as it relates to the fit, feeling, sense of home, comfort, and connection to the institution. Not only did applicants who did and did not enroll at Marathon University indicate different variables that were important throughout the decision-making process, analysis also showed that female

responses tended to be more affective overall compared to males when discussing their decisions, especially when explaining the sense of connection they had with the institution.

When considering how students as consumers make decisions in the final stage of the college choice model (Hossler & Gallagher, 1987), the findings align with Blackwell et al.'s (2001) stages of selection, consumption, post-consumption evaluation in that students are finding the need to attend college, searching for information about various schools, and then considering the different variables and features of each institution which leads them to their ultimate selection, or choice. The findings also support research that suggests women are more influenced than men by their parents, location, safety, and diversity of an academic campus (Bowden & Wood, 2011; Hanson & Litten, 1982; Shank & Beasley, 1998; Wiese et al., 2010). Most notable, these findings also reinforce that women value relationship formation when making a decision as a consumer, and therefore are more susceptible to a make a customer decision when there is a connection between the themselves and brand (Bowden & Wood, 2011; Iacobucci & Ostrom, 1993).

Recommendations. Professionals in strategic enrollment management should note the importance of creating personalized communications and forming connections with incoming students, especially women. This finding is consistent with Bowden & Wood's (2011) research on women valuing relationship formation when making consumer decisions. Admissions counselors, marketing teams, and strategic enrollment management professionals have the ability to control communication plans and recruitment efforts with prospective students of both genders. The findings from this study reinforce how important forming meaningful relationships, being responsive, and

making the prospective student feel special is during the college choice process. It is troublesome to find that a student who considered Marathon University as a top choice chose not to attend because the institution did not make them feel special, especially when higher education professionals have the unique opportunity to create a meaningful and positive college choice decision-making experience for students. Strategic enrollment mangers need to create personalized and specific communication plans and marketing efforts that will encourage students, especially women, to form a connection with the institution.

Strategic enrollment managers and admissions professionals should also consider the notion of safety as it relates to feelings of comfort, home, and sense of belonging for female applicants. Female students who are attending Marathon University noted that feeling at home and comfortable at the campus and surrounding area made them feel safe. Other research (Mansfield & Warwick, 2006; Shank & Beasley, 1998) has also found that safety of a college campus is an important variable in college decision-making for women compared to men, however, strategic enrollment managers often fail to note the significance when communicating with prospective students, especially women. Strategic enrollment management and marketing professionals should consider segmenting populations of students by gender and communicating with them about the variables that impact their decision-making, such as safety. Providing opportunities for women to feel at home, comfortable, and safe on-campus before they reach the final stage of the college choice model may have a significant impact on the decision-making of these students and should not be ignored by strategic enrollment professionals.

Finally, most institutions in higher education conduct accepted student surveys and collect various types of data on their students. Secondary institutional data and survey results are typically available at any college and university, and new findings and conclusions can be made simply by asking different questions of the data. Accepted student surveys and their methodology could be improved across institutions to provide students the opportunity to be more specific, subjective, and descriptive when responding to accepted student surveys. The length of the surveys, the way questions are asked, and the actual outcome desired should all be considered when creating and distributing accepted student surveys. Best practices in survey design may assist strategic enrollment managers to identify why students, both men and women, choose to enroll or not enroll at their institution.

Conclusion

In conclusion, it is imperative for strategic enrollment managers today to consider how gender impacts college choice decision-making. Although current research is limited, this study sought to gain understanding of women as consumers and their decision-making in higher education. Looking at how students value the notion of feelings, familiarity, and family with an institution can impact the way in which institutions make decisions and create strategies around recruitment and marketing initiatives for both men and women. Whether an institution has majority of female students enrolling each year, or is an institution that sees the opposite trend, we need to begin thinking about strategic enrollment management from the perspectives of the consumer, especially our women students.

Chapter 6

Students as Consumers: The Impact of Gender on College Choice Decision-Making

Abstract

As marketization and privatization strategies become commonplace in higher education, it is essential for institutions to understand how students make decisions about college choice. Students as consumers of higher education engage in college choice decision-making that is often impacted by institutional and personal characteristics, such as cost, location, academic program, ethnicity, and gender. This concurrent, mixed methods case study investigates college choice and consumer decision-making models to determine how women make decisions about enrollment at Marathon University, while considering the current landscape of higher education. Results of the study indicate that women place significant emphasis on feelings related to fit, safety, and comfort throughout the college choice process, while academic program, financial considerations and assistance, and ethnicity influence both men and women. Implications and recommendations for strategic enrollment management professionals are discussed, suggesting personalized communication and marketing plans that can be used when recruiting men and women to their institution.

Keywords

Affective responses, college choice, consumer behavior, decision-making, gender, marketization

Introduction

Consumerist notions are commonplace in contemporary higher education; institutions of higher learning operate as businesses where students are the customer and engage in a cost-benefit analysis to determine the value of the service that the college or university is providing (Hayes, 2018; Serna & Birnbaum, 2018). Postsecondary institutions supply this intangible service to their customers, or students, “in exchange for something of value – a college education and the experiences that accompany that education (Hayes, 2018, p. 104). The ultimate goal of the institution is then to graduate as

many students as possible at the lowest cost, due to decreasing state financing, growing global competition, and increased spending by institutions to enroll and retain students (Guilbalt, 2018; Hemsley-Brown & Oplatka, 2014; Hossler, 2018a; Marginson, 2010). Decreasing federal and state resources force institutions to create means that generate revenue to help offset the increasing costs of healthcare and salaries for faculty, improving campus infrastructure, and adjusting enrollment (Hayes, 2018; Hossler, 2018a; Moogan et al., 1999; Slaughter & Rhodes, 2003). Considering students as consumers is a "natural consequence" of increasing marketing efforts by higher education institutions (Cuthbert, 2010, p. 4). This is further exacerbated by "monopsony," where "there is only one buyer facing multiple sellers, creating an instance of imperfect competition" (Cooke & Lang, 2009, p. 626). To condend with this lopsided market, institutions often take a relationship marketing approach that generates customer loyalty, seeks to provide excellent customer service experiences, engages in a financial exchange with the student, and frequently assesses student satisfaction (Cuthbert, 2010; Guilbault, 2018).

Not only are students viewed *as* consumers by higher education institutions, but students also make decisions *like* consumers as it relates to their own college choice process (Guilbault, 2018; Serna & Birnbaum, 2018; Tight, 2013). If students as consumers do not receive what they want from an institution, they will simply not enroll (Hayes, 2018). Students acting as consumers also want to receive the best value for their money and invest their resources in an institution that provides more benefits than cost (Nokkala et al., 2012; Teixeira & Dill, 2012; Woodall et al., 2014). As a result, marketing and advertising efforts are aimed at students to promote a customer relationship

management approach during their college choice decision-making process (Guibault, 2018).

When resource dependency and monopsony combine, gone are the days of viewing the college student as traditional age, White, male (Hittepole, 2015; Paulsen & St. John, 2002). In the past 40 years, traditional enrollment by gender has reversed and women now make up 56% of incoming students annually (U.S. Department of Education, 2018a; 2018b). However, not all institutions experience the same enrollment pattern. Institutions where males are still dominant in enrollment are often military academies, STEM-related institutions, and faith-based colleges (June & Elias, 2019). Unlike other institutions that typically see more males enrolling than females, Marathon University is a four-year, public institution in the northeastern region of the United States where fewer first-time, full-time, undergraduate female students than male students enroll each year, despite relatively even rates of application and acceptance. This enrollment pattern creates an issue in that the gender disparities among students yielding at Marathon University may have educational, economic, and social justice implications in a time of marketization. The goal of this mixed methods case study is to understand decision-making among women at Marathon University and the factors that influence their enrollment decisions by using secondary, quantitative institutional data and qualitative, accepted student surveys.

College Choice & Consumer Decision-Making

Both students and institutions alike need to understand how the college choice decision-making process relates to consumer decision-making. Clearly understanding how a student makes decisions about where to apply and attend college is crucial for an

institution's success, especially for strategic enrollment professionals in higher education where there is an increased emphasis on marketization. Considering the gender of a student may also help to understand their decision-making as a consumer and reveal what is important to each student and how they make decisions.

The focus of this study is on the final phase of Hossler & Gallagher's (1987) college choice model, the stage of choice, and decision-making theories are relevant and directly relate. Although Hossler & Gallagher (1987) discuss the method that students use to make an overall college decision, including predisposition, search, and choice, and the variables that a student considers, previous research fails to consider how students actually make a decision. Johnson, Stewart, & Eberly's (1991) quantitative study of college freshmen at a Midwestern university regarding their college decision-making process found that "only 10% of the students had made their choice of a college before their senior year in high school… Approximately 70% made their final choice during their senior year, and fewer than 20% waited until after high school graduation" to make their final decision on where to attend college (p. 85-86).

Students use college websites, catalogs and brochures, campus visits and college fairs, guidance counselors, parents, and their peers to learn about college options and build their choice set and then select one institution to attend (Avery, 2010; Dolinsky, 2010; Hossler & Gallagher, 1987; Hossler et al., 1999; Park & Hossler, 1989). Dolinsky (2010) found that the information that a student gathers during the search phase was overall sufficient to make a choice, however, information from colleges could be tailored to specific student's needs and characteristics. The way in which a student perceives the quality of the institution ultimately impacts the selection they make, and students select

an institution that has attributes that the student prefers (Hossler & Gallagher, 1987). The actual decision-making process that a student uses to make their final selection is often not discussed in the current literature with the exception of a few studies (Wiese et al., 2010), and as a result, and understanding of consumer decision-making will be helpful in understanding the way in which students as customers select their institution in the final phase of the college choice model.

Strategic enrollment management's understanding of the student as consumer. The past 40 years have marked a movement in higher education where it is common for a student to be considered as a consumer (Bowden & Wood, 2011; Slaughter & Rhoades, 2005; Tight, 2013; Woodall et al., 2014). College choice cannot be understood without also taking into consideration how students are considered consumers and consumer decision-making theories. Finney & Finney (2010) developed the student-as-customer model in higher education, which posits that institutions use corporate-style approaches to increase enrollment. Higher education is currently considered a service that is offered to students as customers (Hayes, 2018; Moogan, Baron, & Harris, 1999; Ostrom, Bitner, & Burkhard, 2011). From this perspective, "a service lens puts the customer at the center of improvement and innovation initiatives" and "assumes the customer is a co-creator of value" (Ostrom et al., 2011, p. 2). In order for the desired outcome of a service to be achieved, the customer needs to make a commitment to and contribute to their success, which is true for students in higher education (Guilbault, 2018). Institutions overall, and strategic enrollment professionals in particular, need to effectively treat students as consumers to order to succeed in the competitive higher education marketplace.

Strategic enrollment managers are encouraged to consider prospective students as consumers and pay attention to what students actually want, rather than what the university is able to provide (Cardoso, Rosa, Tavares, & Amaral, 2012). If an institution considers their students to be clients and consumers, then the institution will need to incorporate marketing strategies to recruit students during the college choice decision-making process (Bowden & Wood, 2011; Cardoso et al., 2012; Hayes, 2018; Shank & Beasley, 1998). These strategies include conducting market research, identifying a target population and understanding their characteristics, articulating the institution's brand, and integrating marketing communications (Hayes, 2018). Although recruitment and admissions should be the role of the entire institution, viewing students as consumers and creating marketing and enrollment initiatives on this basis is especially vital for strategic enrollment managers (Hayes, 2018).

Offices of strategic enrollment management, in addition to postsecondary institutions overall, are greatly impacted by the privatization and globalization of higher education (Hossler, 2018b). Strategic enrollment managers are often concerned with "access, equity, affirmative active, affordability, student debt, and postsecondary education quality" and use a marketing orientation towards recruitment strategies (Hossler, 2018b; Hossler & Bontrager, 2018, p. 585). Recruiting and marketing to students is now used to recover revenue lost from declining state and federal funding, and strategic enrollment managers are forced to create more creative and strategic ways to compete for students (Hayes, 2018; Hossler, 2018b). The marketing strategies, communication plans, and use of market research that universities engage in is similar to for-profit businesses and corporations (Cooke & Lang, 2008; Hossler, 2018b).

It is not uncommon for colleges and universities, specifically strategic enrollment managers, to engage in market research to identify their student markets and competition, the image and brand of the institution, and relative market position compared to like colleges and universities to identify which qualities of the institution lead a student to enroll (Guilbalt; 2018; Hayes, 2018; Paulsen, 1990). Institutions that understand how a student makes decisions about their applications and enrollment can enhance the fit between the students and institution (Wiese et al., 2010). Institutions can use this information to develop marketing strategies designed to attract sufficient numbers of students with the desired academic, as well as non-academic, characteristics such as gender and ethnicity (Wiese et al., 2010). Hayes (2018) notes that institutions are "challenged to provide a service to its customers – students – in exchange for something of value – a college education and the experiences that accompany the education" and that marketing can help the institution determine what students are looking for and gauge their satisfaction (p. 104). If considering colleges and universities as service institutions, then the satisfaction of the customer is crucial and institutions must constantly consider their students as customers and strive to provide an excellent experience for them (Guilbault, 2018; Hayes, 2018).

Gender and consumer decision-making. Consumer behavior directly relates to college choice decision-making in this study, and considering the impact of gender[3] is fundamental. Gender implications and consumer decision-making has been researched

[3] The terms "gender" and "sex" will both be used throughout this study. Scholars often use the words interchangeably in research, not only in terms of labels, but also in terms of how each label is then defined. For the purpose of this study, a distinction between the terms "gender" and "sex" will not be drawn, though this distinction may be considered important by some scholars (Lorber, 1994). Generally, the term "gender" will be used when referring to social implications, the phenomenon of decision-making, and discussion of differences between men and women. Discussion on data collection and analysis will use the term "sex" when referring to male and female data.

over the past 50 years, however, little research on consumer decision-making relates explicitly to college choice (Palan, 2001). Research that has looked at gender in relation to college choice is often extremely limited and inconclusive (Broekemier & Seshadri, 1999). Findings suggest that men and women do make decisions differently as consumers, including college decision-making, and gender differences were evident when considering personal academic expectations, institutional characteristics that were important to each gender, and academic program of choice (Broekemier & Seshadri, 1999; Cho et al., 2008; Hao & Burnstead-Bruns, 1998; Hemsley-Brown & Oplatka, 2015; Stricker et al., 1991; Wiese et al., 2010).

Women as consumers tend to spend more time enjoying the process of shopping and researching options, compared to men who tend to make shopping decisions more quickly (Bakewell & Mitchell, 2003; Hayes, 2018; Moogan et al., 1999). Men are often seen as more agentic and goal oriented, while women are socially oriented and communal (Bakewell & Mitchell, 2006; Iacobucci & Ostrom, 1993). As a result, women are believed to favor relationship formation and are more susceptible to the relationship marketing approach where a relationship between the consumer and the organizational brand occurs (Bowden & Wood, 2011; Iacobucci & Ostrom, 1993). This attribute coincides with the tendencies that women are more influenced by their parents, value the location, safety, and diversity of a campus, and prefer quality academic programs more than men (Bowden & Wood, 2011; Hanson & Litten, 1982; Shank & Beasley, 1998; Wiese et al., 2010).

When considering loyalty, trust, satisfaction, and commitment, which are all elements of successful marketing and brand recognition of an institution, these aspects

are especially important to women who gauge their relationships with the brand and institution when making a college choice decision (Bowden & Wood, 2011). As a result, women tend to focus more on the relationship formation and connection to a university than men, though men and women both value loyalty (Bowden & Wood, 2011). Increased student satisfaction, trust, loyalty, and commitment to the institution can result in a student choosing the institution from their final choice set to attend (Bowden & Wood, 2011). Additional research indicates that despite women being more inclined to value relationship formation with an institution, both men and women do value creating an emotional bond, association, and brand consciousness prior to making a decision about where to attend college, which has implications for institutional marketing and communication styles (Bakewell & Mitchell, 2006; Bowden & Wood, 2011).

Theoretical Framework

When investigating how women and men as consumers, think, evaluate, and act on their college choice decisions, two frameworks emerged as the most comprehensive: Hossler & Gallagher's (1987) three stage model of college choice and Blackwell, Miniard, & Engel's (2001) consumer decision process model.

College choice. Although many theories and models about college choice exist, Hossler & Gallagher's (1987) is most widely used in regards to college choice, and each step of the model has been extensively expanded upon and evaluated throughout the literature. This seminal model of college choice, which includes the stages of predisposition, search, and choice, serves as the primary college choice model for this study, with the main focus on the final stage of choice.

Hossler & Gallagher's (1987) Three-Phase Model. Today, Hossler & Gallagher's (1987) model is the most popular in regards to college choice (Bergerson, 2009; Iloh, 2018; Park & Hossler, 2014). Hossler & Gallagher's (1987) model simplified the steps seen in previous work from Chapman (1981), Jackson (1982), and Hanson & Litten (1982) and focused on the student rather than the institution throughout the college decision-making process (Hossler et al., 1999; Hossler et al., 1999; Hossler & Gallagher, 1987; Park & Hossler, 2014).

The first phase, predisposition, includes a student's decision to continue onto college after high school and is often impacted by the student's socioeconomic status, parental influence, and peers (Hossler & Gallagher, 1987). In the search phase, students find information about colleges and universities that will ultimately lead them to make a choice on where to attend (Hossler & Gallagher, 1987). In this last stage, which served as the focus of this study, students consider and evaluate their choices, ultimately making a decision on which college or university to attend (Hossler & Gallagher, 1987; Kim, 2004). The strategies that institutions use to attract students including their marketing, communication plans, and scholarship, culminate within the choice phase (Hossler & Gallagher, 1987). However, colleges and universities have limited control over this final phase, as the decision is ultimately up to the student (Hossler & Gallagher, 1987).

Consumer decision-making. Using decision-making models to frame this study is applicable as it allows college choice, gender implications, and the notion of the student as a consumer to all intersect. Many decision-making models exist, however, Blackwell et al.'s (2001) consumer behavior model will remain the focus of this study.

Blackwell, Miniard, & Engel's Consumer Behavior Model (2001). While many models on consumer behavior exist, the Blackwell et al. (2001) model for consumer behavior, as it relates to the student as a consumer in the college-making decision process, directly connects to Hossler & Gallagher's (1987) college choice model, as seen in Figure 7A.

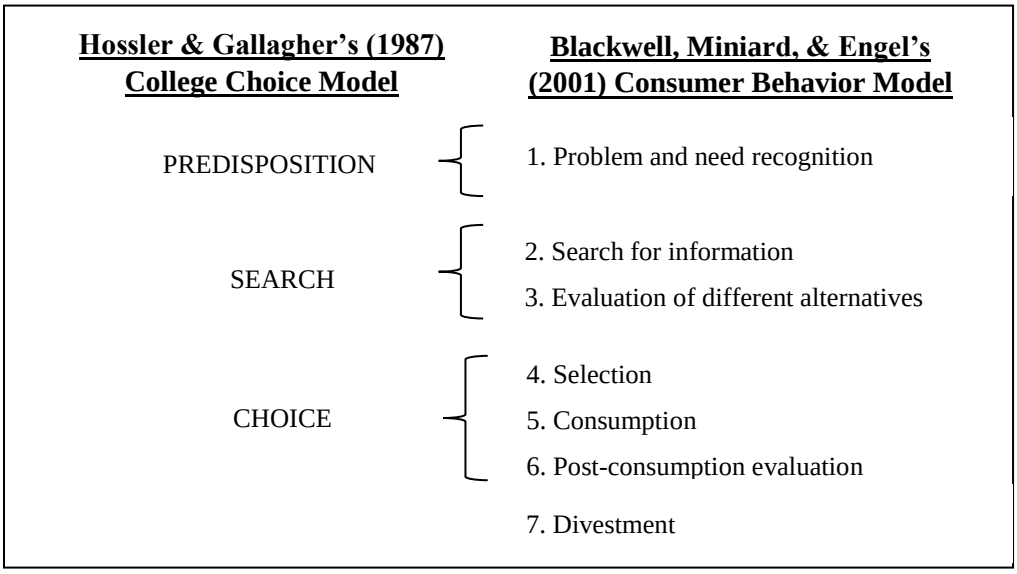

Figure 7A: Connection between Hossler & Gallagher's (1987) Three-Stage College Choice Model and Blackwell, Miniard, & Engel's (2001) Consumer Behavior Model

Blackwell et al.'s (2001) consumer behavior model is comprised of a seven step process and takes into consideration internal and external factors that influence the decision-making process (Wiese et al., 2010). Students who make decisions about where to attend college will undertake all seven stages of the process, including problem and need recognition, search for information, evaluation of different alternatives, selection, consumption, post-selection evaluation, and divestment (Blackwell et al., 2001; Wiese et al., 2010). This model of consumer behavior directly relates to the three stages in Hossler

& Gallagher's (1987) college choice model, as indicated in Figure 7A. The predisposition stage of college choice coincides with problem and need recognition within the consumer behavior model, the search stage equates to searching for information and then evaluating their choices, and the final choice stage compares to Blackwell et al.'s (2001) selection, consumption, and post-consumption evaluation. The only stage in the consumer behavior model that does not fit directly into the college choice model is divestment, although it could be argued that divestment occurs when a student graduates from the institution and chooses to be an active alum, donate to the institution, and stay involved as a graduate student.

Methodology

This concurrent, mixed methods case study focused on first-time, full-time students accepted for the Fall 2018 semester at Marathon University, excluding transfer and international students. This research design included quantitative data analysis of secondary, institutional data and qualitative data analysis of accepted student survey results. At the conclusion of both the quantitative and qualitative analyses, interpretations from both were mixed and analyzed, true to the mixed methods research design.

Quantitative analysis. The following research questions guided the quantitative analysis of this study: *What predicts the differences between females who enroll compared to females who do not enroll, and males who enroll and males who do not enroll at Marathon University?*

1. *Academic program*
2. *GPA*
3. *Standardized test scores*

4. *Ethnicity*
5. *Net cost*
6. *Distance from home*

Secondary institutional data of first-time, full-time applicants to Marathon University from Fall 2018 was obtained from Marathon University, cleaned, and then analyzed through a multinomial logistic regression. The multinomial approach to logistic regression was appropriate as there was one outcome variable, the intersection between gender and enrollment, that consisted of four categories, including females who enroll, females who do not enroll, males who enroll, and males who do not enroll (Field, 2018). Within this multinomial logistic regression, females who enroll served as the reference category (Meyers et al., 2017). The multinomial logistic regression produced the odds ratios that exist between male and female students both enrolling and not enrolling at Marathon University in relation to the key, independent variables. Dichotomous variables included the factors academic program and ethnicity. Continuous variables served as the covariates, which included GPA, SAT, net cost, and distance from home.

To determine that the predictors being used were not too closely related for the multinomial logistic regression to run correctly, correlations between predictors were first considered (Table 4A). If the Pearson correlation between two predictors was too closely related ($r > .7$), then those variables would essentially discount each other in the analysis. Based on the correlation results, all predictor variables in this study were appropriate to use for the multinomial logistic regression analysis.

Table 4A

Pearson Correlations Between Predictors

	Academic Program	GPA	SAT	Ethnicity	Net Cost	Distance from Home
Academic Program	1	-.236*	-.295*	-.014	-.038*	.007
GPA	-.236*	1	.335*	-.103*	.004	-.057*
SAT	-.295*	.335*	1	-.199*	.152*	.04**
Ethnicity	-.014	-.103*	-.199*	1	-.086*	.044*
Net Cost	-.038*	.004	.152*	-.086*	1	.201*
Distance from Home	-.007	-.057*	.048*	.044*	.201*	1

*. Correlation is significant at the 0.01 level (2-tailed).

Qualitative analysis. An existing accepted student survey at Marathon University was used for the qualitative phase of analysis. The research question used to guide the qualitative phase was: *How do female students make decisions about attending or not attending Marathon University compared to male students attending and not attending Marathon University?* The survey was electronically sent by an outside research corporation contracted by the university to all accepted students for the Fall 2018 semester in June and collected by August. A total of 10,035 surveys were administered to accepted first-year freshmen students and 3,208 responses were collected, for an overall response rate of 32%. Of the 3,208 students who responded, 1,455 replied to the open-ended survey questions asked, meaning that 45% of students who responded to the survey filled out the open-ended questions. Of the 1,455 students who answered the open-ended questions, 599 responses were from non-enrolling students and 856 were from enrolling students.

This study focused on the open-ended survey responses that were given to all accepted students, including both enrolling and non-enrolling:

1. In the final analysis, what ultimately led you to choose Marathon University? (Enrolling students, Open-ended).
2. In the final analysis, what led you to decide not to attend Marathon University? (Non-enrolling students, Open-ended).

The survey results were analyzed through content analysis and coded with a priori descriptive coding for the first-cycle coding method and pattern coding for the second-cycle method.

Mixing and interpretations. True to a mixed methods study, the quantitative and qualitative findings were analyzed together (Creswell & Plano Clark, 2018), guided by the research question: *In what ways do qualitative survey results help to explain the quantitative institutional data about college choice between male and female students?* In this study, findings from the multinomial logistic regression were analyzed and compared to the codes obtained from the qualitative, content analysis of accepted student survey results. Analyzing secondary institutional data, in addition to reviewing previous research in conjunction with researcher experiential knowledge, allowed different variables of college choice decision-making to emerge from the analysis that were both similar and different to the variables used in the quantitative phase. The accepted student survey results were compared to the quantitative findings from the secondary institutional datasets. The qualitative findings gave voice to the quantitative institutional data and offered a more varied perspective on why women are choosing not to enroll at Marathon University. Without using and integrating both quantitative and qualitative research

approaches, this study would have been unable to provide a deep understanding of college choice decision-making in regards to gender.

Results and Discussion

Results from the mixed methods analysis found both similarities and differences in how women make decisions about college choice compared to men accepted to Marathon University. Many predictor variables that were analyzed in the quantitative phase of analysis were reinforced in the qualitative survey results.

Findings from the quantitative, secondary institutional data. The quantitative analysis and findings helped to address the first research question in this study, *What predicts the differences between females who enroll compared to females who do not enroll, and males who enroll and males who do not enroll at Marathon University?* Descriptive statistics of continuous variables (Table 1A) were used to organize, characterize, and summarize the data to gain an overall understanding of all variables in the study. Frequencies of the categorical variables, academic program and ethnicity, are shown in Table 2A. Mean and standard deviation also helped to determine the descriptive statistics as related to continuous variables (Table 3A).

Results of the multinomial logistic regression indicated that the seven-predictor model provided a statistically significant prediction of success, -2 Log likelihood = 19808.749, χ^2 (18, N = 8221) = 1451.114, $p < .001$. The Nagelkerke pseudo R^2 indicated that the model accounted for approximately 49% of the total variance. Prediction success for the cases used in the development of the model was modest, with an overall prediction success rate of 46.7% and correct prediction rates of 12.4%, 61.4%, 16.4% and

59.6% for females who enrolled, females who did not enroll, males who enrolled, and males who did not enroll (Table 5A).

Table 1A

Descriptive Statistics of Continuous Variables

Variable	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
GPA	9744	2.00	4.00	3.6004	.43	-1.001	.345
SAT	9744	660	1600	1174.84	134.38	.393	-.176
Net Cost	8221	6946.5	53935	33037.76	4982.58	-.910	3.842
Distance to Home	9744	0	4908.14	65.38	139.62	15.61	319.19

Table 2A

Frequencies of Categorical Variables

Variable	Frequency	Percent
Academic Program = STEM	3530	36.2%
Academic Program = Non-STEM	6214	63.8%
Ethnicity = Majority	7062	72.5%
Ethnicity = Minority	2682	27.5%

Table 3A

Mean and Standard Deviation of Continuous Variables Within Each Population

	GPA	SAT	Net Cost	Distance from Home
Females Enrolled				
Mean	3.59	1124.21	30508.39	48.82
SD	.43	129.75	7583.26	76.86
Females Not Enrolled				
Mean	3.68	1163.33	33817.492	71.41
SD	.37	129.28	3336.64	160.25
Males Enrolled				
Mean	3.5	1169.78	31297.91	49.61
SD	.49	135.17	6730.77	58.053
Males Not Enrolled				
Mean	3.56	1202.96	34032.5	70.37
SD	.44	134.26	3351.62	152.96

Table 5A

Classification

	Predicted				
Observed	1 Females Enrolled	2 Females Not Enrolled	3 Males Enrolled	4 Males Not Enrolled	Percent Correct
1 Females Enrolled	127	485	150	262	12.4%
2 Females Not Enrolled	18	1763	54	1038	61.4%
3 Males Enrolled	103	443	237	662	16.4%
4 Males Not Enrolled	8	1099	57	1715	59.6%
Overall Percentage	3.1%	46.1%	6.1%	44.7%	46.7%

Table 6A

Parameter Estimates from Multinomial Logistic Regression

	B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)
Females Not Enrolled							
Intercept	-7.277	.494	217.037	1	.000		
STEM Academic Program	-.161	.086	25.293	1	.061	1.175	.992, 1.390
GPA	.640	.102	39.151	1	.000	1.897	1.552, 2.318
SAT	.002	.000	27.669	1	.000	1.002	1.001, 1.002
Ethnicity (Majority)	-.436	.087	25.293	1	.000	.647	.545, .766
Net Cost	.000	.000	262.708	1	.000	1.000	1.000, 1.000
Distance from Home	.002	.001	3.669	1	.055	1.002	1.000, 1.004
Males Enrolled							
Intercept	-.655	.493	1.762	1	.184		
STEM Academic Program	.390	.094	17.144	1	.000	1.478	1.228, 1.778
GPA	-.961	.106	82.568	1	.000	.383	.311, .471
SAT	.003	.000	83.532	1	.000	1.003	1.003, 1.004
Ethnicity (Majority)	.257	.099	6.669	1	.010	1.293	1.064, 1.571
Net Cost	.000	.000	2.294	1	.130	1.000	1.000, 1.000
Distance from Home	-.003	.001	5.716	1	.017	.997	.995, .999
Males Not Enrolled							
Intercept	-7.103	.489	210.920	1	.000		
STEM Academic Program	.405	.087	21.813	1	.000	1.499	1.265, 1.777
GPA	-.549	.099	30.497	1	.000	.578	.475, .702
SAT	.005	.000	225.301	1	.000	1.005	1.004, 1.006
Ethnicity (Majority)	-.258	.089	8.401	1	.004	.773	.649, .920
Net Cost	.000	.000	244.851	1	.000	1.000	1.000, 1.000
Distance from Home	.001	.001	2.444	1	.118	1.001	1.000, 1.003

b. The reference category is females who enrolled.

Results of predictor variables on each population. Table 6A presents the regression coefficients, the Wald test, the adjusted odds ratio [Exp(*B*)], and the 95%

confidence intervals (CI) for odds ratios for each predictor contrasting females who enrolled to females who did not enroll, males who enrolled, and males who did not enroll. Compared to females who enroll, females who do not enroll are 1.9 times as likely to not enroll at the institution the higher their GPA is. Therefore, as a female student's GPA increases, their likelihood of attending Marathon University decreases. Females who do not enroll at Marathon University are 1.2 times as likely to be enrolled in a major that is STEM related, as compared to enrolled females. Females who do not enroll at Marathon University are also .647 times as likely to not enroll if they are either White Non-Hispanic or Asian compared to females who enroll. Therefore, female students who do not enroll at Marathon University are more likely to be in the ethnic majority.

Applicants who enroll are 1.5 times as likely to be male if they have a STEM related academic major. Additionally, applicants who enroll are .383 times more likely to be male the higher their GPA is. Those who enroll at Marathon University are 1.3 times more likely to be male if their ethnicity is in the majority of White Non-Hispanic or Asian. SAT, net cost, and distance did not impact the likelihood of applicants enrolling at Marathon University, regardless of gender.

Compared to females who enroll at Marathon University, males who do not enroll are 1.5 times as likely to not enroll if their major is STEM related. If a male is applying for a STEM related program, they are more likely not to attend Marathon University. Males who do not enroll are also .578 times are likely to not enroll as their GPA increases compared to females who enroll. Males who do not enroll at the institution who are White Non-Hispanic and Asian are .773 times as likely to not attend the university, in

comparison to enrolled female. Predictor variables of SAT, net cost, and distance do not impact males who do not enroll at the institution.

Results of predictor variables on all populations. Variables that were consistently significant across all populations included the academic program, GPA, and ethnicity. Compared to females who enrolled, females who did not enroll and males who did not enroll were both found more likely to not enroll if their major was STEM, as their GPA increased, and if they were White Non-Hispanic or Asian. Among applicants who did enroll at Marathon University, they were more likely to be male if their major was STEM, as their GPA increased, and if they were White Non-Hispanic or Asian.

Findings from the qualitative, secondary accepted student surveys. The qualitative analyses and findings helped to address the second research question in this study: *How do female students make decisions about attending or not attending Marathon University compared to male students attending and not attending Marathon University?* Various factors emerged after conducting first and second cycle coding on the qualitative, accepted student open-ended survey results, including academics, Admissions Office influence, athletics, campus, campus life, diversity, feeling, future career & goals, influence of others, location, money, reputation, and visit experience (Table 8B).

Feelings. Out of the four student populations analyzed, including females who enrolled, females who did not enroll, males who enrolled, and males who did not enroll, females who did not enroll uncharacteristically compared to the other populations favored the feelings they had during the college choice decision-making process to ultimately choose to attend Marathon University (Table 8B). Feelings of home, comfort,

and safety on a college campus were included, in addition to sense of belonging and feeling of fit at the institution. One woman who enrolled noted:

> I choose Marathon University because I feel like I belong. I am very proud to be accepted by a school that's very high in ratings academically. I also love the campus and the surrounding town, it is absolutely gorgeous and I would feel very safe and at home there.

Another woman stated:

> Ultimately I made the decision to attend Marathon University because it was a perfect fit for me. It is not too far from my home, the programs offered are well known, and I feel safe and comfortable in Marathon's environment. Of the colleges I visited, Marathon easily felt more like home than any of the others, and it is the only college I did not question feeling like I fit in. I am excited to attend Marathon and am certain I have made the right decision choosing Marathon University.

Women who enrolled valued feeling over academic and financial considerations as seen in the other student populations, although they were still considerations when choosing to enroll or not enroll.

Table 8B

Comparison of Populations and Frequency of College Choice Decision-Making Factors Derived from Second Cycle Pattern Codes.

Females Enrolled	Frequency of Code	Females Not Enrolled	Frequency of Code	Males Enrolled	Frequency of Code	Males Not Enrolled	Frequency of Code
Feeling	174	Money	164	Money	157	Money	110
Academics	151	Academics	100	Academics	153	Academics	68
Money	137	Reputation	71	Location	83	Reputation	53
Influence of Others	99	Location	62	Influence of Others	71	Location	50
Location	94	Feeling	33	Campus	64	Influence of Others	32
Campus	78	Campus	32	Feeling	53	Feeling	31
Reputation	76	Admissions	27	Reputation	50	Admissions	25
Student Life	69	Influence of Others	22	Future Career Goals	34	Future Career Goals	24
Future Career Goals	57	Future Career Goals	20	Student Life	25	Campus	20
Visit	29	Student Life	15	Visit	18	Athletics	16

Reputation. Although the focus of this study was on why female students do not enroll at Marathon University despite relatively even rates of application and acceptance as male students, there is a difference between students who enroll and students who do not enroll, regardless of gender. Both men and women who did not enroll at Marathon University focused on reputation more so than their counterparts who did enroll (Table

8B). One male who chose not to attend Marathon University wrote the following about his decision:

> I decided against attending Marathon due to a personal barrier of "It's not good enough" and "I can do better." I'm sure many people have goals to attend the best colleges and that was mine, and Marathon was just not fit for me.

The perceived sense of prestige and reputation was notable for both men and women who chose not to attend Marathon University and students who did not enroll noted this factor more than those who did enroll when discussion their college choice decision-making.

Interactions with university. In addition to reputation, both men and women who did not enroll at Marathon University considered their interactions with the Admissions Office when making their college choice decision, where both men and women who did enroll did not consider Admissions in their top factors regarding their decision (Table 8B). This characteristic includes first cycle codes of timing of receiving the acceptance, interactions with the Admissions Office, and Admissions communications such as the acceptance or award letter. Both men and women who chose not to enroll at Marathon University indicated negative interactions and experiences with Admissions, while Admissions interactions among students who enrolled were not found as factors in their college choice decision-making process (Table 8B). A female applicant who did not enroll at Marathon University stated that she "just didn't get the same sense of connection that I did from other schools. very little mail sent. nothing personal/targeted toward me specifically. even the acceptance letter was lacking bells and whistles."

Students who enrolled were made to feel special, included, and valued by the institution through communication with the Admissions Office and university

constituents, essentially feeling like part of the university family. While feelings and sense of family with the institution were important to those who enrolled, conversely, students who did not have these same experiences or feelings did not see themselves as part of the Marathon University family, and lacked familial connection and communication from the institution. In accordance to this characteristic, one female applicant who did not enroll acknowledged that:

> Marathon was initially one of my top choices until the acceptance letter came. There was no effort made to make it special. I actually thought I didn't get in because it came in a white envelope. All other acceptance packets I received were packets with great graphics, magnets and pages of information. Once I received that one page letter, I never heard from Marathon again.

The feeling of being part of the university family and timely, positive communication with the university and Admissions Office were notable for students who chose to enroll at Marathon University, including both men and women.

Academics & financial considerations. Although women who enrolled valued their feelings of comfort, home, safety, and sense of belonging the most, all four populations did indicate that financial considerations, including financial aid, scholarships, cost, and value, and academic program were important factors when making a college choice decision about Marathon University (Table 8B). A female applicant who chose to attend another institution noted that their school of choice was "more affordable and had the exact program I wanted" while another stated "Another school had a better program and Marathon did not offer me enough money." Males who enrolled, females who did not enroll, and males who did not enroll focused on academics and finances as

important characteristics that were considered when making their college choice decision. Women who enrolled valued feelings over academic and financial considerations as seen in the other student populations, although they were still considerations when choosing to enroll or not enroll.

Integration of quantitative & qualitative analyses: Discussion. Integrating both the quantitative and qualitative findings helped to address the third research question in this study, *In what ways do qualitative survey results help to explain the quantitative institutional data about college choice between male and female students?* Since this was a mixed methods study, both the qualitative and quantitative findings supported, complimented, and expanded upon each other to provide a deeper understanding of the findings.

Most of the six predictor variables used in the quantitative analysis also emerged in the qualitative analysis of accepted student survey responses of both female and male students who enrolled and did not enroll. For example, academic program was a predictor variable that impacted the probability to attend or not attend for both men and women during the quantitative analysis. Qualitative findings supported these quantitative findings, showing that all four populations valued academics when engaging in a college choice decision. Gender differences in academic major selected in college are often evident, as academic majors in engineering, computers, mathematics, and statistics are comprised of mostly men, compared to women making up the majority of students in academic programs like education, psychology, literature, humanities, and languages (Iceland, 2014; Stricker et al., 1991). Academic program selection also impacts the

careers and earning potential for both men and women once they graduate (Iceland, 2014).

Academic program. Academic program was significant in both the quantitative and qualitative findings as a variable that both men and women considered when choosing to attend or not attend Marathon University. The prestige, reputation, and availability of the academic program either influenced students to attend or not attend the institution based on their perception of the program, either positively or negatively, as seen in the survey results. When looking at the quantitative findings related to academic program, females were 1.2 times as likely and males were 1.5 times as likely to not enroll compared to females who enrolled if their academic program was a STEM related major. Applicants who did enroll were 1.5 times as likely to be male if their major was STEM. The quantitative findings support the qualitative data that show how academic program is important in decision-making, however, the implications of STEM related programs should be considered. Women and ethnic minorities are still underrepresented in STEM majors and fields today, and research indicates that being female can serve as a negative predictor when choosing a STEM major (Moakler & Kim, 2014). Nationwide, women still earn proportionately less degrees in STEM than men despite receiving the higher percentage of bachelor degrees overall compared to men (U.S. Department of Education, 2019). In 2015, 58% of bachelor's degrees were awarded to females and 42% to males, yet only 36% of STEM bachelor's degrees were awarded to females compared to 64% awarded to males (U.S. Department of Education, 2019). Blackburn & Heppler (2017) recommend that higher education institutions focus recruitment efforts on women from STEM pipeline programs and provide inclusive marketing and recruitment strategies to

yield women in STEM majors. This national data supports the quantitative findings that students who enroll at Marathon University are 1.5 times as likely to be male if they are in a STEM related major.

Feelings of sense of belonging and home. Although certain variables like GPA and ethnicity were not mentioned explicitly by students in their qualitative survey responses, quantitative analysis found these to be significant predictors. It could be argued that a student's GPA and ethnicity can directly relate to their feelings of home, comfort, and safety on a college campus, which was extremely significant among females who enrolled at Marathon University. Students, both men and women, may not have considered their own personal characteristics and how that impacted their college choice when reflecting on the elements that led them to choose to attend or not attend Marathon University, but these underlying characteristics may still factor into their decision-making. The quantitative data showed that compared to females who do enroll, GPA impacted applicants who enrolled and females and males who did not enroll, as females are 1.9 times as likely to not enroll as their GPA increases and males are .578 times as likely to not enroll as their GPA increases, compared to enrolled females. The GPA variable impacts females who do not enroll more significantly than males, however, this variable serves as a predictor for both populations compared to females who do enroll. Sense of belonging on campus and college choice can relate to a student's perceived academic self-concept and how they perceive their academic abilities, which supports the qualitative finding of the feeling of comfort, belonging, and safety that a student has at the institution (Wilson & Adelson, 2012).

Also within the quantitative findings, ethnicity served as a predictor for both men and women who chose to attend Marathon University. Again, a limitation to this qualitative finding about ethnicity is that students may not have been outwardly stating how their own identities impacted their decision-making when articulating what allowed them to choose or not choose to attend Marathon University, but research shows that ethnicity can contribute to a student's sense of belonging, feeling of home, or safety at an institution (Johnson, 2012). Racial and gender stereotypes can contribute to a student's self of belonging, academic self-confidence, and performance, which could be reflected in the qualitative accepted student survey results about feeling safe and comfortable on the campus (Johnson, 2012). Not only may sense of belonging contribute to a student's decision-making on choosing an institution to attend, but also impacts their retention and success once they enroll at the institution (Museus, Yi, & Saelua, 2017). When considering the frequency of college choice decision-making factors from the pattern codes seen in Table 8B of the qualitative findings, the variable of feeling is far more significant in applicants who enrolled in the institution than those who did not. The quantitative findings also indicate that applicants who enrolled are 1.3 times as likely to be male if they are White Non-Hispanic and Asian compared to enrolled females, which connects the notion that students who are in the ethnic majority felt more comfortable, safe, and had sense of belonging at Marathon University, a predominantly White institution, than those who were not.

Discrepancies between analyses. Based on prior research about college choice decision-making and personal and institutional characteristics that impact a student's decision-making, it was not surprising that these variables were also present in the

qualitative findings. It was notable, however, that variables that could have been perceived to be more important based on the qualitative findings did not reflect to be as important based on the quantitative findings. For example, proximity to home was not a significant predictor of college choice in the quantitative analysis, but it was recognized by students within the qualitative findings. Proximity to home had relatively high frequencies of second cycle pattern codes in the qualitative findings compared to other variables, but were not significant in the quantitative findings (Table 8B).

Arguably the most significant finding to this overall study was the impact of feelings on women who do attend Marathon University. Feelings cannot be quantified, and feelings of home, safety, and comfort cannot be determined solely by looking at the quantitative results. This is significant because it shows major differences between gender and enrollment, and indicates the importance of sense of feelings when women ultimately choose the institution they will attend. This finding is vitally important for strategic enrollment managers and professionals in higher education today. With increased marketization, privatization, and competition among institutions for students, personalized communication and marketing techniques can give colleges an advantage to enroll students who are connected to the institution and feel a sense of safety, fit, and belonging to the campus. Ultimately, institutions need to understand how to market what is important to different segments of their accepted student populations in order to successfully have students enroll in their college or university (Broekemier & Seshadri, 1999).

Conclusion

The impact of gender can no longer be ignored in conversations regarding college choice decision-making. This study sought to understand how men and women make decisions as consumers when deciding to attend or not attend Marathon University in a time of marketization and privatization in higher education. Institutional secondary data included predictor variables of academic program, GPA, standardized test scores, ethnicity, net cost, and distance from home that were analyzed to predict the differences between females who enroll compared to females who do not enroll, males who enroll, and males who do not enroll at Marathon University. Accepted student survey results from both men and women who did and did not enroll at the university were also analyzed, compared, and contrasted to the institutional secondary data. The two analyses found that women who enrolled focused on their feelings throughout the college choice decision-making process, and factors like academic program and ethnicity also had an impact on their consumer decision-making.

Whether or not an institution has a majority of female students enrolling each year or not, strategic enrollment managers need to be mindful of how students as consumers are impacted by gender when making decisions. Personalized communication and marketing plans should become commonplace and showcase how students can feel safe, comfortable, and have the sense of being at home through relationship development between the student and institution. Higher education institutions should also focus on communication and policy regarding cost and affordability, academic programs, and how ethnicity may impact a student's decision-making as it relates to their sense of belonging and safety on-campus. Having segmented marketing and communication plans for

different student populations throughout their decision-making process will be crucial for colleges and universities as competition for enrollment heightens and students increasingly act as consumers when deciding where to attend college.

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