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Apply Now!: Utilizing Application Date to Predict College Enrollment

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APPLY NOW!: UTILIZING APPLICATION DATE

TO PREDICT COLLEGE STUDENT ENROLLMENT

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ABSTRACT

The purpose of this quantitative study was to identify common traits of freshmen who chose to apply to the University of Mississippi each month, from July of the pre-matriculating year to September of the matriculating year. In examining the application date, the researcher examined the relationship between the freshman student's application timeline and various traits that the student possessed. The data points the researcher utilized were entering metrics such as entrance examination score (ACT/SAT) and high school gpa (core/cumulative). The researcher also considered the demographics of the freshman student. This included gender, ethnicity, residency (in-state or out-of-state), Mississippi county of residence in order to determine Mississippi congressional district, and whether or not the freshman student identifies as first-generation. Last, the researcher was interested in application specific information such as the application date.

Using Perna's (2006) college choice model as the conceptual framework, the researcher utilized two data analyses to complete this study. First, multiple regressions were performed on three groups of variables: entrance examination, core high school gpa, and cumulative high school gpa; gender, ethnicity, and residency; and first-generation status and Mississippi congressional district. Second, a chi square test was completed to discover how likely it is that a student's application date is related to the acceptance rate (likelihood of acceptance) and yield rate (likelihood of matriculating) of the University of Mississippi freshman class.

The results of part one indicate that there is little relationship between the variables chosen for each group of variables and the student's subsequent application date. The results of

the chi square test indicate a relationship between when a student applies and whether or not they will be admitted and enroll at the University of Mississippi. Generally, students who apply in the first three months are more likely to be admitted and subsequently enroll at the University of Mississippi. An impact on timing of application can potentially be affected by numerous opportunities during a student's search phase of college student choice. Ultimately, the goal for this institution, is to find ways, such as those above, to influence students to apply sooner to the University of Mississippi.

DEDICATION

This project is dedicated to my family who have always pushed me through my doubts and tears. To my parents, Gary and Cindy Phillips, who have always been my biggest cheerleaders no matter what the obstacle or goal. To my husband, Chris Fos, who believes I can do anything. To my step-children (Summer, Travis, and Autumn) who I hope will see a higher education bright in their futures. To my grandparents, Paul and Frances Phillips & Bishop Strong, who did not live to see this, but who, I am sure, are cheering from heaven and are very proud.

ACKNOWLEDGEMENTS

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Chapter I

INTRODUCTION

The college choice process is complicated and time consuming. It encompasses the entire progression that results in the decision of whether or not a student enrolls in postsecondary education (Cabrera & La Nasa, 2000a; Chapman, D., 1981; Chapman, R., 1986; Litten, 1982; Hossler & Gallagher, 1987; Perna, 2006). This process includes anything that pushes a student towards or away from a specific choice regarding postsecondary education. This is where the similarities for all students end.

Students who are graduating high school have two choices. First, they can enter postsecondary education (4-year, 2-year, or vocational training), or they can join the workforce (e.g. not enter postsecondary education). High school preparation plays an important part in making the decision to go to college. This includes high school coursework and social activities. These are strong predictors of whether or not a student will enter college and how well they will do (Goldrick-Rab, Carter, & Wagner, 2007; Nora & Rendon, 1990b; St. John, 1991; Thomas, 1998). Research has shown that the courses that prepare a student the most for college are: math, science, and foreign language (Adelman, 1999; Adelman, Daniel, Berkowitz, & Owings, 2003; Goldrick-Rab, et. al, 2007).

Not all high schools are created equal, however. Students from lower socioeconomic status (SES) areas and minority students are more likely to consider vocational options rather than 4-year institutions (Gamoran, Porter, Smithson, & White, 1997; Goldrick-Rab, et. al, 2007; Thomas 1998). They are also less likely to take college preparation math and science courses

(Nora & Rendon, 1990a; Goldrick-Rab, et al., 2007). Bryk, Lee, & Smith (1990) noted that these students attend smaller schools that do not even offer college preparation courses (as cited in Goldrick-Rab, et al., 2007). Discouragement for disadvantaged students from attending college can begin as early as 8th grade (Cabrera, Burkum, & La Nasa, 2003). Researchers have found that college choice begins as early as 7th grade and ends when a student chooses to enroll at a particular institution over others (Hossler, Braxton, Coopersmith, 1989; Perna, 2006; Ternzini, Cabrera, & Bernal, 2001). Because of this, the effects of a disadvantaged student attending a college preparation curriculum are stronger than for more advantaged students (Cabrera & La Nasa, 2000a, 2000b, 2001; Goldrick-Rab, et al. 2007).

Different students will gather the knowledge needed to move forward with college choice in different ways. Less advantaged students who are from low SES backgrounds are less likely to receive "high quality information" (Goldrick-Rab, et al., 2007, p. 2447). They are less likely to seek out information about attending college from anyone other than a high school counselor. This is likely due to a student's parents not having attended college (Cabrera & La Nasa, 2000a, 2000b). The same goes for the information needed about finances to pay for college. According to Flint (1992, 1993, 1997) and Olsen and Rosenfeld (1984), these families are less likely to apply for federal aid using the Free Application for Federal Student Aid (FAFSA) or ask about other financial opportunities for which the family may qualify.

Hossler, et al. (1989) outlined the benefits to the individual and society for attending postsecondary education. A well-educated populace contributes to society: increased productivity, lower welfare, lower crime rates, higher technological development, and greater participation in civic and in community affairs. In return, the outcomes for the individual are higher life satisfaction, lower health problems, higher wages, and better employment. These

outcomes vary depending on the type of education attended. There are costs and benefits to the individual attending postsecondary education, however.

Perna (2006) noted that the costs of attending college are tuition and fees paid, cost of books and supplies, and foregone earnings. She calls these costs and benefits the economic model of human capital investment. Individuals gain productivity by attending education and training opportunities. Deciding on which education or training depends on the costs and benefits of each opportunity. The difference in productivity gain is measured by which types of investment the individual made into their personal development (education and training opportunities taken). Quality and quantity of training, amount of on the job training, geographic mobility, and emotional and physical health are all taken into consideration.

Despite any barriers, participation rates in higher education institutions are the highest they have ever been. "Women, minorities, and individuals from low-income backgrounds are enrolling in colleges at higher rates than previously seen" (Goldrick-Rab, et. al, 2007, p. 2450). In the 1970s, the majority of participants in higher education were white men. Now, according to Adelman, et al. (2003) and Anderson (2003), over half of today's undergraduates are women. About one-fourth are non-white, and one-fourth of college participants are from the 40th socioeconomic percentile or below.

However, despite strides that are being made with regard to access, there are still demographic differences in who applies and enrolls in postsecondary education. Ingels, Curtin, Kaufman, Alt, and Chen (2002) and Goldrick-Rab, et al. (2007) found that there are still large disparities in application and enrollment across ethnicities. Terenzini, Cabrera, and Bernal (2001) found that high school finishers from the lowest SES group are five times as likely as their high SES counterparts to not consider postsecondary education as a viable option.

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This should not be surprising. Alon's (2001) study examined the type of college (2-year or 4-year) and the selectivity level (highly selective, open admissions, etc.). In this study, she discovered that social class dictated, at an alarming rate, where a student would attend college. Higher SES students attended 4-year colleges rather than 2-year colleges twice as often as their lower to middle SES counterparts. In addition to this, the upper SES students were nine times more apt to apply and attend a highly selective institution than their middle to lower SES counterparts. All of the major college choice models (Cabrera & La Nasa, 2000b; Chapman, 1981; Chapman, 1986; Hossler & Gallagher, 1987; Litten, 1982; Perna, 2006) point to SES as one of the main factors that affects all of the college choice processes (search, application, and choice or attendance).

In the same vein, Cabrera and La Nasa (2000b) discussed that the level of SES affects the sophistication of the search. Due to available resources, lower SES families were more likely to utilize the high school counselor as their main source of information about the college choice process, whereas, the higher SES counterparts utilized family, friends, other students, catalogs from interested institutions, college representatives, and private counselors for their college search needs. Goldrick-Rab, et al. (2007) stated that, "a free market assumes that individuals have all of the necessary information in order to make rational choices" (p. 2452). This assumption would be incorrect. Students are making high-cost decisions to attend postsecondary education, based on the information they have, not necessarily all of the available information.

Long (2004) noted that over time (from 1972 to 1992) the importance of college costs with regard to the enrollment decision were found to have decreased, while the importance in quality of institution has gone up. He explained that price plays an important role in how students choose between colleges; however, the exception to this is low income students.

Research has shown this to be true. According to Perna (2002) and Perna (2006), affordability of postsecondary education can be a significant deterrent from attending college; or, if already attending, it can be significant detriment to completing a postsecondary degree.

Students encounter many decisions as they are making their way through the college choice process. Some do it alone or with very little guidance. Others have a world of resources at their fingertips. This can be dictated largely by the resources available to students. What if the playing field could be leveled for students who do not have a wide variety of resources available to them; or, who just do not know where to begin? Goldrick-Rab, et al. (2007) discussed the "disjuncture between K-12 standards and assessments [teaching to the test], college placement exams, and the academic requirements of higher education and the workforce" (p. 2449). With the wide disparity between the K-12 system and the college system, it is no wonder the process of searching for a college, choosing a college, and subsequently attending college confuses so many students.

Statement of Purpose

The purpose of this quantitative study was to identify common traits of freshmen who chose to apply to the University of Mississippi each month, from July of the pre-matriculating year to September of the matriculating year. The University of Mississippi is a historically White, public institution of higher learning, in the Southeast United States. Carnegie classifies the University of Mississippi as an R1, the highest research activity institution (Indiana University Center for Postsecondary Research, 2017b).

In examining the application date, the researcher examined the relationship between the freshman student's application timeline and various traits that the student possessed. The data points the researcher utilized were entering metrics such as entrance examination score

(ACT/SAT) and high school gpa (core/cumulative). The researcher also considered the demographics of the freshman student. This included gender, ethnicity, residency (in-state or out-of-state), and whether or not the freshman student identifies as first-generation. Last, the researcher was interested in application specific information such as the application date.

Conceptual Framework

Perna (2006) created a proposed conceptual college choice model. Her model expands Chapman (1981), Litten (1982), Chapman (1986), Hossler and Gallagher (1987), and Cabrera and La Nasa (2000b). The basis of her model is to take into account students of all walks of life, including students of lower SES families. The basis of her concern is the thirty-percentage point gap between enrollment rates of students in the lowest SES income quartile and students in the highest quartile (Perna, 2006, p. 99). Research shows that different groups blame the gaps on varying reasons. The most common reasons are: a) inadequate financial aid programs; b) inadequate academic preparation; and, c) inadequate information presented to students about financial aid requirements and academic requirements for attending college (p. 100). Her approach, therefore, takes into account both the economic and sociological frameworks that a student will bring to the college choice process.

The interaction effects between the economic model of human capital investment and the sociological model of status attainment are important. Many studies have looked at one or the other without taking into account the entire picture. Perna (2006) found that students seem to be aware of the benefits of a higher education, but they are poorly informed about the financial resources available and the total cost of attending. She also asserted that students who are more likely to enroll in college are those with high academic preparation and achievement and those with the financial resources to pay for the cost of postsecondary education. Unfortunately,

increases in family income have not kept up with the increasing cost of attending college, which may be keeping some students from attending. And, conversely, the education requirements for most jobs have increased.

Perna (2006) revealed that utilizing the economic approach without the social approach only focuses the decision-making process, but does not take into account what information was provided in making the decision. Conversely, the sociological approach only indicates how a person gathers information, but does not demonstrate how they utilize the information to make the decisions. The researcher can create a clearer picture of decision making processes by utilizing both approaches in the framework used. In order to do this, Perna (2006) focused on four "contextual layers" (p. 116). These layers are: a) the individual's habitus; b) school and community context; c) the higher education context; and, d) the broader social, economic, and policy context (p. 116).

The first layer is the individual's habitus. Researchers break down habitus into various demographic characteristics: gender, race/ethnicity, SES, social capital, and cultural capital. The second layer is school and community context. This layer consists of the availability of resources, types of resources, and social supports and barriers to decision-making. The third layer is the higher education context. These include the characteristics of the institution, location, and marketing and strategies they employ in recruiting a student. Institutions can shape student decisions about college choice by being in proximity to the student, by providing resources about attending postsecondary education (specifically that institution), and by direct marketing campaigns based on the fit of the student to the institution. The last layer is the social, economic, and policy context. This layer targets the specific changes that may occur within the social aspect of a student's life, such as demographics, the economic changes that may occur, such as

unemployment rate, and public policies that may shape a student's decision, such as new grants or aid programs (Perna, 2006, p. 116-119).

Perna's (2006) framework for college choice allows the researcher to look at all aspects of a student's life that may affect the college choice process. Many of the attributes in the framework are out of the student's control, but could be the difference between a student going to a 2-year institution for vocational work or going to a 4-year institution for academic work. It is important to understand how students are making the decision to attend a particular institution. Understanding where they are coming from within their habitus and community will go a long way for an institution to know who is attending and how it can best assist the student.

Rationale for Study

The University of Mississippi is a four-year, public institution classified Carnegie classification, highest research activity (R1). As one of the poorest states in the nation, Mississippi compounds many issues that other institutions experience. All four-year public institutions are essentially open access to all in-state students, due to the Ayers Settlement (*Ayers v. Musgrove*, 2002). Any in-state, public institution affords the ability to all qualified citizens of the state of Mississippi to attend due to the Ayers case settlement which lowered the standards of entrance to institutions within the state for residents. All four-year, public institutions have the same in-state metrics for allowing admission as well as alternate admissions standards that ease the burden some requirements may cause. For instance, a 3.2 high school core gpa on the College Preparatory Curriculum (CPC) will allow admission to a four-year, public institution in the state of Mississippi without a standardized test score such as the ACT, SAT, or SATR. Three of the other four options for admission have scaling ACT/SAT/SATR and scaling high school core gpa: 1) 16 ACT or equivalent SAT/SATR and a 2.5 high school core gpa; 2) 16 ACT or

equivalent and graduation in the top 50% of graduating class; or, 3) 18 ACT or equivalent

SAT/SATR and a 2.0 high school core gpa. The last entrance option, "meeting certification for

the National Collegiate Athletic Association (NCAA)," applies to all freshmen applicants

(University of Mississippi, 2018).

Due to these entrance requirements, nearly any problem that incoming freshmen face on

the national level will be higher at the Mississippi state level because a 16 or 18 on the ACT

guarantees that a student will have at least one (if not more) developmental courses coming into

a state institution. Developmental courses are those that indicate that a student is not college

ready in a particular area of study (math, English, and/or reading). According to Love and

Maxam (2011), college students are increasingly coming to college underprepared for the

academic rigors they will face. Nationally, approximately 28% of freshmen in 2000 were

required to sign up for at least one remedial course. At the University of Mississippi, only 11%

of the 2017 freshman cohort required at least one developmental course, but nearly two-thirds of

the freshmen who were required to sign up for at least one remedial course were resident

students. This can be correlated directly to the Ayers case and the subsequent reduced metrics

required to get into a Mississippi public institution. The rates of underprepared and

developmental students, according to Love and Maxam (2011), are expected to continue

increasing.

Love and Maxam (2011) paint a picture of today's incoming students. Not only are

students entering college underprepared, they are more polarized politically, meaning that more

students are identifying as either conservative or liberal upon entering college. According to

Love and Maxam (2011), those working directly with college students will find that political

polarization is evident on both sides, liberal and conservative. Along with a political shift, Love

and Maxam (2011) noted that there has also been a continuing shift in family dynamics. More students are coming to college from single-parent homes and divorced families. Some students are deferring their education and they themselves return to the college landscape as single parents or divorced individuals. The latter group of students, according to Love and Maxam (2011), make up a significant group of adult learners.

In the emotional and psychological realm, today's students are struggling like no other group before them. According to Love and Maxam (2011), students are utilizing psychological services on college campuses in record rates. Goodman (2017) agrees and cites that due to the increased responsibilities college students face as they transition from high school, stress, anxiety and depression have increased significantly. The American College Health Association (2017) reports that 86.5% of college students report that their responsibilities have overwhelmed them at least once in the last year, 60.9% feel that this anxiety is substantial and overwhelming, and 39.3% state that the anxiety and depression has effected the functioning of daily life at least once in the last twelve months. According to Love and Maxam (2011), this group includes a large number of military and veterans who are returning or beginning their schooling as they have come back from combat. This group has its own unique challenges that universities are beginning to deal with extensively, especially with regard to the transition from military life to civilian life. All of these shifts in home dynamics, politics, and psychological issues affect who is coming to college, where they go, and when they choose to go. All of these points also affect how a student may do academically. Most academic struggles stem from issues outside the classroom.

Today's students struggle in ways we do not fully understand. As higher education professionals, we need to understand who the population we serve consists of and how we can

best help them navigate the college landscape. Knowing who our potential struggling students are based on the parameters we can measure is more than helpful to us as we educate the next generation. Being able to predict which students will attend the University of Mississippi based on application timeline will allow enrollment managers to target these areas earlier to help students apply sooner.

Significance of the Study

Access to higher education has been a topic of concern for many years. Researchers have been debating for the last thirty years or more how best to measure how a student makes the choice to attend college or not (Cabrera & La Nasa, 2000; Chapman, D., 1981; Chapman, R., 1986; Litten, 1982; Hossler & Gallagher, 1987; Perna, 2006). Students have two choices: schooling or non-schooling. Some students consider only one or the other, and some students consider both options as viable. Traditional college enrollment considerations are made as early as 7th grade and end when a student decides on the appropriate institution in which he or she will enroll. These initial considerations continue through 10th grade. The search phase, where students are actively looking for colleges to attend, occurs between 10th and 12th grades. And lastly, choice – the final decision a student makes – occurs in 11th or 12th grade (Hossler, et al., 1989; Perna, 2006).

According to Kezar (2004), there is an understood social charter between higher education and society. In this charter, higher education acts for the greater good of the community, not the individual. The community provides the "resources, political support, and a guiding influence;" in return, universities "educate students, serve as developers and repositories of knowledge, provide social critique, and contribute to the community" (Kezar, 2004, p. 436). Based on this principle of communitarian philosophy (Kezar, 2004), society has an obligation to

allow college to be a viable option for all students who want to pursue an academic pathway. Not only is there an individual benefit to be had by the student; there is also a benefit to be had by society for having a well-educated populace. Perna (2006) found that a smaller percentage of students from low income families expect to graduate high school, take the ACT or SAT to enter college, or even apply and subsequently enroll in a 4-year institution. She also observed that students, generally, are well informed with regard to the importance of higher education; however, they are poorly informed about how much that education will cost or what they may qualify for with regard to financial aid.

According to Perna's (2006) framework for college choice, it takes a village to affect a decision to attend or not to attend college. Who are the students who are academically unprepared to attend postsecondary education? How can we identify these students to help them make an informed decision about college? Well prepared students do better in college and graduate with degrees in higher rates than those who are not prepared (Goldrick-Rab, et al., 2007). Cabrera, et al. (2003), Cabrera and La Nasa (2000a, 2000b, 2001), and Kuh (2007) also noted that providing low income students with better academic preparation will have a stronger effect than providing the same preparation to more advantaged students. Simply shifting to a college preparation curriculum can provide a much-needed boost to disadvantaged students. Knowing who the struggling students are can help us as a society close the gap on access and college choice. Utilizing application date as a predictor of who matriculates and who does not may help identify these students.

College readiness is about more than academics. According to Arnold, Lu, and Armstrong (2012), college readiness is a "developmental process" that is derived from a student's prior "experiences, biological characteristics, and abilities" (p. 21). While academics is

part of the preparedness process, understanding timelines of college procedures such as when to apply for admission and when to begin thinking of financial aid are also a large portion of becoming prepared to attend college. Arnold, et al. (2012) call the understanding of the processes of higher education, college knowledge. College knowledge and the ability to gain this knowledge differs from student to student depending on access to resources both within and without the family. They state, "The development of college knowledge is particularly important because the traditional college admissions process is time sensitive, and preparation begins as early as eighth grade, when students make decisions about enrollment in college preparatory course work" (p. 24).

Students with college knowledge may be more likely to apply sooner, be accepted quicker, and be on track to complete all of the pre-college events such as signing up for housing and enrolling in orientation in a timely manner and thereby allowing more choice for when a student could obtain their first college schedule. By enrolling in an earlier orientation, students are more likely to get the classes they desire at optimal times. Students who apply later in the timeline may have been held up by applying to other schools, meeting academic standards, or by access to people and resources to help them with their college choice process. By utilizing the application date as a predictor, we may better see which students are affected and by what measures.

Research Hypotheses

Perna's (2006) conceptual model consists of four layers. These are the outside influences that she has identified that affect college choice. Layer 1 is the student's habitus. The habitus consists of demographic characteristics, cultural capital, and social capital. Layer 2 is the school and community context which is all of the resources that a student may have available to him or

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her including school counselors, family, and peers. Layer 3 is the higher education context which comprises of all of the influences that institutions have on a student's college choice. And last, Layer 4 is the social, economic and policy context. This consists of changes in "social forces, economic conditions, and public policies (p. 119). The hypotheses below correspond to the various layers in order to make sure all aspects of Perna's (2006) framework are utilized.

Perna's Layer 1 Hypotheses. There is a significant relationship between residency (in-state or out-of-state) and application date of students who apply to the University of Mississippi.

There is a significant relationship between gender and application date of students who apply to the University of Mississippi.

There is a significant relationship between ethnicity and application date of students who apply to the University of Mississippi.

Perna's Layer 2 Hypotheses. There is a significant relationship between high school core grade point average and application date of students who apply to the University of Mississippi.

There is a significant relationship between ACT score (or SAT or SATR equivalent) and application date of students who apply to the University of Mississippi.

There is a significant relationship between high school cumulative grade point average and application date of students who apply to the University of Mississippi.

Perna's Layer 3 Hypotheses. There is a significant relationship in yield of students and application date of students who apply to the University of Mississippi.

Perna's Layer 4 Hypotheses. There is a significant relationship between geographical locations within the state of Mississippi using congressional voting districts as a guideline and application date of students who apply to the University of Mississippi.

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There is a significant relationship between first generation status and application date of students who apply to the University of Mississippi.

Definition of Terms

ACT. An American college entrance exam that students take in order to be considered for admission to any institution in the United States (ACT, 2017).

Cultural Capital. "System of attributes, such as language skills, cultural knowledge, and mannerisms, that is derived, in part, from one's parents and that defines an individual's class status" (Perna, 2006, p. 111).

First-Generation Students. Students who self-identify both parents as having a high school diploma or less (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996).

First-Time, Full-Time Freshman or Freshman Cohort. Any first-time-in-college undergraduate student who is degree seeking beginning in the fall semester of each year. Each fall is a different cohort year. These cohorts are used to define four- to six-year graduation rates and first-time, full-time freshman fall-to-fall retention. The National Center for Education Statistics: IPEDS Glossary (2016-17) is the standard that the University of Mississippi uses for data reporting, so it makes sense to use the definitions provided in the glossary to guide this research. (See definitions of: entering students, first time student: undergraduate, and fall cohort.)

Habitus. An individual's demographic characteristics in relation to college choice (Perna, 2006).

High School Core Grade Point Average. The academic average of all courses required for admittance into the University of Mississippi based on the completion of the College Preparatory Curriculum (CPC) (Institutions of Higher Learning, 2017).

High School Cumulative Grade Point Average. The academic average of all courses a student has taken in high school for admittance to the University of Mississippi (Institutions of Higher Learning, 2017).

In-State Student. Student who has residency in the state of Mississippi upon entering as a first-time, full-time student at University of Mississippi.

Organizational Context. This is the school and community context layer in Perna's (2006) framework for college choice. This layer describes the availability of resources, the types of resources, and the supports and barriers that a student may encounter while making his or her college choice (p. 117).

Out-of-State Student. Student who has residency outside of the state of Mississippi upon entering as a full-time, first time student at the University of Mississippi.

SAT. A test given by The College Board and used for consideration of admittance into college prior to March, 2016 (The College Board: SAT, 2017).

SATR. A test given by The College Board and used for consideration of admittance into college. This is the SAT revised. The College Board changed, revised, and renamed the SAT in March, 2016 (The College Board: SATR, 2017).

Social Capital. A set of social networks that is acquired through participation in the social structures he or she has been brought up in. It is status within one's own community. It enables an individual "to gain access to human, cultural, and other forms of capital, as well as institutional resources and support" (Perna, 2006, p. 112).

Student College Choice. "A complex, multistage process during which an individual develops aspirations to continue formal education beyond high school, followed later by a

decision to attend a specific college, university or institution of advanced vocational training"
(Hossler, et al., 1989, p. 234).

Methodological Approach

According to Perna (2006), "quantitative methodologies are especially useful for testing and confirming theoretical propositions about college choice for a particular population" (p. 120). This study seeks to analyze all applications to the University of Mississippi to see if there are patterns in the variables of those who apply and enroll and those who apply and do not enroll. These relationships may be useful in enrollment management in helping decode who is more likely to enroll based on the application timeline and the student metrics and demographic data. In using a multiple regression and chi square analysis, I will be able to study the relationships between students and their pre-matriculation predictor variables.

Delimitations

This study will be delimited to students who were first-time, full-time, degree seeking freshmen at a predominantly White institution in the Southeast beginning in fall 2013 and continuing through fall 2017 and all students who applied and would have fit the above criteria had they enrolled. This will encompass five years of data and include the first-time, full-time freshman cohorts and potential members of these cohorts from fall 2013 through fall 2017.

When describing a first-generation student, the study will be delimited by known data. First generation status was defined by both parents having received a high school diploma or less (Terenzini, et al., 1996). Students with unidentified parental education will not be classified as first-generation. Only those with both parents classified as having a high school diploma or less (e.g. GED, some high school, etc.) will be considered first-generation.

This study will be delimited further by standardizing all entrance exam scores. All SAT and SATR entrance exam scores will be equated to the ACT in order to standardize for comparison purposes. The researcher will use a standardized conversion chart to change all SAT and SATR scores into the ACT equivalent score where needed (The College Board: Concordance Tables, 2016).

Layer 3 of Perna's (2006) framework also has some delimiting factors. It is difficult to quantify a university's outreach to a particular student and how that impacts matriculation and college choice. The layer 3 hypotheses that have been chosen have to do with application yield, since this deals with interest level in applying and then ultimately matriculating.

Limitations

This study will be limited by quantitative data collected. A student may be unaware he or she is making much of the decision process of college choice, and the data will not tell the full story of that process. Therefore, we will have an incomplete snapshot of the entire college choice process. Additionally, the study will be limited by the change in out-of-state requirements to be admitted to the predominantly White institution in the Southeast. Beginning with fall 2013, the metrics for admittance increased for out-of-state students. Prior to that time, the metrics were the same for in-state and out-of-state students. Beginning with fall 2015, the metrics increased, yet again, for out-of-state students. Due to these increases, out-of-state students may have a shorter timeline for applying and may apply later than they would have before the admission requirements changed at the University of Mississippi.

In addition to the out-of-state changes in admissions requirements, in-state Mississippi funded grants changed policies in spring 2016. In the past, in order to receive Mississippi state grants, students had to maintain a particular grade point average. Now, students must maintain

the grade point average and complete (e.g. have a passing grade) 15 hours per semester in which they receive this aid. In addition to this change, for the 2017 freshman cohort, the state of Mississippi will only allow students to receive one state-funded grant per student even if the student qualifies for multiple state-funded grants.

Chapter II

LITERATURE REVIEW

Introduction

The college choice model has gone through many iterations since Chapman (1981) put forth the first model. This model was not exhaustive of all influences on college choice and future models expanded on his ideas. However, Chapman (1981) did consider the major influences on the college choice process. This model's major limitation was that it only focused on traditional aged college students (ages 18-21). Chapman (1981) discussed the following as having influence over college choice: student's background and characteristics, student's family, and the characteristics of the college. The background and characteristics of a student were socioeconomic status (SES), aptitude, level of educational aspiration and expectation, and high school performance. Later frameworks simply expanded Chapman's (1981) college choice model.

College Choice Model: An Overview

The following literature review focused on the evolution of the college choice model and looked at the similarities and differences of the models in the following articles:

Table 1

College Choice Models Through the Years

Author	Article
Chapman, D. (1981)	A model of student college choice. *The Journal of Higher Education, 52*(5), 490-505.
Litten, L. H. (1982)	Different strokes in the applicant pool: Some refinements in a model of student college choice. *The Journal of Higher Education, 53*(4), 383-402.
Chapman, R. G. (1986)	Toward a theory of college selection: A model of college search and choice behavior. *Advances in Consumer Research, 13,* 246-250.
Hossler, D., & Gallagher, K. S. (1987)	Studying student college choice: A three-phase model and the implications for policymakers. *College and University, 62*(3), 207-221.
Cabrera, A. F., & La Nasa, S. M. (2000)	Understanding the college choice of disadvantaged students. *New Directions for Institutional Research, 2000*(107), 5-22.
Perna, L. W. (2006)	Studying college access and choice: A proposed conceptual model. In J. Smart (Ed.), *Higher Education: Handbook of Theory and Research, Vol. XXI* (pp. 99-157). doi: 10.1007/1-4020-4512-3_3

David Chapman's model. Chapman (1981) stated that SES was important in the college choice process because students from varied backgrounds entered college at different rates and went to different kinds of colleges (e.g. 4-year, 2-year, public, private, etc.). He indicated that SES was positively correlated to the educational aspirations and expectations that a student held. The higher the SES, the more likely the student would pursue postsecondary education.

According to Chapman (1981), standardized tests measured a student's aptitude by the ability to do well on standardized tests. Colleges encouraged like-minded students who demonstrated similar achievements to apply by publishing the average metrics of incoming students. In this way, a student would know whether or not they were above, at, or below the averages of the previous entering classes. These college brochures also discouraged students who were less likely to meet the aptitude of students who attended that institution. High school performance was similar in this aspect. Colleges published information about incoming high school metrics to encourage students who are similar to students who already attended, and they also discouraged students who are not similar. Students also used these publications to find institutions who enrolled students who were like them.

The last student background characteristic that Chapman (1981) discussed is the level of educational aspiration and educational expectation. The aspirations are the wishes and desires that potential students have about their futures. The expectations are perceptions of future ability and accomplishment. It is important that students be able to look toward the future with regard to their goals and future accomplishments.

Personal characteristics and some external characteristics influenced the student's college choice process. This is where Chapman (1981) discussed the influence of significant persons, the characteristics of the institution, and how the influence and the institution affected the student college choice process. He stated that friends and family influenced students in three ways. First, comments made will shape a student's expectations regarding a particular college. Second, friends and family gave direct advice about where a student should enroll for postsecondary education. And, third, friends' choice institution would influence where the student went to college.

The institution was relatively unchangeable according to Chapman (1981). Most institutional factors could not be changed in the short term. The location of the institution affected student college choice. Approximately 50% of freshmen attended colleges within fifty miles of home and 92% attended within five hundred miles of home. High need, low income students were the least mobile of all incoming students. According to Chapman (1981), college cost had more influence over whether a student would attend any college or simply go straight into the workplace. Available financial aid may have influenced the number of institutions available to a student. Based on cost, the student's estimated family contribution (EFC) would not change from institution to institution; but, the cost of the institution might have been more or less. Campus environment and the availability of a desired program were other ways an institution may have influenced a student's choice.

After all of these factors were taken into account, a student would apply to one or several colleges. The institution would then have the option of admitting or declining the student. Declining a student may have meant that the student would not have fit into the institution and may have harmed future success at the institution due to being a poor fit. Admission to an institution depended on how many applied, seats available, and the admission process itself.

Litten's model. Litten (1982) updated Chapman's (1981) work based on his belief that Chapman's theory was too generalized and only included a basic model of influences and not the college selection process itself. The focus of Litten's work was two-fold. He included the college choice process and the personal and social phenomena that affected the way students conducted the college choice process. He considered the following in his model: timing of the process, number of options considered (investigated versus applied), types of information sought, college attributes considered, information media used and preferred, and influential persons.

With regard to the timing of the college choice process, Litten's (1982) work appeared to show that Blacks started their college selection process later than Whites. Blacks conducted the process longer and finished later in the decision making process. Students with higher ability in high school started earlier and decided sooner on which schools to apply. First generation students started the college choice process later. Blacks appeared to consider more options than their White counterparts. The number of options considered includes colleges investigated and colleges in which they applied.

According to Litten (1982), Blacks reported more instances of asking for information about colleges than Whites; and, in more of these instances, the source provided additional schools to consider. Visits to a college were more influential for Blacks than Whites in the decision to enroll. Whites ranked writing for information, guidance counselors, and parents as influential in making the decision to enroll in college. Greater parent education led to greater usage of other sources such as visits, comparative guidebooks, and admissions counselors.

Randall Chapman's model. Chapman (1986) created the next model of college search and choice behavior. He presented five behaviors that outline the college choice process. His behavioral theory proposed that the process could be summed up through: pre-search behavior, search behavior, application decision, choice decision, and matriculation. Pre-search behavior represented the time when a student realized they may want to attend college. This time period may have covered several years, especially the time through high school. At this point, he stated most students are assessing the costs and benefits of attending college in the future.

Chapman (1986) asserted that during search behavior a student decided that college was a viable option for postsecondary aspirations. At this point, students began researching the attributes that characterize colleges. They also started actively seeking information on college

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choices from what he calls "knowledgeable others" (p. 247). These resources were high school teachers, counselors, parents, other relatives, family friends, institutional alumni, or any other trusted source.

All of these conversations and research led to the application decision. At this point, the student was ready to apply to the decided upon institutions. According to Chapman (1986), once they applied to the college or colleges, they had an application set. The application set was the group of colleges to which the student had applied. Students were more likely to apply to institutions in which there was a high likelihood of acceptance. Once they applied, they were either accepted or declined. This was the final destination in Chapman's (1986) behavioral theory. They had to make a matriculation decision based upon the college or colleges that have accepted them.

Hossler and Gallagher's model. One year later, Hossler and Gallagher (1987) published their three-phase model of college choice. This was an interactive model between the student and the prospective institution. The three phases of the model were: predisposition, search, and choice. This model was very similar to Chapman (1986), except that the authors narrowed the phases and spliced each phase into individual (student) factors, organizational (institution) factors, and student outcomes.

Phase one, predisposition, was a developmental phase where a student decided whether or not to continue with their education beyond high school. It focused on the individual factors of the student, specifically on student SES and ability. Hossler and Gallagher (1987) stated that SES had a cumulative effect on potential college enrollment. They believed this plan began as early as preschool. According to their study, high SES students were four times more likely to attend college than lower SES students. With regard to ability, they believed that as student ability and

achievement increased, so did the likelihood the student would attend a postsecondary institution. With this model, the perfect student was high SES, high ability, and high achievement.

Other factors that affected whether or not a student pursued higher education were significant others and educational activities. Students who were involved in high school have an increased likelihood of attending postsecondary education. Significant others were those "knowledgeable others" mentioned in Chapman (1986). The attitudes of a student's parents and peers influenced feelings that a student had one way or another towards postsecondary education. Parental encouragement, specifically, was positively correlated to a student's continuing education beyond high school. In addition to this, students with friends who had educational aspirations beyond high school were also more likely to consider continuing his or her education. A student with a quality high school education had an increased chance of attending college. Quality high school education was any secondary educational program with more science and math programs and college preparation courses. Students who grew up in proximity to a higher education institution were also more likely to attend, but they did not necessarily attend at the local level (Hossler & Gallagher, 1987).

At the end of the predisposition phase, a student had the following possibilities moving forward: college options and other options. Other options included everything else except attending college. These students explored other non-educational options for their future endeavors. Students who chose to move forward with college options entered the search phase. During the search phase, the student and institution began to interact more frequently. Students began searching for specific colleges, and the colleges, in turn, searched for students that met their entering metric criteria (Chapman, 1981; Hossler & Gallagher, 1987).

In the search phase, colleges considered students' preliminary college values. These included high school GPA and SAT or ACT scores. According to Hossler and Gallagher (1987) and Litten (1982), high ability students tended to make more sophisticated searches for institutions that met personal values and educational aspirations. In addition to this, as SAT or ACT scores and SES dropped, so did the geographical range and quality of institutions that students considered. During this phase, students were not very knowledgeable about ability to receive aid and the true cost of attending a postsecondary institution. As mentioned, both the college and the student were searching during this phase. As colleges searched for students that fit into their environment, institutional administrators and policy makers exerted a mild influence onto the student's college choice process.

There were two possible outcomes for the student's search phase. First, the student narrowed down their institutions to a "choice set" (Hossler & Gallagher, 1987, p. 214). According to Hossler and Gallagher (1987), this choice set was the list of institutions that a student decided to pursue. By pursuing them, the student asked for more information and may have applied to more than one of them during the choice stage. Second, the student may have decided to move forward with other options as in the predisposition phase. At this point, after gathering information about intended institutions, the student may have decided to pursue an alternate path away from educational aspirations.

The last phase in Hossler and Gallagher's (1987) three phase model was choice. At this point, the student had only one or two institutions left in their choice set. The final decision a student made could be influenced by the courtship activities that an institution takes part in. Though, according to Hossler and Gallagher (1987), students eliminated many institutions before they were afforded the opportunity to court a student in any way. Courtship activities included:

merit awards and communication (preferably personalized and hand written) from the institution. After the courtship ended, a student made his or her decision regarding the preferred institution, and then they matriculated.

Cabrera and La Nasa's model. According to Cabrera and La Nasa (2000b), Hossler and Gallagher's (1987) three phase model was accurate; however, Cabrera and La Nasa's (2000b) research suggested that the stages were not stages at all. Cabrera and La Nasa (2000b) indicated that the stages were fluid and interacted with each other throughout the process. A student may have gone back and forth as the stages ebbed and flowed against each other. They agreed with much of Hossler and Gallagher's (1987) work and expanded upon it, especially with regard to how SES plays a role in college choice. The three stages were the same as Hossler and Gallagher (1987): predisposition, search, and choice.

In predisposition, the student began developing occupational and educational aspirations. Parental encouragement and involvement were integral at this stage. According to Cabrera and La Nasa (2000b), parents were involved in the student's college choice process in several ways. Family encouraged students both explicitly and implicitly. First, they were motivators by having high educational expectations for the student. This encouragement needed to be constant throughout the process in order to be effective. Encouragement was given by the family both explicitly and implicitly.

Second, if the family saved for college, that was an expression of encouragement as well. SES played a factor in whether or not a family would proactively save. In addition to this, the family needed knowledge of the cost of college in order to save, so they needed to be familiar with higher education or at least be able to ascertain how much it might cost. Parental encouragement and student ability had a direct relationship. Parents were more likely to actively

encourage the child that has the highest ability. Parents were proactive and acted as an advocate for their student by taking a more active role in the college choice process. The amount of parental involvement in the student's high school predicted whether a student would enroll in a 2-year or 4-year postsecondary institution.

The accumulation and assimilation of information necessary to develop a short list of interested institutions encompassed the search phase, according to Cabrera and La Nasa (2000b). At this point in the process, the student began active interaction with interested institutions. They started visiting colleges, collecting academic catalogs and other institutional brochures, and they talked to friends about choices made. SES influenced the level of sophistication of the search. Students with low SES utilized high school counselors as the main, and sometimes only, source of information about colleges. Students with higher SES utilized parents, other students, catalogs, college representatives, and private counselors as well as any resources the high school provided.

The last part of the predisposition stage readied the student to apply. The student developed preferences among the list of institutions that they had selected. They evaluated the qualifications for admission with regard to their own metrics, such as high school gpa and ACT or SAT score. In the last phase, choice, they thought of the cost and how they were able to pay for it. Ultimately, economic and sociological factors played a role in what choice the student made. Cabrera and La Nasa (2000b) found an inverse relationship between increasing college costs and enrollment. In addition to this, they affirmed that students who had non-college educated parents (first-generation) were less likely to enroll than students whose parents had some college or had earned a degree.

Perna's Conceptual Framework

Perna (2006) agreed with Cabrera and La Nasa (2000b) with regard to SES having a large factor in whether or not a student enrolled in postsecondary education. She based her proposed conceptual model of college student choice on two main theories: the first was economic, and the second was sociological (Hossler, Braxton, & Coopersmith, 1989; Paulsen, 1990). Perna's (2006) conceptual model was the most extensive and recent model of student college choice created.

The first theory Perna (2006) used was the economic model of human capital investment. Basically, people received higher earnings as productivity increased. The differences people had in productivity were due to differences in their investment for personal development: quantity and quality of education, amount of on the job training, geographic mobility, and emotional and physical health. In this model, cost-benefit analysis was the basis for choosing whether or not an individual chose more education or more training. The desire for education and training was chosen based on cost-benefit analysis. With regard to student college choice, college attendance had costs (e.g. tuition, fees, books, and foregone earnings) and generated benefits to the individual in the form of higher education and training, which produced higher wages over time. There were benefits to society for having highly educated and skilled workers. Everyone wins. Options explored are based on available information, which was often not complete or perfect information. Similarly, students were often poorly informed of the costs and benefits of attending college versus not attending college.

The second theory Perna (2006) used was a sociological cultural approach. This theory did not focus only on the cultural capital that a student brought to the search process. These were the attributes that defined class status. Her study also focused on social capital. These were the connections and social networks to which a student and his or her family belonged. This theory

emphasized the ways in which the socioeconomic background of a student and his or her family influenced the decisions that were made about postsecondary education. This allowed Perna (2006) to focus on more than SES effects on educational and occupational aspirations. Academic preparation, achievement, and demographic characteristics (e.g. SES) determined educational aspirations.

In her research, Perna (2006) found that college enrollment rates continued to increase over the past two decades for eighteen to twenty-four year olds. However, these rates were lower for those families of students who fell into the bottom quartile of family income due to low SES. Enrollment rates also continued to be lower for African Americans and Hispanics when compared to Whites.

Perna's (2006) conceptual model consisted of four contextual layers which allowed for the recognition of differences across students. These layers aimed to explore all areas that effected how a student made the college choice decision from going to college or not going to college. Rather than a straight-line, decision-making process (as in Chapman, 1981; Chapman, 1986; Hossler & Gallagher, 1987; Litten, 1982), she focused on the interactions of contextual layers in the process. These layers consisted of the utilization of both a social/cultural construct and an economic model in order to capture the full picture of how a decision is made. These layers appeared as though they were four pieces of paper on top of each other, indicating that they impacted decision-making in and of themselves, but they also interacted with each other.

The first layer of Perna's (2006) framework consisted of the student's habitus. The habitus involved demographic characteristics, cultural capital, and social capital. These were the attributes that an individual brought to the college choice decision-making process. Demographic characteristics consisted of the individual's gender, ethnicity/race, and SES. The second part of

layer one involved cultural capital, which were the characteristics a student learned from his or her family such as language skills and cultural knowledge. The last part of habitus consisted of social capital, which was the set of networks that a prospective student navigated on a daily basis. These networks set a status within an individual's community. Due to this, cultural capital informed the types of information that may or may not be available to a student regarding information about college or other college processes.

The second layer of Perna's (2006) framework consisted of the school and community context, which was also called organizational habitus (p. 117). This layer predicted which structures available to the student would help or hurt the college choice process. Specifically, this area of the framework impeded college choice processes for low income students. Cabrera and La Nasa (2000a, 2000b) cited that low income (SES) families were less likely to explore informational options outside of the recommendations of the high school counselor. This lack of exploration may have had something to do with the higher numbers of low SES families having had less experience with the college process. Flint (1993, 1997) and Olson and Rosenfeld (1984) both held that these families were also less likely to file a Free Application for Federal Student Aid (FAFSA) or ask about other financial aid options. This part of the framework judged the quality of information that a family sought to help the student college choice process.

The third layer of Perna's (2006) framework focused on institutional activities in recruiting students. These activities included the availability of resources, the types of resources available, and the institutional characteristics. The availability of resources referred to the institution's ability to serve as a source of information for students both passively and actively. An institution could be passive in its recruitment by being physically close to a student's hometown. Active recruitment included mailing information about the institution to a student's

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home and making available institutional characteristics in a way that would allow the student to make an informed decision about how he or she would fit in.

The last part of the framework was the social, economic, and policy context layer. These were the external forces that may or may not influence the decision of college choice. Social influences were effects such as demographic changes. The economic conditions that may affect a student's college choice decision were circumstances such as the unemployment rate or a great job opportunity. Last, the policy context referred to lawmaker's policies. These may have affected the college choice process by allowing for more, or less, state or federal aid programs (Perna, 2006).

Ultimately, Perna's (2006) framework folded back onto itself. Each layer affected the layer above it, and all of the layers influenced the final outcome of a student's college choice. These were expressed by the cost-benefit analysis of attending college. In the final step of college choice, a student looked at their own preparation and achievement in relation to the monetary resources that a student had to attend college. This moved forward to the accumulation of the effects of all the layers in the framework. The expected benefits were, potentially, monetary and non-monetary. Generally, the expected costs were the costs of attending college versus the foregone earnings of going to college rather than entering the workforce. Ultimately, the student actualized all of these data and made a final choice to attend, or not attend, college.

The basis of Perna's (2006) model came from human capital investment models and the sociological approach. Utilizing both models allowed for a more complete picture. The human capital investment model did not take into account the information available to a particular person, while the sociological approach did not take into account how people make decisions based on the information available (Manski, 1993). Looking at both frameworks allowed the

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researcher to take into account the material available to a specific individual and how they made decisions while utilizing presented information.

Layer 1: Habitus. Each person had habitus which was "an individual's internalized system of thoughts, beliefs and perceptions that are acquired from the immediate environment" (Perna, 2006, p. 113). Quite simply, habitus was who a person was and what he brought to the process based on where he came from, who he was connected to, and the thoughts and actions that seemed reasonable. Perna (2006) suggested habitus was a person's demographics, cultural capital, and social capital. Beneath demographics lay gender and race/ethnicity. Within cultural capital, a person had cultural knowledge and some value of college attainment. Last, there was social capital. Social capital was the information about college and the assistance received with regard to the college process. These three areas made up the habitus that a student brought to the college choice table.

According to Bourdieu (1986), "external wealth" accumulated cannot be transferred all at one time to a person within their habitus (p. 18). These were experiences and information that a particular person gathered over time. Habitus acquired was different across demographic characteristics such as gender or race/ethnicity even with those in the same social class (Dumais, 2002). McDonough (1997) echoed Bourdieu's (1986) assessment of habitus. She stated that habitus was "a common set of subjective perceptions which individuals receive from their immediate environment and which is shared by all members of the same social class" (p.106). Additionally, she went on to say, habitus was a combination of "objective probabilities" and "subjective assessments" of any one person's chance to move up in the world (p. 106).

Demographic characteristics. Perna's (2006) framework focused on several demographic or background characteristics of students. Gender was the first characteristic. With

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regard to gender, women had been increasingly more likely to enroll in post-secondary institutions over men since the mid-1990s. However, according to Perna (2006), they were still less likely to enroll in science, technology, engineering, and math programs than men; this statistic was also on the rise for women.

Second, Perna (2006) pointed to race and ethnicity divisions for college access and choice. The ability and desire to enroll in college were different across racial/ethnic groups. She stated not much research had been done about groups outside of White and African-American students. This was likely due to the composition of today's colleges and universities.

Gender. Dumais (2002) pointed to earnings and distribution of majors in college as examples of how those in the same social class acquired different habitus. She stated that 30% of women in college had to change their major in order to stratify to the same distribution across majors in college as men, and women consistently earned less in all areas even when controlling for the same college degree and same job. She stated, "despite advances for women over the past few decades, there are many structural constraints to women's progress, and gender socialization continues to shape girls' lives" (Dumais, 2002, p. 45). This was true, even though women made up a larger percentage of today's higher education institutions, and it was only growing. Women made up nearly 60% of college enrollment. (McDonough, 2004).

Race/ethnicity. Approximately two-thirds of the enrollees of colleges and universities were White. This was followed by African-Americans and Hispanics which made up nearly the other one-third of enrollees. Other races/ethnicities were a very small portion of the population (McDonough, 2004, p. 2). Perna and Titus (2005) found that regardless of social/cultural capital, parental involvement in the college choice process promoted enrollment for all ethnicities. However, Rowan-Kenyon, Bell, and Perna (2008) discovered that schools had a higher

expectation of involvement from parents than some parents were able to put forth. They cited several reasons for lack of parental involvement, especially for lower socioeconomic status students, such as "lack of comfort with school staff, language barriers, and conditioned mistrust" (p. 583).

Cultural capital. Cultural capital referred to the constructs that indicated a person's class status. Some of these attributes were gained from family, such as cultural knowledge and the way one moved through society. A person learned other attributes, such as language skills, from the surroundings, both at home and at school. According to Bourdieu (1986), capital was not distributed equally among lower, middle, and upper classes. Similarly, Perna (2006) identified that

> Individuals who lack the required cultural capital may: (a) lower their educational
> aspirations or self-select out of particular situations (e.g., not enroll in higher education)
> because they do not know the particular cultural norms; (b) overperform to compensate
> for their less-valued cultural resources; or (c) receive fewer rewards for their educational
> investment. (p.111-112)

McDonough (2004) echoed these findings. In her American Council on Education school-to-college report, she affirmed that 80% of upper-class, high income students were enrolling in college right after high school as opposed to 44% of students from low-income families. Many of these upper-class, high income students were prepared simply due to their parental educational level, access to appropriate college preparation courses, availability of counseling, and their built-in financial resources.

According to Bourdieu (1986), cultural capital had three main forms of existence. He called these the embodied state, the objectified state, and the institutionalized state (p. 243).

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Cultural capital was the essence of what a person was made up of and who he was in relation to his surroundings. In the embodied state, capital existed inside a person. These were "long-lasting dispositions of the mind and body" (p. 243). He compared this mind acquisition to fine-tuning the body during exercise. The embodied state must be intentionally sought and must have intentional time invested to have the experiences to improve this state.

The objectified state housed cultural capital within mementos such as books, pictures, and other items that one collected through the years. These were forms of capital that were passed on for another to appropriate and pass on yet again. As long as these forms of cultural capital exist, future persons enjoyed and appropriated them. The institutionalized state was a kind of objectified state in the form of "academic qualifications" (Bourdieu, 1986, p. 246). These qualifications had value, and, among those who obtained institutionalized capital, it was compared and exchanged. Acquiring this type of cultural capital implied a certain amount of time and energy expended to accumulate it.

Cultural knowledge. Cultural knowledge was the space between cultural capital and how a person interacted with the rest of the world. McDonough (1997) asserted that students who had more experience navigating processes like college choice were able to utilize resources more effectively than their peers who had not had any kind of similar experience.

Value of college attainment. The value of college attainment came from external sources for students who were searching for the right college. Many different groups gave value to college attainment: parents, other family members, peers, and society as a whole. Arnold, Fleming, Castleman, DeAnda, Wartman, and Price (2008) found that parental encouragement was the most important value that pushed students to pursue post-secondary education. In addition to parental encouragement, Perna and Titus (2005) held that parents' education level

was one of the most important predictors of whether or not a student pursued post-secondary education.

Social capital. Bourdieu (1986) best defined social capital. He defined, "The social world is accumulated history," and "capital is accumulated labor" (Bourdieu, 1986, p. 241). If you put these two together, social capital was described as a history of a person's accumulated labor. These were all of the experiences and learned material that one had gathered in order to move through the social order of the world and become connected to others. According to Arnold et al. (2008), social capital was typically passed from parents to child. They found that students who were of lower socioeconomic status or from another low status group needed additional social capital resources to help them become more "upwardly mobile" (Arnold et al., 2008, p. 5).

Social capital was the accumulation of all networks available to a person. These included: family, school, clubs, church, or any other organization within the community or online. The amount of social capital conferred based on membership of any group was limited by the amount of capital the group had to offer an individual (Bourdieu, 1986). Therefore, a person accumulated social capital based on what is available to them; or, more capital was accumulated through the additional effort one puts forth to become a member of a social group outside of the set availability of connections.

Information about college. The attainment of information about college was gained in many ways. Prospective students gained this information by talking to peers, parents, counselors, and college recruiters. A student researched colleges independently through the internet or the local library. College visitation was also useful to gain information on a specific institution.

Arnold et al. (2008) recognized that peer influence impacted students in one of two ways. Having friends who are planning to attend college positively influenced a student's desire to

attend college himself; alternatively, if he had friends who were not planning to attend a post-secondary institution, he may not feel as inclined to attend either. In fact, for lower socioeconomic status students, friends attending college was the best predictor of a student attending or continuing to attend.

Assistance with college processes. Rowan-Kenyon, Bell, and Perna (2008) observed there were large differences in parental involvement across socioeconomic groups. This makes sense as the potential student was a member of the same social group as their parent, parents, or other influencing family member. One only gained the cultural capital that was available to him or her. This meant that the more capital parents stored, the more they had to offer. They also found that there was a gap between what schools believe parents should be doing to be involved at the school and how parents were actually interacting with school personnel.

Perna and Titus (2005) established that the more a parent was involved in the secondary school with regard to their child's education, the more likely the student enrolled in post-secondary education. They also recognized that parental education and parental expectation of their child's future education also played an important role in whether or not the student enrolled in further education. Arnold, et al. (2008) identified that parental encouragement, support, and involvement increased college access for students from poorer backgrounds and who were of lower socioeconomic status. Support, in their study, included saving money, visiting campuses with the prospective student, and attending financial workshops (p. 4).

Layer 2: School and community context. McDonough's (1997) organizational habitus model heavily guided layer two of Perna's (2006) framework. Organizational habitus was the structure of all of the potential opportunities that were afforded to all students. Each school and community offered four habiti to the students with regard to college choice and the decision-

making process. There were three areas of support that a school may offer with regard to helping a student with the college decision making process: "timing, availability, and support for college advising" (Perna, 2006, p. 106).

The fourth habitus was the make-up of the school itself. There were several ways in which a secondary school fostered the ability of students to make positive decisions about post-secondary education. First, the school could offer college preparation courses. Second, they could build a guidance counselor system that explicitly stated a mission to help students with the college choice process by providing a counselor or counselors with a specific set of expectations in that role. Third, schools could be aware of their own students' cultural capital and find ways to help them build upon foundations that already existed.

Availability of resources. Resources were anything that helped a student make a decision about attending college. The availability of these resources, in theory, was the same for everyone, as in McDonough's (1997) organizational habitus. In actuality, the availability of resources was limited depending on social or economic status and the community in which the school was situated.

Chapman (1986) discussed "knowledgeable others" in his model as those that students sought out to for assistance in choosing a college (p. 247). If it was taken a step further, these knowledgeable others were trusted agents of information. Lack of trust in the person giving the information was the gap that was often discussed in literature regarding available resources.

Types of resources. There were many types of resources available to students as they navigated college choice. They used people: family, friends, counselors, school officials, admissions recruiters, and teachers. They used recruitment materials directly from the institution: college guidebooks, brochures, and recruitment flyers. Students also used third party rankings

and other information in the process. They also visited institutions in which they were interested, saw these institutions first hand, and asked the questions that no one else could answer of their recruiter.

McDonough (1997) was interested in how students chose college and the resources they used. She talked to twelve rising college freshmen about their path. During this research, she noted that there is no one direct path to choosing college; additionally, she documented that not all resources were available to all students. Resources differed from student to student based on their background, their school's background, or their community background. Some students had family that was very knowledgeable of the college choice process. Other students were on their own when they made this decision. Students made decisions because of prestige, cost, and where their friends were attending. No one student utilized the exact path to get to the right institution for them.

Structural supports and barriers. Perna (2006) detailed several potential barriers that students faced when trying to choose a post-secondary institution. First, at the K-12 level, the schools were focused on bureaucratic policies rather than the education and support of their students. Second, many times schools used teachers and counselors interchangeably. This required counselors and teachers to have dual roles in the school, which stretched the time that they could realistically apply to either position. And last, the duration of meetings with these institutional agents tended to be too short and interactions too few. Students should not be expected to make life-changing decisions in one or two meetings; however, due to a lack of resources, there was not enough time or counselors to properly help each and every student with the time that they needed.

Layer 3: Higher education context. The higher education context was layer three in Perna's (2006) model. This layer focused on how institutions target students for recruitment through marketing strategies, how location influenced student college choice, and the characteristics that students were looking for in an institution. Layer three emphasized the institution and how it affected the college choice process for prospective students. The institution promoted itself through direct and indirect measures. In an active role, agents of the institution reached out to prospective students to sell a specific institutional experience; alternatively, in a passive role, the institution sold itself through reputation and location.

Marketing and recruitment. Higher education institutions marketed their product several ways. First, they contacted students directly through mail, social media, or through university agents who had knowledge of the institution. Second, as stated above, there was a passive role that a university took on through word of mouth, location, and the goodwill a respectable reputation brought. Branding became increasingly important in the higher education realm. Prior to the early 2000s, branding and image were only looked at as something a business would worry about, but as universities became more competitive they looked at branding as a way to situate themselves positively in the market (Sung & Yang, 2008).

According to Sung and Yang (2008), branding included the university image, perceived prestige, and creating a supportive attitude towards the university. Identification, commitment, trust, and school membership made up the qualities of a supportive attitude toward the university. Identification indicated that a person had a "perception of oneness with an organization" (p. 363). This oneness was equated to pride. Commitment required that a person identify strongly with the organizational values, which fostered a "desire to maintain organizational membership" (p. 364).

Trust, in the corporate world, generated a positive relationship between the worker and workplace. According to Sung and Yang (2008), the same was said for educational institutions. Students were more likely to enroll and persist at institutions in which there was a level of trust. In turn, trust fostered the relationship between the student and the institution. A student was more likely to have had "positive experiences and evaluations, which consequently help increase quality perceptions, generate positive word-of-mouth effects, and reduce sensitivity to cost and tuition changes" (Sung & Yung, 2008, p. 364). The last form of supportive attitude towards the university was a membership with the school. Membership was in the form of attachment, commitment, involvement and belief and inspired student loyalty. "Student loyalty refers to the loyalty of a student during and after his or her time at the university" (Sung & Yung, 2008, p. 364).

Sung's and Yang's (2008) study affirmed that there was a significant relationship between the university and a student's perception of the university. In particular, for freshmen, their study indicated that the determining factor for a supportive attitude to the university was the perception of how others viewed the institution. Researchers tended to use the following constructs of image interchangeably: personality traits, perceived external prestige, and reputation. However, their study established that while these constructs are related, they were perceived very differently by students. "The impact of perceived external prestige was around four times that of university reputation" (p. 371). In other words, they recognized it was more important for a student to know that others perceived the institution in a positive light than for the student to have had a positive view of their own.

According to Pope and Pope (2014), athletic success at an institution played a role in whether or not a student sent standardized scores to the institution. Institutions who had a good

year in a big sport were more likely to receive up to 10% more scores sent to the school the year following success. Athletics was a form of branding and fostered a supportive attitude towards the university as students and prospective students identified with the institution and desired a membership with the school.

Location. According to Sung and Yang (2008), university image has become the branding tool that allows universities to compete with others of the same kind. Each institution wanted to be viewed as a separate entity even if, ultimately, they offered the same attributes and services to students as their competition. As mentioned above, universities utilize athletic programs as a major source of positive prestige and branding.

However, one of the main attractors for students was the location of an institution. It could be used as a passive recruitment tool for enrollment of students. Simply having a college nearby influenced student choice on where and whether they attended college. (Sung & Yang, 2008).

Institutional characteristics. Students attended institutions that were most like them and had attributes which the student thought important. According to Perna (2006), "students prefer to attend colleges and universities with particular characteristics, especially characteristics that are consistent with their personal and social identities and needs for personal acceptance and institutional support" (p. 118).

Students with higher pre-college metrics were more likely to apply to more selective colleges and universities. Non-religious students would be less likely to apply to a predominantly religious institution; while more religiously inclined students included these institutions on the list of potential institutions to explore. Each institution had its own set of unique characteristics that allow them to stand out from the crowd. Students categorized institutions in the ways that

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make them feel most likely to be accepted, be able to adapt, and be successful. Universities had a way of categorizing themselves as discussed below.

There were 4,665 institutions that were most recently categorized by Carnegie classification at the Indiana University Center for Postsecondary Research (2016a, 2016b). These classifications allowed a look at the basic landscape of who universities were in the United States, how the classifications grouped universities for research purposes, and allowed for the major changes and challenges between institutions. In effect since 1970, the Carnegie classification was first published in 1973. The listings were updated seven times since the first publication (Indiana University Center for Postsecondary Research, 2017a). The latest update was in 2017 and was published to the public in 2018.

There were eight different classifications that were used to distinguish institutions from each other, percentages reflected how many institutions qualified at a particular level according to the most recent facts and figures published by Indiana University Center for Postsecondary Research (2016b): Doctoral Universities (7%), Master's Colleges and Universities (16%), Baccalaureate Colleges (12%), Baccalaureate/Associates (9%), Associate's Colleges (24%), Special Focus: Two-Year (9%), Special Focus: Four-Year (22%), and Tribal Colleges (1%). These classifications allowed institutions to be divided by degree granting ability.

Carnegie separated doctoral institutions by research category, as followed: highest research (R1), higher research (R2), and moderate research (R3). These categories included all doctoral granting institutions who awarded at least twenty research or scholarship based degrees during the year in which the classifications were updated (Indiana University Center for Postsecondary Research, 2017a).

Layer 4: Social, economic, and policy context. Perna (2006) acknowledged that social, economic, and public policy directly or indirectly influenced student college choice decision making. Social changes were events such as divorce, death, or moving. These could directly affect the ability to attend college by changing some demographic for the student. Changing demographics affected things such as financial aid awards, proximity to the chosen institution, or family obligations. Economic changes referred to national, state, or local levels of data such as unemployment rates. The public policy effect was from direct policy measures that may have affected whether or not a student could attend to further their education. An example of this kind of change would be the beginning of a new grant program or state aid policy.

Demographic characteristics. According to Perna and Titus (2005), changes in demographic circumstances dictated a student's ability to go to college and have enough available resources. A student and his or her family may have moved or there may have been a change in family situation (e.g. death, divorce, etc.). Demographic characteristics were those closest to home and would have the most personal effect on individual circumstances.

Economic characteristics. According to Perna (2002), economic characteristics changed a student's ability to attend post-secondary educational aspirations by potentially changing the flow of income. Low unemployment rates meant more money flowing into the household, and high unemployment rates mean that there are little to no jobs available and going to college would be the only option.

Public policy characteristics. Perna and Titus (2004) found that there are four types of public policies that influenced attendance in college: "(a) direct appropriations to higher education institutions, (b) financial aid to students, (c) tuition, and (d) policies related to academic preparation at the elementary and secondary school levels" (p. 502).

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Human Capital Investment Model. This was at the center of Perna's (2006) college student choice model. It consisted of the final evaluation of expected costs versus the expected benefits of enrolling or not enrolling in post-secondary higher education based on the assessment of the four layers Perna (2006) puts forth in her model.

College choice. According to the college choice literature (Cabrera & LaNasa, 2000; Chapman, 1981; Chapman, 1986; Hossler & Gallgher, 1987; Litten, 1982; Perna, 2006), this was the ultimate goal for many students in secondary education. Before making this choice, there were many things to consider, many of which were explored above. After weighing all of the information that was known to a prospective student, he or she had to make the choice to enroll in college or not.

Demand for higher education. Based on the human capital investment model, the demand for higher education was the combination of academic preparation and academic achievement. According to Perna (2006), academic preparation and academic achievement were the the "initial stock of human capital" (p. 130). These were the abilities that a student brought to the table when they initially enrolled in higher education.

Academic preparation. Cabrera and LaNasa (2000b) specified that academic preparation was the single most important factor that would predict college enrollment. Academic preparation consisted of all the courses that helped a student become eligible and interested in college.

Academic achievement. Perna (2000) and Perna and Titus (2004) asserted that academic achievement was measured by grades in some cases and by test scores in others, much like college entrance was often based on both of those measurements.

Supply of resources. Rowan-Kenyon, Bell, and Perna (2008) asserted that the difference in enrollment in college between students with sufficient resources to attend college and students with a lower socioeconomic status stayed consistent since 1970. Approximately 32% fewer lower socioeconomic status students enrolled in college than their peers who had sufficient resources to attend college. This was true even though overall enrollment in college consistently increased over the same amount of time for all groups. Interest in resources available gained as students go through the college choice process. In the predisposition and early search phases, this was not as important as it became when students were making final decisions about where they attended (Bergerson, 2009).

Family income. According to Rowan-Kenyon (2007), delayed enrollment into college can be linked to lower socioeconomic status. She established there was a positive correlation between family income and enrollment or delayed enrollment into college. According to Perna (2006), there was also a link between funding available and how many applications a student tendered and to which kind of institution, two-year or four-year. Students with fewer resources would be more likely to apply closer to home and to smaller, cheaper option schools such as a community college (two-year). Students with more financial resources from home would be more likely to apply to multiple institutions at varying distances and be able to make a choice based on personal interest in the university or college and not have to be as concerned about out-of-pocket cost.

Financial aid. Rowan-Kenyon, Bell, and Perna (2008) argued that knowledge of the available resources, at the very least, began the conversation of how to pay for college between parents and their children. This was especially true for state merit aid rather than for need-based

aid. Interest in resources available happened during the later stages of college choice, usually during eleventh and twelfth grades.

Expected benefits. Expected benefits were anything tangible or intangible that a person expected to gain from choosing to attend college. The majority of research focused on tangible, monetary expectations from attending post-secondary education. Perna (2005) explored many of the monetary and non-monetary benefits of completing a college degree.

Monetary. Students who chose to pursue post-secondary education expected monetary benefits, according to Perna (2005). The biggest monetary benefit expected by higher education students was an increase in lifetime earnings. In addition to this, Perna (2005) asserted that students were also able to make more informed purchases and have an expectation to be employed and continue earning money.

Non-monetary. Perna (2005) discussed expected non-monetary benefits as the intrinsic value received by pursuing a post-secondary education. During the college experience students expected: the enjoyment of learning, involvement with peers, participation in events that brought social and cultural capital, and an increase in social status. After college concluded, students expected to be more fulfilled in their chosen vocation and a healthier lifestyle in which they would live longer.

Expected costs. Perna (2005) stated there were two major expected costs to attending college. First, the student paid for college through grants, loans, scholarships, and out of pocket expenses. Second, the student had foregone earnings from the job they could have had, had they not attended college instead.

College costs. The cost of college steadily increased over the last few years. Perna's (2005) research showed that student enrollment in post-secondary education is negatively

influenced by the cost of college and positively influenced by grant funded financial aid. Grant funded aid has not kept up with the swelling college costs. Goldrick-Rab, Harris, Kelchen, and Benson (2012) estimated that lower socioeconomic students only had a 9% chance of attaining a bachelor's degree (pg. 3). This discrepancy could not be explained by a lack of preparedness. Grant funded federal aid encouraged students to enroll in post-secondary education, but Goldrick-Rab, et al. (2012) explained that there was little evidence that these funds motivated the same students to re-enroll for a second year.

Foregone earnings. While attending college full-time, most traditional, college-aged students did not have a full-time job. They may have had a part-time job to supplement the costs of attending college, but by attending college, most students were giving up the earnings they would have received had they entered the workforce instead of attending college. These are called foregone earnings, according to Perna (2005).

Summary

Student college choice models have changed dramatically over time. Since the 1980s, researchers have been adding more variables to the mix, and the models have been increasingly complex. Perna's (2006) model is the most comprehensive model to date as it takes into account both the "economic model of human capital investment and the sociological concepts of habitus, cultural and social capita, and organizational context" (p. 116). A primary contribution of her model is that it recognizes that student college choice is not a linear proposition. Her layered model pushes and pulls against itself as the act of student choice ebbs and flows. Students can start at any point in the model. The model has many moving parts and can be restarted over and over until the final choice is made. Because of the complexity of Perna's (2006) model, it is my hope to utilize the variables within to identify which students are more likely to attend the

University of Mississippi based on the timeline of application and the metrics and variables of the students.

Chapter III

METHODOLOGY

Introduction

The purpose of this quantitative study is to explore the relationships between application completion date for incoming freshmen to the University of Mississippi and various pre-matriculation predictor variables. In addition to the pre-matriculation predictor variables, the researcher will look at the likelihood ratio that a student's application date predicts the acceptance to the University of Mississippi and the yield (actual attendance) to the University of Mississippi.

Design

According to Perna (2006), both qualitative and quantitative designs are needed to further the research into student college choice (p. 120). Both approaches typically look at student metrics and other student characteristics to drive the study. Perna (2006) also stated that multiple regression was an appropriate data analysis for student driven data in which a dependent variable has more than two outcomes. Hinkle, Wiersma, and Jurs (2003) agreed with this assessment. they stated, "in multiple linear regression we have a single criterion variable, but we have k predictor variables $(k \geq 2)$" (p. 461). In this case, $k = 9$.

Population

The population of this study will be potential entering freshman cohort members at the University of Mississippi. Entry into the population will be randomly decided by the student as

they apply as a potential first-time, full-time member of the freshman class. The data points will be the five classes of entering freshmen from fall 2013 through fall 2017. The entering classes will include those students who enroll in courses during the summer prior to full-time matriculation. This study can be generalized to future freshman classes at the University of Mississippi.

Hypotheses

Listed below are the hypotheses set forth based on Perna's (2006) conceptual framework of college choice.

Perna's Layer 1 Hypotheses. There is a significant relationship between residency (in-state or out-of-state) and application date of students who apply to the University of Mississippi.

There is a significant relationship between gender and application date of students who apply to the University of Mississippi.

There is a significant relationship between ethnicity and application date of students who apply to the University of Mississippi.

Perna's Layer 2 Hypotheses. There is a significant relationship between core grade point average and application date of students who apply to the University of Mississippi.

There is a significant relationship between ACT score (or SAT or SATR equivalent) and application date of students who apply to the University of Mississippi.

There is a significant relationship between cumulative grade point average and application date of students who apply to the University of Mississippi.

Perna's Layer 3 Hypothesis. There is a significant relationship in yield of students and application date of students who apply to the University of Mississippi.

Perna's Layer 4 Hypotheses. There is a significant relationship between geographical locations within the state of Mississippi using congressional voting districts as a guideline and application date of students who apply to the University of Mississippi.

There is a significant relationship between first generation status and application date of students who apply to the University of Mississippi.

Procedure

This study will be based on the use of existing data from the University of Mississippi's Institutional Research, Effectiveness, and Planning (IREP) office. The researcher filed a request to work with non-identifiable data with the University of Mississippi's Institutional Review Board (IRB) after receiving permission to do so from her dissertation committee. The researcher sought five years of data on potential freshman cohort students who applied to the University of Mississippi for fall entry from 2013 through 2017. These data included: residency, gender, ethnicity (white and non-white), core high school gpa, cumulative high school gpa, college entrance exam score (ACT, SAT, or SATR), county of residence for Mississippi students, first-generation status, application date, and whether or not the student attended.

In addition to the student data, the researcher asked for yield rates by the tenth day of the matriculating semester in relation to application date and acceptance rates by the tenth day of the matriculating semester in relation to application date in order to see if application date can determine if a student is accepted and if they will matriculate. These data will be attached to the individual student data from above.

Statistical Tests and Data Analysis

The data analysis took place in two parts. First, the researcher looked for relationships between the predictor variables by using multiple regression (Hinkle, Wiersma, & Jurs, 2003) for

hypotheses relating to Perna's (2006) layers one, two and four. The dependent variable is the application date for each student grouped by the month of application from July of the pre-matriculating year to August of the matriculating year (numbered 1-14, where July = 1, August = 2, etc.). The independent variables are the student metrics outlined in hypotheses layers one, two and four. For the hypotheses in layer two, the researcher checked collinearity between high school core grade point average and high school cumulative grade point average. Collinearity occurs when one or more predictor variables can be predicted by another predictor variable with relative accuracy (Field, 2013). In these cases, one variable should be thrown out of the multiple regression equation.

For the second part, the researcher analyzed layer three hypotheses using a chi square test (Field, 2013; Hinkle, Wiersma, & Jurs, 2003) to discover how likely it is that a student's application date is related to the acceptance rate (likelihood of acceptance) and yield rate (likelihood of matriculating) of the University of Mississippi freshman class.

Conclusion

Research has suggested that incoming student metrics and other predictor variables such as ethnicity, residency (distance from the institution), gender, and socioeconomic status can help identify particular groups of students. It is the hope of the researcher that by utilizing Perna's (2006) model we can better understand who our students are by looking for the patterns of behavior, social capital, and cultural knowledge that will give a clue as to how and when potential University of Mississippi freshmen are making their decision to attend college. This may lead to a better understanding of who these students are based on their characteristics, when they apply, and whether or not they will attend. It is the hope of the researcher that these data can

be utilized to improve on the admissions and recruitment of students at the University of Mississippi.

The remainder of the study comprises Chapters IV and V. Chapter IV is the results of the statistical analyses. Chapter V is the conclusion and implications for further research.

Chapter IV

RESULTS

Introduction

This chapter presents the results and data analysis for this study. The data analyses include the four layers of Perna's (2006) framework of college student choice. Variables from layers one, two, and four of Perna's (2006) framework were analyzed using multiple regression. Multiple regression was used to look at the relationship of the predictor variables to the independent variable of application date to see if there is a relationship between them. Layer three was analyzed using chi square test to see how likely it is that a student's application date is related to the acceptance rate (likelihood of acceptance) and yield rate (likelihood of matriculating) of the University of Mississippi freshman class. The specific areas discussed in this chapter include the results from each of the layers of Perna's (2006) framework.

Multiple Linear Regression

Layer one results. Perna's layer one consists of the habitus (Perna, 2006, p. 117). The habitus consists of the student's characteristics to the outside world. It is intrinsically who they are and influences how they take in information and make decisions. According to Bourdieu (1986), the habitus consists of all of the information that a person takes in to create the social and cultural capital that a person has obtained. Influencing this, according to Perna (2006), is who a person is with regard to ethnicity, gender, etc. As discussed earlier, this layer includes a student's demographic characteristics, cultural capital, and social capital. For the regression equation in

layer one, the predictor variables are gender (male and female), ethnicity (White or non-White), and residency (resident of Mississippi or resident of another state or country). The dependent variable is the date of application which is categorized by month from July of the year prior to matriculation until August of the matriculating year (1-14). Table 2 shows the descriptive statistics of the variables from layer one.

Table 2

Descriptive Statistics for Layer One

	Count[a]	Count[a]	SD [a]
Date of Application, Month			2.17
Residency (resident, non-resident)	17247	46812	.44
Ethnicity (White, non-White)	52042	12017	.39
Gender (male, female)	38092	25967	.49

[a]n = 64,059

According to the descriptive statistics the 64,059 students who are included in this model, this data group has more out-of-state (non-Mississippi) students than in-state students, more White students than non-White students, and more students who identify as female than male.

A multiple regression analysis was performed on application date based on residency of student, reported ethnicity, and reported gender. Table 3 shows the significance level of the variables. Significance of .00 for all the variables would typically indicate that the variables were significant to the equation. Given the sample size of 64,059, significance will occur because the sample size is so big (Sullivan & Feinn, 2012). For this reason, the r and r^2 values are also important to show effect size.

Table 3

Coefficients and Significance of Layer One Variables

Model	Unstandardized B	Coefficients Std. Error	Std. Coefficients Beta	t	Sig.
Constant	3.63	.02		178.98	.00
Residency	.29	.02	.06	14.86	.00
Ethnicity	1.20	.02	.22	54.59	.00
Gender	-.43	.02	-.10	-25.25	.00

Tables 4 and 5 show the relationships between the variables. According to Field (2013), the r value indicates the "strength of the relationship between the variables" (p. 82). A small effect size is $r = .10$, a medium effect size is $r = .30$, and a large effect size is $r = .50$. For this regression, the r value is .23 which falls between small and medium effect sizes. The predictor variables (residency, ethnicity, and gender) only predict about five percent of the variance in application date ($r^2 = .05$).

Table 4

Model Summary of Layer One Variables

R	R^2	Std. Err.	F Change	df1	Sig F Change
.23	.05	2.11	1182.25	3	.000

Table 5

ANOVA of Layer One Variables

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	15830.08	3	5276.69	1182.25	.00
Residual	285893.30	64055	4.46		
Total	301723.38	64058			

Overall, the variables of residency, ethnicity, and gender have very little predictive value for the application date and have little to no correlation with each other.

Layer two results. Perna's layer two consists of the school and community context. This layer includes the availability of resources, types of resources available, and structural support and barriers. According to Perna (2006), the school and community context include influences outside of self, for example: social structures and organizational resources available to the student. ACT, core grade point average, and cumulative grade point average are by products of available resources to the students.

Before completing the regression for this layer's variables. First, a collinearity assessment was run for the variables of high school core and cumulative grade point averages. Table 6 shows the output for the collinearity check.

Table 6

Collinearity Diagnostics for Layer Two Variables

	Tolerance	VIF
High ACT or SAT equivalent	.79	1.27
Core High School GPA	.26	3.79
Cumulative High School GPA	.27	3.71

According to Field (2013), if the VIF values from the collinearity statistics are less than ten, then collinearity is unlikely. The VIF values are all less than ten in this case. Therefore, collinearity is not an issue and the regression can be run with all inputted variables.

For the regression equation for layer two, the predictor variables are cumulative grade point average, core grade point average, and ACT (or SAT equivalent). The dependent variable is the date of application which is categorized by month from July of the year prior to matriculation until August of the matriculating year (1-14). Table 7 shows the descriptive statistics of the variables from layer two.

Table 7

Descriptive Statistics for Layer Two Variables

	Mean [a]	SD [a]
Date of Application, Month	3.81	2.17
Highest ACT or equivalent	24.96	3.94
Core High School GPA	3.29	.50
Cumulative High School GPA	3.52	.43

[a]n = 64,059

According to the descriptive statistics the 64,059 students who are included in this model, this data group has an average ACT (or SAT/SATR equivalent) of 24.96, an average core high school gpa of 3.29, and an average cumulative high school gpa of 3.52.

A multiple regression analysis was performed on application date based on highest ACT or equivalent, core high school gpa, and cumulative high school gpa. Table 8 shows the significance level of the variables. Significance of .00 for all the variables would typically indicate that the variables were significant to the equation. Given the sample size of 64,059, significance will occur because the sample size is so big (Sullivan & Feinn, 2012). For this reason, the r and r^2 values are also important to show effect size.

Table 8

Coefficients and Significance of Layer Two Variables

Model	Unstandardized B	Coefficients Std. Error	Std. Coefficients Beta	t	Sig.
Constant	7.409	.08		99.32	.00
ACT	-.08	.00	-1.41	-32.18	.00
Core GPA	.24	.03	.06	7.35	.00
Cum. GPA	-.70	.04	-.14	-18.60	.00

Tables 9 and 10 show the relationships between the variables. According to Field (2013), the r value indicates the "strength of the relationship between the variables" (p. 82). A small effect size is $r = .10$, a medium effect size is $r = .30$, and a large effect size is $r = .50$. For this regression, the r value is .20 which falls between small and medium effect sizes. The predictor

variables (ACT, core gpa, and cumulative gpa) only predict about four percent of the variance in application date ($r^2 = .04$).

Table 9

Model Summary of Layer Two Variables

R	R^2	Std. Err.	F Change	df1	Sig F Change
.20	.04	2.13	863.184	3	.000

Table 10

ANOVA of Layer Two Variables

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	11723.82	3	3907.94	863.18	.00
Residual	289999.56	64055	4.53		
Total	301723.382	64058			

Overall, the variables of ACT, core high school gpa, and cumulative high school gpa have very little predictive value for the application date and have little to no correlation with each other.

Layer four results. Perna's layer four consists of the social, economic, and policy context. This layer includes the demographic characteristics, economic characteristics, and public policy characteristics of the student. These characteristics are even further outside the student's sphere of influence. They include changes in public policies, changes in social forces, and economic conditions such as unemployment rate (Perna, 2006, p. 119). For the regression equation for layer four, the predictor variables are Mississippi congressional district and first-

generation status. The dependent variable is the date of application which is categorized by month from July of the year prior to matriculation until August of the matriculating year (1-14). Table 11 shows the descriptive statistics of the variables from layer four.

Table 11

Descriptive Statistics for Layer Four Variables

	Count [a]	Count[a]	SD [a]
Date of Application, Month			2.56
MS Congressional District			1.13
District 1: Northeast MS	6242		
District 2: West MS, Delta	4776		
District 3: Central, Southwest MS	2873		
District 4: Southeast MS	3358		
First-Generation (yes, no)	7886	9361	.50

[a]n = 17,249

According to the descriptive statistics the 17,247 Mississippi students who are included in this model nearly half the students report themselves as first-generation. There are more students from the northeastern portion of the state, which is where the University of Mississippi is located. There are fewer students from the Southwest/Central portion of the state than anywhere else.

A multiple regression analysis was performed on application date based on Mississippi congressional district and first-generation status. Table 12 shows the significance level of the variables. Significance of .00 for all the variables would typically indicate that the variables were significant to the equation. Given the sample size of 17,248, significance will occur because the

sample size is so big (Sullivan & Feinn, 2012). For this reason, the r and r^2 values are also important to show effect size.

Table 12

Coefficients and Significance of Layer Four Variables

Model	Unstandardized B	Coefficients Std. Error	Std. Coefficients Beta	t	Sig.
Constant	3.616	.05		79.81	.00
MS Congressional District	-.15	.02	-.07	-8.97	.00
First Generation	1.11	.04	.22	1.04	.00

Tables 13 and 14 show the relationships between the variables. According to Field (2013), the r value indicates the "strength of the relationship between the variables" (p. 82). A small effect size is $r = .10$, a medium effect size is $r = .30$, and a large effect size is $r = .50$. For this regression, the r value is .22 which falls between small and medium effect sizes. The predictor variables (Mississippi congressional district and first-generation status) only predict about five percent of the variance in application date ($r^2 = .05$).

Table 13

Model Summary of Layer Four Variables

R	R^2	Std. Err.	F Change	df1	Sig F Change
.23	.05	2.49	471.06	2	.000

Table 14

ANOVA of Layer Four Variables

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5858.92	2	2929.46	471.06	.00
Residual	197250.68	17246	6.22		
Total	113109.60	17248			

Overall, the variables of Mississippi congressional district and first-generation status have very little predictive value for the application date and have little to no correlation with each other.

Chi Square Analysis

Layer three results. Perna's layer three consists of the higher education context and includes marketing and recruitment by the institution, location of the institution, and the institutional characteristics. Perna's (2006) layer three consists of an institution's ability to attract students. Basically, how appealing is the location, the institutional image, and branding to various students across all economic and social backgrounds? For this layer, a chi square analysis was run between the dependent variable of application date and the predictor variables of enrollment yield (enrolled or did not enroll) and admission status (yes or no). The dependent variable is the date of application which is categorized by month from July of the year prior to matriculation until September of the matriculating year (1-15).

Admission status. Tables 15 and 16 show the chi square results for admission status in relation to application date. Table 15 describes the relationship between admission status and date of application. As we can see from the results, the majority of students who were admitted

at the University of Mississippi applied in the first few months in the admission cycle, with the majority occurring in the first month of the studied application cycle.

Table 15

Date of Application * Admission Crosstabs

Date of Application	Not Admitted	Admitted	Total
July (1)	705	9275 (92.94%)	9980
August (1)	925	9425 (91.06%)	10350
September (1)	1627	12523 (88.50%)	14150
October	2680	13347 (83.28%)	16027
November	2511	7730 (75.48%)	10241
December	1831	4097 (69.11%)	5928
January	1888	3886 (67.30%)	5774
February	1047	1622 (60.77%)	2669
March	1357	929 (40.64%)	2286
April	1083	556 (33.92%)	1639
May	260	345 (57.02%)	605
June	165	199 (54.67%)	364
July (2)	161	10 (5.85%)	171
August (2)	139	115 (45.28%)	254
September (2)	34	0 (0.00%)	34
Total	16413	64059 (79.60%)	80472

Table 16 shows the chi square relationship between admission status and application date. The chi-square value has an assumption that has been met in the footnote as all cells had at least an expected count of 6.93. Additionally, the p value or significance for this test was .00 and is less than the test value of .05. Based on this evidence, there appears to be an association between application date and whether or not a freshman student is admitted by the University of Mississippi.

Table 16

Chi Square Results for Admission Status

	Value	df	Sig.
Pearson Chi-Square	9846.78[a]	14	.00
Likelihood Ratio	8962.22	14	.00
Linear by Linear Association	8874.66	1	.00
N of Valid Cases	80472		

[a] 0 cells have expected count less than 5. The minimum expected count is 6.93.

Enrollment yield. Tables 17 and 18 show the chi-square results for enrollment yield in relation to application date. Table 17 describes the relationship between enrollment status and date of application. As we can see from the results, the majority of students who enrolled at the University of Mississippi applied in the first few months in the admission cycle, with the majority occurring in the first month of the studied application cycle.

Table 17

Date of Application * Enrollment Crosstabs

Date of Application	Did Not Enroll	Enrolled	Total
July (1)	5595	4385 (43.94%)	9980
August (1)	7399	2951 (28.51%)	10350
September (1)	10798	3352 (23.69%)	14150
October	13094	2933 (18.30%)	16027
November	8470	1771 (17.29%)	10241
December	4933	995 (16.78%)	5928
January	4663	1111 (19.24%)	5774
February	2114	555 (20.79%)	2669
March	1944	342 (14.96%)	2286
April	1445	194 (11.84%)	1639
May	473	132 (21.82%)	605
June	295	69 (18.96%)	364
July (2)	167	4 (2.34%)	171
August (2)	215	39 (15.35%)	254
September (2)	34	0 (0.00%)	34
Total	61639	18833 (23.40%)	80472

Table 18 shows the chi square relationship between enrollment and application date. The chi-square value has an assumption that has been met in the footnote as all cells had at least an expected count of 7.96. Additionally, the p value or significance for this test was .00 and is less

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than the test value of .05. Based on this evidence, there appears to be an association between application date and whether or not a freshman student decides to enroll at the University of Mississippi.

Table 18

Chi Square Results for Enrollment

	Value	df	Sig.
Pearson Chi-Square	3435.75[a]	14	.00
Likelihood Ratio	3214.48	14	.00
Linear by Linear Association	1827.66	1	.00
N of Valid Cases	80472		

[a] 0 cells have expected count less than 5. The minimum expected count is 7.96.

Conclusion

Layers one, two and four results show that the variables that were analyzed had almost no relationship to application date. Layer one variables included residency (in-state or out-of-state), gender (male or female), and ethnicity (White or non-White). These represent pieces of who a student is to the outside world. Layer two variables included core grade point average, cumulative grade point average, and ACT. These variables represent the resources available to each student as a reflection of how well they were able to utilize resources available to them. Layer four variables included Mississippi congressional District and first-generation status (yes or no). These data represent external forces to the student that may still influence the college choice process.

The relationships shown with all of the variables from layers one, two, and four are five percent or less correlated to application date. In other words, the tested student characteristics above have little to no influence as to when a student applies to the University of Mississippi.

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With such a large sample and five years of data, it is with certainty that these results can be generalized to all future potential and incoming freshmen at the University of Mississippi.

The chi square results from layer three, however, do show a relationship between both admission status and enrollment status with regard to application date. Both results show a higher likelihood of a freshman student enrolling and being admitted if they apply within the first three months of the application cycle. In other words, those students who enroll in July, August, and September have a higher likelihood of attending the University of Mississippi regardless of the variables explored in this study (gender, residency, ethnicity, core gpa, cumulative gpa, ACT, Mississippi congressional district, and first-generation status). There is no best time to recruit a student with a particular background to the University of Mississippi. All students who apply within the first three months have an equal chance of being admitted and subsequently enrolling.

CHAPTER V

CONCLUSION

This chapter consists of a summary of the study, the methods, and results. A discussion of the findings in relation to each of the layers of the conceptual framework for college choice (Perna, 2006) follows the summaries. Implications for future research as well as institutional practice and policy are also discussed.

Statement of Purpose

The purpose of this quantitative study was to identify common traits among freshmen who chose to apply to the University of Mississippi each month, from July of the pre-matriculating year to September of the matriculating year. The University of Mississippi is a historically White, public institution of higher learning, in the Southeast United States. Carnegie classifies the University of Mississippi as an R1, the highest research activity institution (Indiana University Center for Postsecondary Research, 2017b). This research is beneficial to the University of Mississippi since universities are very data driven. This includes the use of enrollment managers to predict future enrollment in order to fund future needs.

In examining the application date, the researcher investigated the relationship between the freshman student's application timeline and various traits that the student possessed. The data points the researcher applied were entering metrics, namely the entrance examination score (ACT/SAT) and high school gpa (core and cumulative). The researcher utilized the demographics of the freshman student. These included gender, ethnicity, residency (in-state or out-of-state), Mississippi Congressional District, and whether or not the freshman student

identified as first-generation. Last, the researcher was interested in application specific information such as the application date and whether or not a student subsequently enrolled after application.

These variables were chosen through the college choice framework using Perna's (2006) conceptual model of college choice. She asserted that there were four layers of context that may influence a student's college choice. These layers are broken up into habitus, school and community context, higher education context, and social, economic, and policy context. The variables chosen for this study refer back to their chosen context.

Summary of Procedures

The data analysis took place in two parts. First, the researcher looked for relationships between the predictor variables by using multiple regression (Hinkle, Wiersma, & Jurs, 2003) for hypotheses relating to Perna's (2006) layers one, two and four. Habitus (layer one) includes social capital, cultural capital, and demographics. The chosen variables for this layer were residency, gender, and ethnicity. School and community context (layer two) refer to the support the student receives and resources available from various constituencies in the school and within their communities. The variables for this layer included core grade point average, cumulative grade point average, and ACT. These scores and metrics are a by-product of available community and school resources. Last, the social, economic, and policy context (layer four) includes social changes, economic conditions, and public policies. For this context, the variables were Mississippi congressional district and first-generation status (Perna, 2006, p. 117-19).

The dependent variable was the application date for each student grouped by the month of application from July of the pre-matriculating year to August of the matriculating year (numbered 1-14, where July = 1, August = 2, etc.). The independent variables were the student

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characteristics outlined in hypotheses layers one (habitus), two (school and community) and four (social, economic, and policy).

For the hypotheses in layer two (school and community), the researcher checked collinearity between high school core grade point average and high school cumulative grade point average. Collinearity occurs when one predictor variable can be predicted by another predictor variable with relative accuracy. In these cases, one variable would be thrown out of the multiple regression equation (Field, 2013).

For the second part, the researcher analyzed layer three (higher education context) hypotheses using a chi square (Field, 2013; Hinkle, Wiersma, & Jurs, 2003) to discover how likely it is that a student's application date was related to the acceptance rate (likelihood of acceptance) and yield rate (likelihood of matriculating) of the University of Mississippi freshman class. The higher education context (layer three) includes the branding of the university and how well it attracts students. For this context the variables used were admission status (yes or no) and enrollment status (yes or no).

Summary of Results

Results from the regression analysis of the variables identified to represent Perna's (2006) layers one (habitus), two (school and community), and four (social, economic, and policy) indicated that there was little to no relationship of the variables with application date. The relationship that is shown accounted for less than five percent of the variability in application date for all three layers. These findings suggest that the variables selected to represent each of the layers have little to no effect on when a freshman student will apply to the University of Mississippi.

Layers one (habitus), two (school and community) and four (social, economic, and policy) were run as a multiple regression. Layer one (habitus) variables focus on the student's habitus. The habitus includes social capital (information about college and assistance with college processes), cultural capital (cultural knowledge and value of college attainment), and the demographic characteristics (gender and ethnicity) of each student. Gender, ethnicity, and residency are the variables for this layer of the study. These variables only account for five percent of the predictability of application date. This leaves 95% of the variability in application date unaccounted for and left to random chance.

Perna's (2006) layer two (school and community) variables focus on the student's school and community context. For this layer, the variables were core grade point average, cumulative grade point average, and standardized tests (ACT). These variables were chosen to better understand the resources that students have in their schools and community that cause them to do well in school (core and cumulative gpa) and do well on college entrance exams (ACT). The assumption was that the better they do in these areas, the more resources available to them in the school and communities they live in. However, these variables only accounted for four percent of the variance in application date. Student affairs offices often make assumptions about higher achieving students being earlier to complete all pre-admission tasks including submitting an application to the college of their choice. However, the analysis of this institution's applicants showed that high school metrics (grade point average and ACT) have very little predictive value of the timing of application. These academic variables account for four percent of the variance in application date ($r^2 = .04$).

Layer four variables derived from Perna's (2006) model focus on the student's social, economic, and policy context. An assumption could be made based on research (Engle & Tinto,

2008; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Pascarella, Pierson, Wolniak, & Terenzini, 2004) that first-generations status students would apply later in the admissions cycle due to having less knowledge of the college search process or less social capital than their peers. Therefore, the use of Mississippi congressional districts was used to separate students from Mississippi into designated areas which are very different from each other.

Due to the way the congressional district lines are placed, areas in Mississippi are siloed from each other into very distinct zones. Using these districts, the hope was to show the differences in the areas in Mississippi based on when students apply. For instance, district two students live in the Mississippi Delta. The "Delta region is defined by its poverty and low educational attainment" (Taylor-Grover, 2006, p. 10). Because of this, it may be concluded that students from this area would have less social and cultural capital, higher rates of first-generation students, and would complete pre-admission tasks at a later time than their more affluent peers. Surprisingly, these variables also had very little impact on the predictability of application date, as the variables account for only five percent of the variance in application date ($r^2 = .05$).

Layer three variables from Perna's (2006) college choice model focus on the student's higher education context, in this case their specific application date as well as whether or not they were admitted, and whether or not they enrolled. For this layer, a chi square was computed for the yield of students who applied and subsequently enrolled. Layer three (higher education context) was the most interesting and telling of all of the calculations that were performed. The chi square showed, generally, that the earlier students apply the more likely they are to be admitted and enroll at this institution.

Results of the chi square analysis for layer three indicated that there was a relationship between when a student applies and whether or not they will be admitted and enroll at the

University of Mississippi. A large percentage of students that apply in the first three months were admitted and subsequently enrolled. So, this study showed, generally, the earlier any student applies the more likely he/she will be accepted and enroll for the next fall semester.

Discussion

While this research did not have expected results, it is important nonetheless. Based on the parameters of Perna's (2006) college choice model and the research completed for this study, it was expected that more prepared students with higher social and cultural capital would apply earlier in the application cycle than their less prepared peers. Preparation is used as a broad term here and assumed through a myriad of factors which can be seen through each of the layers in Perna's (2006) college choice model.

In layer one (habitus), preparation can be seen through demographic characteristics such as gender or race/ethnicity. Perna (2006) found that ability and desire to enroll in college was different across racial/ethnic groups. This shows in the stratification of ethnicity enrollment across colleges and universities, as approximately two-thirds of enrollees in colleges and universities are white and non-Whites make up the other one-third. McDonough (2004) also states that women make up approximately 60% of college enrollment and has been steadily increasing since the 1990s. Through residency, a student's cultural and social capital can be seen further. How poor your state or region is can have much to do with how you value college attainment (Arnold, et al., 2008; Perna & Titus, 2005), obtain cultural knowledge (McDonough, 1997), and receive assistance with the college process (Rowan-Kenyon, Bell, & Perna, 2008; Perna & Titus, 2005).

In layer two (school and community), preparation can be seen through high school metrics (core and cumulative grade point averages) and college entrance exams (ACT or

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equivalent). These variables measure the four habiti of school and community. The habiti are made up of three areas of support "timing, availability, and support college advising" (Perna, 2006, p. 106) and the fourth area is the make-up of the school itself and the ways it fostered positive decisions about post-secondary education. Without knowing specifically what kind of school or community each student comes from, grade point average and ACT score can show a kind of absorption of how a student navigates the academic world in which they subsist.

In layer four (social, economic, and policy), preparation can be seen through the variables of Mississippi congressional districts and first-generation status. These variables were utilized with particular attention to Mississippi based students because the University of Mississippi is the state's flagship institution and one of its goals is to increase Mississippi resident enrollment at the University. This layer is comprised of events or policy that are outside the student's control (Perna, 2002; Perna & Titus, 2005). They live where their parents/guardians live and they were not around to make decisions about parent or guardian access to post-secondary education, enrollment in a post-secondary program, and their desire to attend college.

This study did not correspond with the assumption that students with higher preparation would be more likely to apply earlier and complete pre-admission activities earlier. Therefore, the assumptions we may make as practitioners are not always correct. Breaking years of assertions based on personal observation is just as important than if the results had shown that application date is predictable by the variables used in this study. The study's large sample sizes (regression: layers one and two- n = 64,059; layer four- n = 17,249; chi square: n = 80,472), enhances confidence in the reliability of these results.

For this institution, the results indicate there is no significant difference among any student with regard to when they apply for admission, whether or not they are admitted, and

whether or not they will enroll. Utilizing the variables selected as representation of Perna's (2006) model of college choice, this study revealed that there is no predictable pattern of behavior for this institution's incoming students or applicants.

However, there are some interesting observations that can be made from these data even if the variables are not predictive. Looking at date of application versus admissions, students who apply earlier are more likely to be admitted. July (1) shows an admissions rate of 92.94% of applicants, which is the highest admissions rate for any month. From there, the percentage of applicants who are admitted goes down even as applications go up in subsequent months. The most applied to months, September (1) and October have admissions percentages of 88.50% and 82.28% respectively. Beyond this, the percentages of students admitted sink drastically (June = 54.67%, July [2] = 5.85%) until a spike in August (2) which has an admissions rate of 45.28%. Applications are also up for this group, though the number very small (254). In September (2), the institution did not admit any of the thirty-four students that applied. Given that this is typically the second week of classes during the fall semester, this is a good institutional practice to continue. Safer (2009) found that enrolling late for classes was linked with lower grades than the class average in those classes.

The raw number of applications received in each month coincide with institutionally important dates. For instance, the application window opens in July (1). The percentages of overall applications versus admitted students are particularly high for July (1), August (1), and September (1). It is likely that these students really want to attend the University of Mississippi and created applications as soon as the application opened. Continuing observations of the application data, but looking at date of application versus enrollment, some of the same trends can be seen. For example, the highest number of enrollees is in July (1) with 43.94% of the

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students who were admitted also enrolling at the institution. The reasoning for this is likely the same as for application versus admissions. These students had a high propensity for wanting to attend the University of Mississippi and put themselves in the best position to apply, be admitted, and then enroll.

Additionally, these percentages begin to decline as the application cycle continues. A sudden increase in enrollment can be seen from January and February applicants because these months coincide with financial aid and scholarship deadlines. Likely, many of these students applied in order to be considered for an institutional scholarship. The ones who enrolled may have been successful scholarship recipients. Without financial aid data this assumption cannot be confirmed, but it is intriguing how the dates and institutional policies for scholarships line up.

While this institution cannot predict when a student will apply, or even enroll, it can use these raw number trends and percentages to drive any and all students to apply sooner. There is no single distinguishing characteristic that defines who these students are, so the institution will need to treat prospects for admissions equally regardless of the month when the student applies. Given there is higher admission and enrollment rates for the earlier months of the application cycle, a guiding question for institutional practice might be: how can more students be pushed into making their decision to apply sooner?

Implications for Policy and Practice

This research found that the predictor variables used in this study based on Perna's (2006) college choice model do not successfully and accurately predict a student's month of application. However, the chi square data showing the relationships between application date and admission and application date and enrollment show that any student who applies earlier in the process (first three months) is more likely to be admitted and subsequently enroll. Given this

information, there are many opportunities that the University of Mississippi could indulge that may push students to apply earlier in the application cycle. These opportunities focus on the search phase of student college choice theory.

The search phase for college choice includes the accumulation and assimilation of information necessary to develop a short list of interested institutions. This is the point at which a student will begin to personally interact with those interested institutions (Cabrera & La Nasa, 2000b). According to Chapman (1981) and Hossler and Gallagher (1987), this is also the phase in which institutions are actively searching for students that show institutional fit.

If the University of Mississippi wishes to impact a student's decision to apply sooner (e.g. in the first three months of the application cycle), it will need to make sure that the students it is targeting have the appropriate resources. Tierney (2002) and Arnold et al. (2008) stated that more parent and family involvement in the college choice process, specifically in institutional outreach, enhances the opportunity for a student to attend college and to attend that specific college. Students are influenced by family, peers, and trusted agents as they are making their college choice decision. Sung and Yang (2008) discovered that it was more important for a student to know that others perceived the institution in a positive light than for the student to have their own positive view. McDonough (1997) interviewed twelve rising college freshmen about their college decision path. In her research, she noted that there is no one, clear path to choosing college. She also noted that not all of the students had access to the same resources to help them guide their college choice decision.

Given these sources, it is just as important to recruit the student's family as it is to recruit the student, especially those families of low socioeconomic status (Tierney, 2002). In this vein, workshops for families, not just students, educating them on who the University of Mississippi is

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and what it offers may help students in their college choice process. This would require working with high school counselors and school districts to see what resources are lacking in order to help fill the gaps for student college choice decision-making.

College visits are also a viable way to supply resources of information and influence a student's decision to apply. Multiple formats should be used. Continuing the traditional on-campus visit is important, but being able to meet students where they are with online visits and virtual tours can get more information out to more students. Students cannot always afford to visit and parents are not always able to come with them when they are able to visit. This would allow more access to people who already influence the student's decision-making process.

Offering incentives to students to get them to apply earlier could also help the institution attract students sooner in the application process. Application fees are often tiered to incentivize people to apply sooner rather than later. Appealing to a person's pocketbook, given the cost of higher education in general, could work. For example, the institution might consider an "Apply in July" campaign or public relations outreach initiative with the goal to increase July applications. Or, the University could provide a reduced fee for applying in the first three months. Additionally, they could waive the fee all together for a certain amount of time. Research would need to be done to see if the costs (application fees) outweigh the benefits (potential increase in paid tuition). Reducing or waiving the fee could cause more students, who are not interested, to apply sooner simply because of the cost and would defeat the purpose.

Incentivization could be used in other ways. Athletics is another form of institutional branding and the University of Mississippi is in the Southeastern Conference (SEC) for its sports programs. Pope and Pope (2014) found that athletic success at an institution played a role in whether or not a student sent standardized scores to the institution. The institution could offer

discounts on student season tickets to major athletic events for applying earlier and subsequently enrolling. Using the incentivization model again, they could also provide some sort of limited-edition memorabilia for applying sooner rather than later.

Implications for Further Research

This research is a valuable tool that can help institutions know who to target and when to best target them for admissions. Institutions are always looking for a way to distill student outcomes and choice into something marketable and manageable. Thirty-eight years of college choice model research (Cabrera, A.F., & La Nasa, S. M., 2000; Chapman, D., 1981; Chapman, R. G., 1986; Hossler, D., & Gallagher, K. S., 1987; Litten, L. H., 1982; Perna, L. W., 2006) have shown that there are many moving parts to a student's application behaviors.

We now know, for this institution, the background characteristics and entrance metrics used in this study do not predict when a student will apply to enroll in college. But, the raw numbers and percentages do tell a story about any student who may be applying sooner and subsequently choosing to enroll based on their application date regardless of gender, ethnicity, high school core grade point average, cumulative grade point average, standardized test scores, residency, and first-generation status.

Given the nature of humans and human behavior, further research is needed with regard to actual experience rather than simple entrance metrics and demographics. For example, a new study with the same population and open-ended survey questions could be an important route to understand a student's decision-making about college application and enrollment. Furthermore, a study of applicants in July (1) and August (1) might identify the connections of those students in relation to relatives and alumni networks, because these connections may enhance the student's desire to apply sooner and enroll. A better understanding of these dynamics may create

opportunities for collaboration with the alumni association. Finally, utilizing existing data from student surveys, such as the new student survey, may also reveal nuance of students' decision making and transition to college.

Conclusion

This study was based on Perna's (2006) college choice model. Her model has four layers to describe the various moving parts of the decision-making process of student college choice. The results of this study are in two parts. Part one is a regression analysis conducted on layer one (habitus), layer two (school and community), and layer three (social, economic, and policy). The results of part one indicate that there is little to no relationship between the variables chosen for each layer in Perna's (2006) college choice model and the student's subsequent application date.

Part two of the study is a chi square test on layer two (higher education). This test focused on application date with regard to admission and then enrollment. The results of the chi square test indicate a relationship between when a student applies and whether or not they will be admitted and enroll at the University of Mississippi. Generally, students who apply in the first three months are more likely to be admitted and subsequently enroll at the University.

An impact on timing of application can potentially be affected by numerous opportunities during a student's search phase of college student choice. Changes in the way the university recruits their students, and their families, can be implemented through incentivization programs and expansions to how college visits are performed. University outreach to communities through high school counselors and school districts could also be implemented to expand the number of resources available to students and their families. Ultimately, the goal for this institution, is to find ways, such as those above, to influence students to apply sooner to the University.

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APPENDICES

SPRING NATURE LICENSE

LAURA PERNA'S COLLEGE CHOICE MODEL DIAGRAM
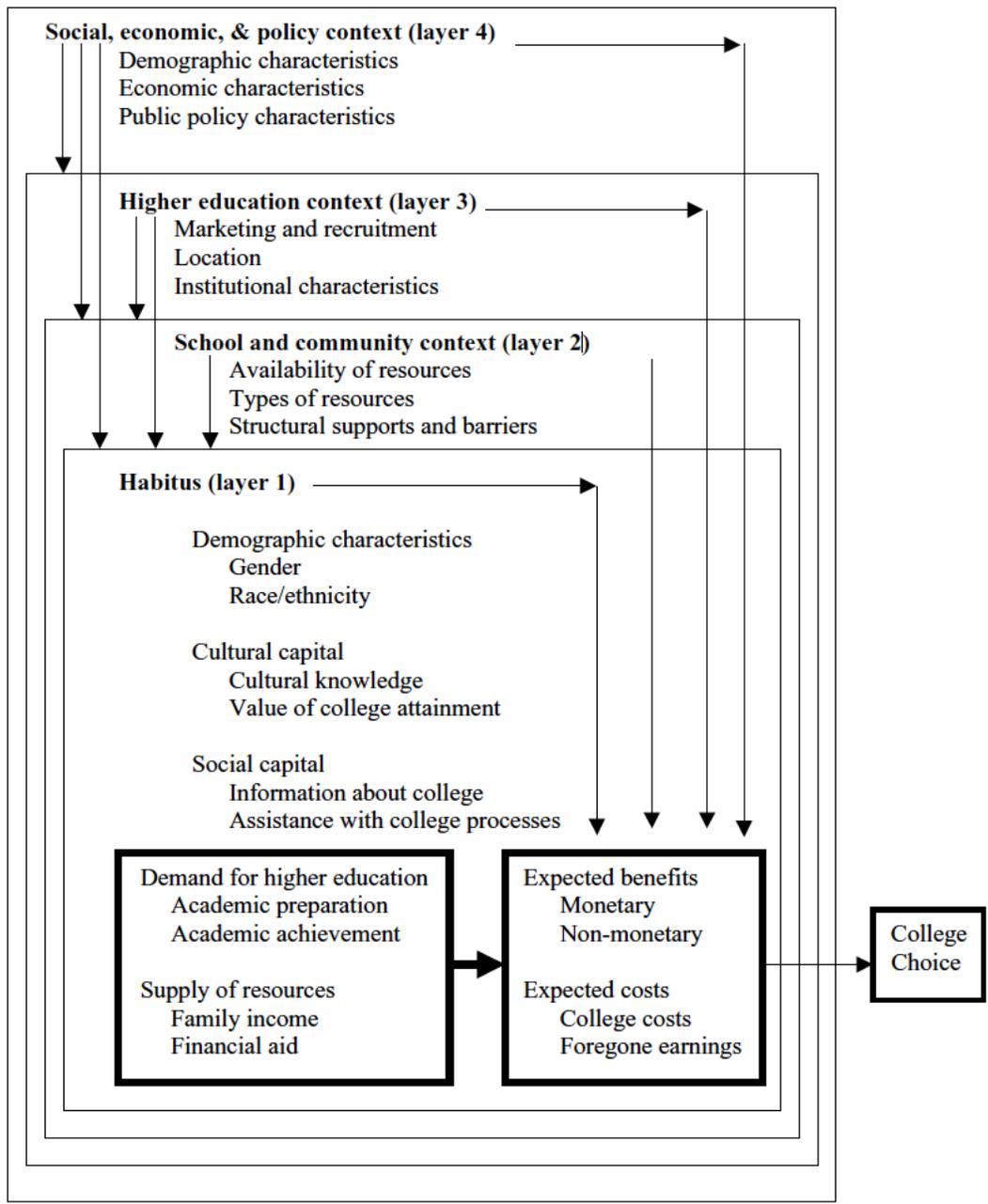
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Number of figures/tables/illustrations	1
Will you be translating?	no
Circulation/distribution	<501
Author of this Springer Nature content	no
Title	Apply Now!: Utilizing Application Date to Predict College Student Enrollment
Institution name	University of Mississippi
Expected presentation date	Apr 2019
Portions	Figure 3.1 on page 117
Requestor Location	Jennifer Fos 105 CR 213
	OXFORD, MS 38655 United States Attn: Jennifer Fos
Total	0.00 USD

Social, economic, & policy context (layer 4)
Demographic characteristics
Economic characteristics
Public policy characteristics

Higher education context (layer 3)
Marketing and recruitment
Location
Institutional characteristics

School and community context (layer 2)
Availability of resources
Types of resources
Structural supports and barriers

Habitus (layer 1)

Demographic characteristics
Gender
Race/ethnicity

Cultural capital
Cultural knowledge
Value of college attainment

Social capital
Information about college
Assistance with college processes

Demand for higher education
Academic preparation
Academic achievement

Supply of resources
Family income
Financial aid

Expected benefits
Monetary
Non-monetary

Expected costs
College costs
Foregone earnings

College
Choice

VITA

Degrees

University of Mississippi
M.A. in Higher Education/Student Personnel, 2007

University of Mississippi, 2004
Paralegal Certificate

University of Mississippi
B.A. in English, 2003

Relevant Experience

University of Mississippi
Center for Student Success and First-Year Experience
Assistant Director for Retention, 2013 – present

University of Mississippi
Academic Support Center
Senior Academic Advisor, 2010-2013
Academic Advisor, 2008-2013

University of Mississippi
Department of Music
Administrative Assistant, 2004-2008
Administrative Secretary, 2000-2004
Secretary, 2000

Awards

Student Affairs Core Values Award: Students First, 2017
Excellence in Advising Award: Staff, 2016
Outstanding Staff Member: Professional, Non-Faculty, 2016
1848 Pin for Outstanding Service to the Student Affairs Division, 2015