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ADMISSION OFFICERS' PERCEPTIONS OF IMPLICIT BIAS IN THE ADMISSION
PROCESS

A Dissertation
presented in partial fulfillment of requirements
for the degree of Doctor of Education
in the Department of Higher Education
The University of Mississippi

by

CHRISTI DENISE HARDY

May 2020

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ABSTRACT

Although they are not involved in the decision making process, admission officers at institutions of higher learning could have a significant effect on the admission process. For the purposes of this research, admission officers are defined as the primary personnel assisting applicants to complete their applications through the collection of applications, fees, essays, transcripts, test scores, and other supplemental documents required by the institution for admission consideration. More specifically, their implicit biases could significantly affect the admission process. Research on implicit biases is on the rise, and studies investigating this issue in health care and hiring practices are abundant. Implicit biases in higher education have been studied as they relate to the interview section of the admission process. In order for applicants to make it to the interview section, they usually must have a complete application. This research was conducted through a case study of the freshman admission process at a southeastern public institution including two focus group sessions and joint interviews. Admission officers were introduced to implicit bias and completed three Implicit Association Tests (IATs). The aggregate results of the tests were presented to the admission officers in a group setting to discuss the results as a group. The transcripts of these interviews were coded to identify whether implicit bias, systematic bias, or both affected the institution's freshman admission process. Research participants unanimously agreed systematic bias rather than implicit bias was more prevalent in the freshman admission process at the institution but stated admission officer implicit bias could significantly affect institutional admissions depending upon the application processing procedure. Through this research, areas of the admission process where implicit

biases may exist were identified and ways to reduce the effect of admission officers' implicit biases on the process were hypothesized.

DEDICATION

For my son, Tucker. You were not even a blip at the beginning of this journey, but you are now
the most cherished part of my life. I love you little man

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I would first like to acknowledge my advisors, Drs. Brandi Hephner LaBanc and Neal Hutchens, and my committee members, Drs. Frank Fernandez, Nichelle Robinson, and Juanyce Taylor for their time and commitment towards this project. All of you have been vital to my success in this program. I would also like to thank the Department of Higher Education faculty who truly challenged me as a student and educational professional.

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On a personal note, I would like to acknowledge my family. Josh, I could not picture sharing my life with anyone else. I am truly blessed to call you my husband. To my parents, Grady and Cindy Martin, thank you for providing a solid foundation to allow me to flourish. To my in-laws, Charley and Mary Hardy, thank you for cheering for me. To my grandmother, Johanna Martin, thank you for always ensuring I stay grounded.

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CHAPTER 1

INTRODUCTION

This study aims to increase the body of literature related to the presence of admission officer implicit biases and improve admission practices in higher education. Many admission officers follow best practices set forth by the American Association of Collegiate Registrars and Admissions Officers (AACRAO) which includes “[promoting] broad and equal access to higher education for qualified students” and “[adhering] to principles of nondiscrimination and equality within the framework of institutional mission and prevailing law” (AACRAO, 2010) and regional organizations, *i.e.* the Southern Association of Collegiate Registrars and Admissions Officers (SACRAO), as well as guidelines established by individual institutions as a result of the admission officer’s institutional strategic plan, mission, and vision.

The mission of higher education has changed dramatically since the first American institutions of higher learning were established in the late 1600s; then, they were focused on studying the classics and accessible only to the elite. In the mid-1800s, U.S. higher education began to incorporate programs more applicable to daily life such as engineering and agriculture, and this growth can be attributed to support through public funds, the necessity of spreading knowledge to U.S. citizens allowing the advancement of the country as a whole, and a high level of autonomy granted to these institutions to operate in the best interest of the nation (Altbach, 2011; Carey, 2007; & Hoffman, 2013). Higher education transformed, yet again, between 1950 and 2000 expanding its research role due to increased federal research funding and increasing

access for all students, including those from underrepresented groups, as a result of growing federal financial aid programs (Hoffman, 2013; Mumper, Gladieux, King, & Corrigan, 2011).

Goldrick-Rab and Cook (2011) also note that other aspects of the U.S. higher education's student body have become more diverse such as age, academic ability, pre-college experiences and success, and future ambition. Since 2000, many publications and initiatives have gained public support, especially from state and federal lawmakers and have focused on increasing higher education access such as the *Spellings Report* and *Complete College America*.

A call to increase diversity and facilitate inclusion across all higher education institutional types is prevalent in the United States, and these goals are routinely included and prominently featured in institutional mission statements. Currently, there is much discourse on how to achieve diversity, with special consideration of racial diversity. *Grutter v. Bollinger* (2003) was a U.S. Supreme Court case that supported the use of affirmative action in college admissions; however, in the same year, *Gratz v. Bollinger* decided predetermining a certain number of positions per race defied the U.S. Constitution (Maramba, Sulè, & Winkle-Wagner, 2015). Maramba, Sulè, and Winkle-Wagner (2015) go further to explain *Fisher v. University of Texas* challenged the use of affirmative action in higher education admissions prior to experimenting with other alternatives not directly related to race in an effort to admit a more diverse student population. In a recent case, *Students for Fair Admissions, Inc. (SFFA) v. President and Fellows of Harvard College*, SFFA claimed Harvard College's use of racial information in the admissions process negatively affected qualified Asian American applicants; however, the judge in the case sided with Harvard stating, "there [was] no evidence of any racial animus whatsoever or any intentional discrimination on the part of Harvard beyond its use of a race conscious admissions policy, nor [was] there evidence that any particular admissions

decision was negative affected by Asian American identity” (Harvard Admissions Lawsuit, 2019). U.S. District Judge Allison D. Burroughs further ruled that Harvard College met the burden of proof in demonstrating race-neutral admissions ratings would not allow the institution to meet its diversity goals while maintaining its level of student body scholarship. Maramba, Sulè, and Winkle-Wagner warn, citing tenets of the Critical Race Theory, institutions may digress back towards admitting mostly white students if diversity is only policed internally indicating a need for external accountability measures which support diversification of the student body. However, special consideration should be given to accountability measures identified to “measure” diversity of the student body at an institution. Diversity within the student body should include not only categorical identification of students such as race and gender but also individual characteristics of students than cannot be categorized such as life experiences, future goals, etc. Research concerning diversity and inclusion should also be mindful of the intersections of an individual’s make up and how the combination of an individual’s characteristics shape the educational experience of that individual.

Support for increasing diversity and inclusion can be found in Labaree’s framework, specifically democratic equality (1997a & 1997b). Democratic equality necessitates education produce citizens invested in improving society, and student inputs such as cultural backgrounds, racial identities, and previous social experiences will affect student learning. Institutions should provide opportunities and support for all applicants during the admission process if democratic equality is to be achieved. Admission of a diverse and inclusive student body should be paramount when considering the economic needs of the country and individual states. Admission officers’ implicit biases may limit diversity and inclusion at institutions. Identifying the presence of admission officers’ implicit biases and increasing awareness of how these biases

may affect communication with applicants could increase diversity and promote inclusion in higher education.

This dissertation consists of five chapters. This first chapter, the introduction, briefly introduces the reader to the problem of practice as well as defines a rationale for researching the topic. The second chapter is a literature review focusing on frameworks used to study implicit bias, implicit biases in health care and hiring practices, various areas of previously identified bias in admission processes including interviews and standardized tests, admission best practices, and equity as it relates to standardization of processes. The third chapter explains the research methodology and includes a description of the study participants partaking in the case study. The fourth chapter discusses the results of the case study and identifies areas where admission officers' implicit biases may impact the admission process. The fifth chapter discusses results, postulates how a quality enhancement plan may be developed to improve higher education admissions, and begins a discourse on future research that could be conducted to expand upon literature concerning implicit biases in admission processes, which is currently insufficient.

The Role of Admission Officers

Admission officers in colleges and universities operate within a unique space during the admission process. Each higher education institution operates differently, and admission officers may have different titles and roles. Admission officers may work in tandem with an admission committee in competitive admission processes or not for open admissions where decisions are rendered solely based on pre-determined criteria. Because of this variation, it is important to note the roles of individuals prior to directly applying the results of this research. For the purposes of this dissertation, the term admission officer will refer to individuals directly involved in the processing of college and university admission applications. These individuals collect the

required documentation for admission such as, but not limited to, admission applications, application fees, transcripts of high school and/or previous college coursework, standardized test scores, and admission essays. Their role may also require entering, uploading, and/or reviewing the required information is accurately displayed in an institution's application or student information system allowing admission committees electronic access to applicant materials. In addition, the admission officer may ensure minimum academic criteria are met, if defined. Admission officers are responsible for communicating with applicants concerning submission of documents and completion of the application allowing a decision to be made regarding admission either through published guaranteed admission criteria or by an admission committee in competitive admission processes.

Admission officers in this study are not voting members of the admission committee; therefore, they do not have direct influence on admission decisions. Because of this, their effect on the admission process may seem negligible. However, admission officers typically serve as advocates for applicants, and many believe it is their job to assist applicants in completing their applications enabling them to be presented to admission committees. They are often the primary point of contact for applicants as they navigate the admission process.

Implicit Biases

Implicit biases, also referred to as unconscious biases, are biases of which the individual is unaware. Implicit biases may include, but are not limited to, race, ethnicity, nationality, political ideology, gender, sexual orientation, weight, religious beliefs, and presence of physical or mental disabilities (Charles, 2009; Robinson, 2016). Implicit Association Tests (IATs) developed by Harvard University's Project Implicit and other diagnostic tools have been developed to identify individuals' implicit biases (Project Implicit, 2011). Many critics of

implicit bias denounce its existence believing only explicit biases, those overtly present, affect discourse and relationships.

A driving principle of the Carnegie Project on Education Doctorate, of which this dissertation is a product, is to frame problems of practice around ethics, equity, and social justice (Perry, 2015). Increased access, diversity, and inclusion in higher education may be able to do more than any other formal system, *i.e.* direct legislative action concerning civil rights, in regards to informing the United States citizenry and eventually ridding it of social barriers based upon race, class, sexual orientation, and disability status (Espinosa & Gaertner, 2015; Gamez-Vargas & Oliva, 2013; Gibbons, Cihak, Mynatt, & Wilhoit, 2015; Kirshner, Saldivar, & Tracy, 2011; May & LaMont, 2014; Pitman, 2015; Pyne & Means, 2013; & Whittaker & Montgomery, 2013). Increasing awareness of implicit biases may assist in this attempt to break down social barriers that hinder cooperativeness and respect in our society. Organizations, such as the Kirwan Institute for the Study of Race and Ethnicity, have committed to making more individuals aware of this topic to promote social change through publications reviewing current research investigating implicit bias (e.g., Staats, Capatosto, Wright, & Jackson, 2016).

Significance of the Problem

It is documented that admission application processes and components may be biased. For example, first generation college students may be more challenged by the admission process because their parents may be unfamiliar with the process or unable to offer needed guidance (Dockery & McKelvey, 2013; Fenderson & Fenderson, 2010; & Gamez-Vargas & Oliva, 2013). Entry tests, including the American College Test (ACT) and Scholastic Aptitude Test (SAT), typically required for admission into universities and competitive graduate or professional programs may be biased toward white males and those of higher socioeconomic statuses

(Fenderson & Fenderson, 2010; Nankervis, 2011; Sackett, Kuncel, Arneson, Cooper, & Waters, 2009; & Soares, 2012). Essay bias related to gender and socioeconomic status has been researched as well as possible interview bias against most applicants (Alweis, Fitzpatrick, & Donato, 2015; Gamez-Vargas & Olivia, 2013; Greenwald & Banaji, 1995; Kirshner, Saldivar, & Tracy, 2011; Latu, Mast, & Steward, 2015; Mendick & Moreau, 2013; Nadler, Lowery, Grebinoski, & Jones, 2014; Paley, 2004; Pau et al., 2013; Penta, 2010; Reiter & McConnell, 2014; & Robinson, 2016). The shift towards increasing enrollment diversity and inclusion of underrepresented groups within higher education will require more equity and purposeful planning in providing vital services to these identified groups, considering even more students without prior experience or support may be entering higher education in the coming decades (Espinosa & Gaertner, 2015; Gibbons et al., 2015; Lynch & Getzel, 2013; May & LaMont, 2014; Pitman, 2015; Teague, 2015; Whittaker & Montgomery, 2014; & Wolfe & Dilworth, 2015).

Admission officers may make judgments or decisions in their daily work, possibly a result of implicit biases. Although implicit biases have been researched within higher education, research on this topic related specifically to admission officers and their roles in the admission process could not be located. For some students, their first interaction with an institution may be with an admission officer, and researching the effects of admission officers' implicit biases on the admission process may be of value to institutions seeking to improve diversity and inclusion.

Purpose of Research

Objectives of this research include: (a) introducing implicit bias to admission officers and encouraging exploration of these biases through completion of IATs, (b) identifying areas of the admission process where admission officers' perceive their implicit biases may have an effect, and (c) utilizing the themes prevalent in the interviews to suggest ways to standardize or

improve the admission process and reduce the effect of admission officers' implicit biases on the process itself. Prior experiences of the author suggest some admission officers' implicit biases may be the result of systematic biases of the admission process such as the sole use of electronic admission applications rather than allowing applicants to submit paper applications; therefore, systematic biases of admission processes will also be explored.

This research study may not apply to admission processes at all higher education institutions. It aims to provide general, valuable information related to admissions and encourage new and self-reflective practices for admission officers in an effort to be more consistent and equitable with each applicant. This author believes if admission officers are more aware of their own implicit biases, underrepresented groups could gain more access to higher education, and ultimately improve compositional diversity in student populations thereby creating more inclusive institutions.

Theoretical Framework

In conducting the literature review for this dissertation, many frameworks were identified when researching implicit biases, especially in the areas of health care and human resources, including the Critical Race Theory and aversive racism, discriminatory intent, and poststructuralist feminism frameworks (Nadler, Lowery, Grebinoski, & Jones, 2014; Penta, 2010; Pyne & Means, 2013; Robinson, 2016; & Wolfe & Dilworth, 2015). In order to address implicit bias as a whole and its effects on more than race and gender, this research utilizes social unconscious theory, which suggests individual's thoughts and actions are automatic responses to previously internalized, usually unconsciously, attitudes and viewpoints (Charles, 2009).

Greenwald and Banaji (1995) discussed implicit stereotyping and its effects on social psychology beginning with defining "attitudes." The consensus among many definitions of

attitudes reviewed by the authors indicated social psychology research, at the time, was not accounting for differences between implicit attitudes and explicit attitudes. Therefore, studies on social behaviors were omitting implicit effects on decision-making versus explicit effects. These authors further identified that failure to define a difference between implicit and explicit could significantly affect the findings of a social study because proper measures may not have been used. They stated indirect measures of attitudes would include the researcher's inferences on participants' responses whereas direct measures of attitude would most likely stem from the participants' awareness of what attitudes were being researched. Building upon the idea of attitudes, Greenwald and Banaji defined self-esteem and identified its relationship to social interactions. Within their study, it was noted that implicit bias as a result of in-group bias, favoring individuals from a similar background or group as one's self, could significantly affect social interactions among individuals. The researchers then postulated the presence of implicit attitudes and implicit self-esteem led to implicit stereotyping where stereotypes of groups are created by individuals based upon previous social interactions, both positive and negative, which may be reinforced by popular culture. These implicit stereotypes may guide an individual's behavior and possibly lead to aversive racism and gender bias. Greenwald and Banaji cited studies implying implicit racial and gender stereotypes were more prevalent when the pressure of time was added to decision making or a social situation. They also found support for the notion that implicit stereotyping was reduced when individuals were aware of their own implicit attitudes.

[The research presented] share the point that conscious attentional effort can weaken the influence of a current or previous cue on performance. However, the method of weakening likely depends on whether, at the time of the performance measure, the cue is

or is not clearly cognized. When attentional effort is directed to a weak stimulus or memory trace, the reduced effectiveness of that cue is likely due to conscious strategies overriding and interfering with automatic cognitive effects. (Greenwald & Banaji, 1995, p. 18)

Dalal (2001) discusses the social unconscious theory as it relates to individuals' psychological development. This research makes connections to Freudian theory which hypothesized individuals' instincts are consistently at odds with each other because the ego wants what is best for the individual whereas the superego accounts for cultural and social norms to regulate behavior. Dalal expands his explanation of the social unconscious theory to include Foulkes' two iterations, labeled Orthodox and Radical. The Orthodox social unconscious theory implies there are two areas of unconsciousness, the personal and the social unconsciousness, whereas the Radical implies there is a singular unconsciousness operating within an individual. Orthodox social unconsciousness supports the notion that an individual unconsciously cares for oneself, personal unconsciousness, but also unconsciously relates to and ultimately favors those who belong to groups to which he/she relates such as those of the same gender, ethnic background, or socioeconomic status, termed social unconsciousness. Foulkes' Radical theory identifies a singular unconsciousness in which the individual consistently reacts as a direct result of the group to which he/she belongs thereby always considering his/her group to guide behavior within his/her social interactions. In this case, the individual is unconsciously serving themselves both personally and for the betterment of his/her social group. Radical theory and its relation to social behavior were extended to account for relationships between groups and the power relating to group's social capital indicating biology has preprogrammed individuals to socially identify themselves as part of a larger group and, therefore, serve the betterment of their

own group within social interactions (Elias and Scotson, 1994). This research was then applied to communication between individuals. Dalal (2001) ultimately concludes “notions of the ‘social’ unconscious are as problematic as descriptions of ‘the social *in* the unconscious’, because not only is the social integral to the unconscious, the unconscious is constituted by social at *every* level” (p. 554).

Within this dissertation, the researcher understands it is impossible to measure implicit bias in social situations to understand the internal thought processes guiding other individual’s behaviors. Individuals’ unconscious thoughts may not be representative of a society’s acceptable norms, *i.e.* the concept of political correctness, and are therefore, repressed by the individual. The social unconscious theory hypothesizes that while repressed, these unconscious thoughts significantly affect individual’s decision-making abilities and social interactions. Yielding power to marginalized groups can change the dynamics of group thought in the United States and reduce implicit biases present in day-to-day interactions between individuals.

Problem Statement and Questions

Implicit bias may be present in many areas of the higher education admission process. There is research concerning implicit bias on the part of admission committees, implicit bias in the admission interview process, and systematic bias in standardized test scores. Before a decision can be rendered on an admission application, the applicant typically must have a complete application. This is the area of the admission process in which admission officers are involved, and the area where little research has been conducted. The main problems researched by this study are do admission officers’ implicit biases affect the college or university application process and whether admission officers believe the systematic biases or their own implicit biases have more of an effect on college admissions than previously believed.

The main research question is, “do admission officers believe their own implicit biases affect the admission process more or less than systematic biases?”

(a) If admission officer implicit biases affect the process, what steps should be taken at both the institutional level and professional level to address this issue and improve university admission processes?

(b) If the process is affected by systematic biases, do admission officers have a responsibility to address this in their professional practice? If so, how can these systematic biases be corrected?

Summary of Methodology

The study was structured to facilitate authentic conversations with study participants and reduce preconceived notions by the researcher. The case study was conducted using staff from one admission office at a public southeastern university. Participants recruited included the Associate Director of Admissions, Assistant Director of Admissions, and undergraduate admissions officers. Each was sent an email which introduced the concept of implicit bias, instructed each participant to complete a single IAT from a preselected list, and return the test result along with the consent form to the researcher. The Associate Director and Assistant Director participated in a joint interview. The admission officers participated in a focus group to assess familiarity with the topic; discuss each participant’s background and experience in admissions; understand the freshman admission process at the institution; apprise the institution’s strategic plan concerning access, diversity, and inclusion; and discuss possible implicit bias and/or systematic bias present in the admission process. All study participants within the office were asked to complete two more IATs from preselected groups and send the results to the researcher. Results were compiled and aggregate findings were verbally presented

in a group setting to the research participants. As a group, the presence of implicit biases and their effects were discussed as well as systematic bias in the admission process and future implications for professional practice. Both group sessions were audio recorded and transcribed. Participants were instructed to speak one at a time in order to hear all responses and asked to identify themselves by name before contributing to the discussion (Bogdan & Biklen 2007). This method was selected to record the interaction rather than including a secondary note taker because the researcher believed an outsider of the office may negatively affect the discussion. The researcher believe this study is a pivotal first step in identifying consistent ways biases may affect the admissions process, developing possible interventions to reduce these effects, and encouraging the profession as a whole to evolve and become more active in the effort to increase diversity and inclusion in higher education.

Limitations

Limitations to this study exist. First, the body of literature used to inform the study is disjointed and pulls from various areas of research because literature concerning implicit biases by admission officers specifically could not be found. Second, the research study is a small, qualitative study, meant to be exploratory in nature. Some researchers opine qualitative research as neither reliable nor valid. Using the themes identified in this study, the researcher hopes a larger quantitative study could be conducted to support the study's reliability and validity. Third, all research participants practice in the same office; therefore, the research may need to be conducted on a larger scale to reduce the effects of a specific institution's and region's social norms and state's legislative policies on higher education admission processes. Fourth, within this case study, only admission officers processing freshman admission applications at a public, four year institution are included; therefore, admission officers at more selective institutions or

those working with professional and/or graduate school admissions may have different experiences. The specific institution utilized for this study has an open admission process for resident applicants and a selective admission process for nonresident applicants; the specific admission parameters identified by the institution may greatly affect the admission process. Fifth, others involved in the admission process including admission committee members and applicants were not studied to understand their perceptions of implicit bias within the admission process, so these internal and external stakeholders may have unique perspectives on the presence and effects of admission officers' implicit biases or systematic biases. The researcher believes that to fully research this topic, stakeholders at all levels should be considered.

CHAPTER 2

LITERATURE REVIEW

The term bias carries a negative connotation. In statistics, experimental designers work diligently to remove bias from studies. To do this, experiments are conducted with pre-determined parameters and significance levels, rules and identified best practices are followed, and experiments are repeated multiple times or with more subjects to establish both validity and reliability. If a researcher can demonstrate validity and reliability in a study, he/she may consider the study a success and subject to little or no bias. Results of a study may be highly scrutinized, especially if research is conducted on human subjects, and evidence of bias can quickly discredit the study in the court of public opinion.

Just as research can be received negatively when bias is suspected and especially if proven, bias in social interactions can significantly affect perceptions of an individual's character by others. In social interactions, two types of bias may be present, explicit bias and implicit bias. Explicit bias is identified by an individual or group based upon the purposeful actions of an individual (Staats, 2014; Staats, Capatosto, Wright & Contractor, 2015; & Staats, Capatosto, Wright, & Jackson, 2016). Implicit bias is internal bias against a group of which an individual may be unaware, which is often the result of prior negative interactions with individuals belonging to said group (Charles, 2009; Robinson, 2016; Ross, 2014; Staats, 2014; Staats, Capatosto, Wright & Contractor, 2015; & Staats, Capatosto, Wright, & Jackson, 2016). Consider the following scenario. A hiring manager is seeking a marketing assistant whose

primary responsibility will be moderating and improving the organization's social media presence. The manager considers two applicants. The first applicant is a highly qualified 35 year old woman with a baccalaureate degree in business and five years of experience in marketing including solely managing the social media accounts for her current employer over the last two years. The second applicant is a 23 year old woman who has completed one year of collegiate level work, has held part-time jobs in the fast food industry, and states in the interview that she is not proficient in the use of two of the four social media platforms utilized by the hiring manager's organization. In this scenario, the hiring manager hires the 23 year old applicant. Within a month of hiring the new marketing assistant, the owner of the company notices a diminished presence on social media and asks the hiring manager about this observance, eventually learning of the backgrounds of the final two applicants considered for the position. When the owner asks why the younger applicant with less professional experience was hired, the hiring manager states preference to hire assistants under the age of 25. This is an example of explicit age bias because the hiring manager states she did not hire the 35 year old solely because of her age. If we consider a similar interaction between the hiring manager and owner where the hiring manager states hiring the younger applicant because younger people are better with computers and social media, this would be an example of implicit age bias where the hiring manager makes a decision based upon preconceived notions of individuals in their early twenties rather than evaluating the merits of the particular 23 year old applicant.

Implicit bias can include internal bias related to physical and non-physical characteristics. Usually, negative implicit bias is stronger towards a group to which an individual does not belong or has had little exposure (Choudhury, 2015; Dalal, 2001; & Elias and Scotson, 1994). In his research on implicit bias in psychoanalysis, Dalal (2001) explains the basics of group

thought. Dalal (2001) cites research from Davidson, Zaphiropolous, Speigel, and Bhugra and Bhui in which culture is determined to be the primary driver in division of individuals into groups whether it is ethnic cultural differences, regional cultural differences, or the like because biologically all humans are *Homo sapien*. Dalal further indicates that once individuals separate themselves into groups they fail to notice similarities between characteristics of their own group and other groups.

Implicit bias in the higher education admission process has not been heavily researched; however, it has been studied in health care, specifically in researching treatment decisions made by medical professionals related to racial and ethnic implicit biases (Charles, 2009; Kalian, 2014; LeLacheur, 2008; Quach et al., 2012; & Vanoy, 2011), and in human resources, researching how gender and sexual orientation implicit biases affect hiring decisions (Latu, Mast, & Stewart, 2015; Mendick & Moreau, 2013; Penta, 2010; & Robinson, 2016). As mentioned in the introductory chapter, implicit biases exist in the subconscious of an individual; therefore, implicit biases do not present themselves in an overt manner. As a result, it is challenging to explicitly identify and measure individuals' implicit biases.

Researching Implicit Bias in Health Care

In health care, researchers have studied the effects of implicit biases related to race and socioeconomic status on patients' treatment plans. Charles (2009) used IATs to find significant evidence of racial bias as it relates to cardiac treatments. Quach et al. (2012) suggest racial bias occurs in both directions of patient care where reduced services are provided for racial minorities on the part of the provider and patients omit details necessary to allow for the best care because they do not trust the healthcare provider. As a result of these studies, many schools associated with health care are increasing students' exposure to social and cultural bias, both in the

classroom and in clinical settings, and because of these efforts to better health care education, many believe patient and provider relationships will be improved (Kalian, 2014 & LeLacheur, 2008). Vanoy (2011) suggests diversity training is needed in established health care environments in order to truly combat health disparities related to implicit bias as well as instances of employee-employee implicit bias.

Researching Implicit Bias in Human Resources

In human resources, researchers have studied the effects of implicit bias related to gender within the hiring process (Latu, Mast, & Stewart, 2015; Mendick & Moreau, 2013; Penta, 2010; & Robinson, 2016). Latu, Mast, & Stewart (2015) determined semi-structured interviews could be used to reduce implicit gender bias of interviewers and could also lead to a reduction in poor female interview performance, which may be the result of self-fulfilling prophecies based upon interviewer's behavior. Mendick and Moreau (2013) concluded gender bias was more prevalent in the fields of science, technology, and engineering. Nadler, Lowery, Grebinoski, and Jones (2014) found that sexual orientation bias exists in human resources as well indicating while both heterosexuals and homosexuals rate job applicants within their own group higher than those of a different sexual orientation, homosexual men are more often victims of implicit sexual orientation bias. In research related to higher education employment, evidence of racial and gender bias, especially at the administrator level, has been identified (e.g. Teague, 2015 & Wolfe & Dilworth, 2015).

Researching Implicit Bias in Other Areas

The Kirwan Institute for the Study of Race and Ethnicity produces annual State of the Science reports, which comprehensively evaluate and report upon advancements in the study of implicit bias. In the 2016 report, the Implicit Association Test (IAT), the Affect Misattribution

Procedure (AMP), the Implicit Relational Assessment Procedure (IRAP), and the Relational Responding Task (RRT) were reviewed as tools to identify and measure implicit bias (Staats, Capatosto, Wright, & Jackson, 2016). In the report, specific results concerning the reliability and validity of the IAT were discussed including the possibility of falsified results, the effects of racial self-identification on test outcomes, and a mention of Blanton, Jaccard, Strauts, Mitchell, and Tetlock's (2015) findings in which the authors claimed the IAT may overestimate positive bias stating it is right-skewed. While this finding existed, the Kirwan Institute for the Study of Race and Ethnicity supports the use of the IAT and AMP to assess implicit biases. Findings regarding the IRAP suggested more research should be conducted concerning its validity. The report identified the RRT as a promising new test to use in this area of research.

Ross (2014) states, as a society, tolerance and positive changes in behavior have resulted at a conscious level because of the global society's awareness of bias through social movements, legal statutes, and research. Individuals, upon reflection, can still find instances of implicit bias in daily interactions. Research investigating implicit bias is expanding in many areas, most notably in law enforcement as a reaction to the current racial climate related to police shootings of African American males and the Black Lives Matter movement (Staats, Capatosto, Wright, & Jackson, 2016). In researching implicit bias, literature supporting the existence of this bias and supporting its influence is abundant, and the Kirwan Institute for the Study of Race and Ethnicity uses yearly publications to report advances in this research (e.g., Staats, Capatosto, Wright, & Jackson, 2016).

Some researchers question the actual impact of implicit bias in daily interactions (Bartlett, 2017). Forscher et al. (2017) believe implicit bias research will face challenges in the future because studies conducted have demonstrated discriminatory behavior is not highly

correlated with implicit biases. Forscher questions the value of this subject of research and its ability to make a difference in the daily lives of individuals. Ross (2014) asserts that researching implicit bias, especially in education, is valuable because individuals are not fully conscious of all decisions made, and these decisions could affect not just the individual but also the collective.

Frameworks Used to Study Implicit Bias

Multiple frameworks are used to research implicit biases with certain frameworks tailored more specifically to a certain classification of bias. Regarding racial and ethnic bias, Critical Race Theory (CRT) is often utilized. CRT, first introduced by Ladson-Billings and Tate in 1995, was developed in response to lacking research on educational outcomes specifically related to race citing an abundance of research regarding gender and socioeconomic status and influence by many scholars including W. E. B. DuBois and Carter G. Woodson (Howard & Navarro, 2016). CRT assumes inequity, social and educational, in the United States is significantly determined by race and property rights where the intersection of these two factors is instrumental in analyzing these inequities. CRT has five basic tenets: (a) while studying the intersections of race with other identifiers such as gender and socioeconomic status are important, the main focus should be on race; (b) marginalized viewpoints should be featured in research framed by this theory; (c) the pursuit of social justice drives this research; (d) narratives of racially marginalized individuals are essential to develop the theory further; and (e) multiple racial perspectives, *i.e.* African American, Native American, etc., should be considered in an effort to be equitable (Howard & Navarro, 2016). One shortfall of CRT in its current form is the lack of consideration for mixed raced individuals (“Critical Race Theory and the Next 20 Years,” 2015). As a result, some researchers have extended CRT to better suit research for specific racial groups. One example, Latina(o) Critical Race Theory (LatCrit), focuses on challenges

concerning Hispanic individuals who are more susceptible to face issues concerning language and immigration than black and white individuals (Pyne & Means, 2013). Wolfe and Dilworth (2015) used CRT in educational leadership research to examine the impact of race, specifically Eurocentric ideals, on higher education access for underrepresented groups theorizing discussions related to higher education access and equity are guided predominantly by white males.

Another framework used to study racial implicit bias is Gaertner and Dovidio's aversive racism framework (2005). Gaertner and Dovidio explain aversive racism is different from traditional, overt racism and practiced more by educated White individuals. The researchers suggest while these White individuals may be sympathetic to the plight of underrepresented groups, they classify those of a different race into racial groups, which may lead to negative attitudes towards non-White individuals and avoidance of interracial interactions in an effort to behave the way polite society expects. Because of this, the aversive racism framework may be more useful in studying racial or ethnic implicit biases. Some frameworks, though engineered for a specific purpose, can be extended to study other implicit biases. Nadler, Lowery, Grebinoski, and Jones (2014) used fundamental ideas of Gaertner and Dovidio's aversive racism framework to research individuals' sexual orientation in employment decisions.

Quach et al. (2012) support the use of frameworks considering multiple inputs theorizing implicit biases are not related to one single aspect of an individual. For instance, in studying the relationship between health care disparities and racial implicit biases, social, biological, historical and ecological events should be considered. An example of such considerations includes the fear some African Americans possess concerning clinical research and receiving medical care as a result of learning of atrocities committed against this marginalized group

during the Tuskegee Study of Untreated Syphilis (Kalian, 2014). In their research of health care disparities related to race and breast cancer treatments, Quach et al., utilized Jones' Three-Level Framework, which considers institutionalized racism, personally mediated racism, and internalized racism.

Institutionalized racism focuses on the availability of tangible items as well as intangible resources such as guidance and professional services available to certain racial groups based upon society's structure, which suggests marginalized groups do not have equal access to goods and services needed to live healthy lives. Personally mediated racism relates to racism inflicted on others based upon preconceived notions determined by societal stigmas. An example of this would be to assume African American individuals prefer certain foods, which perpetuate chronic health conditions like diabetes and high cholesterol. Internalized racism is concerned with the notion of self-fulfilling prophecies in which marginalized individuals "buy in" to detrimental thoughts inflicted upon them by non-marginalized groups. This three-level framework considered multiple aspects related to thought processes of patients and providers affecting the treatment of individuals with breast cancer in the 2012 research study warranting the need for extended research on implicit biases of both groups, patients and providers.

Choudhury's (2015) Deep Diversity Framework, mostly related to implicit race bias but applicable to other areas of implicit bias, is based upon four important ideas – bias, emotions, power, and tribes. Choudhury studies the notion of us versus them. Within this framework, it notes individuals must accept they have implicit biases based upon neurobiological processes resulting from prior experiences. Individuals who reflect upon these biases and use recommended bias reduction skills are more likely to interact positively with those of different groups. Choudhury encourages self-awareness to better understand one's emotional responses to

situations, stating all interactions have an emotional component. When interacting with individuals from another group, Choudhury postulates emotions have a more significant effect because feelings of anxiety or fear are more prominent than when interacting with individuals like one's self. This theory promotes self-awareness along with self-regulation are pivotal to fostering a diverse and inclusive environment. Power, both social and personal, can antagonize us versus them thinking. Choudhury suggests individuals self-reflect on their power and use it positively to encourage inclusion. Examining one's strengths and weaknesses as well as discussing power with others can lead to self-awareness and promote positive interactions in the future. To better understand one's power, one must be aware of which tribes they belong. Humans socially identify with others based on commonalities and social identities. A single individual may identify to both a dominant and non-dominant tribe. For example, a homosexual white man may be aware of dominance related to race and gender as well as non-dominance related to sexual orientation. Choudhury recommends noting interactions between groups and practicing positive behaviors to promote positive interactions between groups.

Self-fulfilling prophecies, as mentioned when discussing internalized racism, are related to implicit gender biases as well (Latu, Mast, & Stewart, 2015). In this research, the authors theorized applicants seeking employment read both verbal and nonverbal cues to guide their behavior in an interview. Following this train of thought, implicit biases held by interviewers, particularly males, could significantly affect a female applicant's performance in the interview because she may feel she has to behave a certain way, for instance flirt if she feels the interviewer is romantically interested, to obtain the position. While both the interviewer and applicant may believe they are reacting to the situation at hand, this framework suggests self-fulfilling prophecies guided by interviewer's implicit biases assign unfair power to the

interviewer. Both this framework and the multi-level framework previously mentioned suggest marginalized individuals relinquish control in certain situations as a result of implicit biases of others.

When considering racial, ethnic and gender implicit biases, frameworks analyzing discriminatory intent have been used (e.g., Penta, 2010). It is more difficult to identify implicit biases, and in many legal cases, decisions rendered do not favor arguments citing discrimination as a result of implicit biases because the burden of proof is not explicitly met. In reaction to this, many in the legal community believe the burden of proof should not require absolute proof of explicit bias in decisions such as those related to employment; instead, an identifiable link between one person's unconsciously protected status as a member of a non-marginalized group against an individual belonging to a marginalized group should be all that is required (Wirts, 2017). Critics of this framework suggest individuals who do not act in a malicious manner may be unfairly punished in the court of law while proponents, such as Wirts, suggest this discriminatory intent model may lead to more self-regulation of employers and increase individual's accountability in their daily interactions to facilitate positive societal change, especially as they relate to race.

Robinson (2016) researched implicit biases related to gender and promotion of women into chief officer positions in industry by combining three frameworks. The first was McAdams's Theory of Narrative Identity, which suggests individual's personal perspectives of situational existence guide their actions and influence their ability to achieve goals (McAdams, 2008). When considering the previous discussion related to self-fulfilling prophecies, multiple microaggressions against marginalized individuals, usually the result of implicit biases against marginalized groups, could negatively affect the perceptions of those subjected to these biases.

McAdams's Theory of Narrative Identity is guided by Erik Erikson's Theory of Generativity, part of his Life Span Theory identifying a link between psychological growth and developmental growth (Erikson, 1963). The primary guide used in Robinson's research study was Randall's theory of poststructuralist feminism (2016). This framework contends differences exist between men and women; however, neither group is more powerful nor possesses more ability than the other. It also states all women are not alike, highlighting the importance of the individual and discouraging the need to perform tasks expected of their gender or sex. For instance, many women who cannot conceive children due to biological deficiencies suffer depression directly related to an inability to perform a role expected of their sex; however, a woman in this position may possess other abilities such as exceptional leadership skills allowing her to be successful in a multi-million dollar industry as a chief executive, which is admirable and desired by both men and women in our society.

When considering implicit bias as it relates to disability status, May and LaMont (2014) guided their research using the Human Diversity Framework. This framework suggests that those with disabilities – blindness, deafness, learning obstacles such as dyslexia, etc. – are part of a culture that enhances society. As an extension of this, unique cultures should be both celebrated and supported by mainstream society. In this research study, the authors explain the need to increase instruction related to those with learning disabilities into social work educational programs to ensure the needs of these individuals are met by the profession. The field of education, as a whole, has made a slow but steady transition to mainstreaming learning disabled students into classrooms, and this framework directly supports this endeavor.

Within this section, multiple frameworks have been discussed which lend themselves well to researching one or two types of implicit biases; however, the higher education admission

process may allow for implicit biases related to more than race/ethnicity, gender, or disability status. Therefore, it is imperative to use a framework conducive to studying all types of implicit biases. This researcher identified the social unconscious theory to conduct this research.

Dalal (2001) explained the evolution of the social unconscious theory through the field of psychoanalysis. It began with Freud's basic ideas concerning the struggle between doing what is best for the individual and what is best for the species as a whole. The theory also addressed Foulkes two theories, where the first favors doing what is best for the individual over what is best for the group and the second favors doing what is best for the group because the individual is fully immersed as a member of a certain group (Dalal, 2001). Lastly, Dalal incorporated Elias and Scotson as well as Matte-Blanco (2001). Elias and Scotson (1994) introduced the notion of power used by groups in social interactions. Matte-Blanco (1988) suggested human thoughts were both symmetric, constructed using similarities to define the meaning of "we," and asymmetric, constructed primarily by identifying differences and encouraging divisiveness and classification of "us" versus "them."

As a result, it can be determined that as minority groups gain power and society adapts to support this power, the line between "we" and "they" fades creating a more cohesive society. LeLacheur (2008) used the social cognitive approach to research the effects of racial identification on health care disparities. This framework highlights the need to recognize stereotypes exist, how they are formed, and the effect they have on everyday situations. This approach is a companion piece used along with the social unconscious theory to guide the research presented in this dissertation. Being mindful of motivation and origin of thought, individuals may be in a better position to understand their own implicit biases without shame and be more confident in discussing these biases with others in a professional setting.

The combination of these frameworks is similar to Choudhury's Deep Diversity Framework but requires that individuals thoroughly investigate motivation for interactions by delineating what is best for the individual versus the group. Many proponents of increased access, diversity, and inclusivity for underrepresented groups in higher education, suggest educating these groups will perpetuate positive economic momentum and create a more active and productive citizenry within the country (Labaree, 1997a). Because of the range of possible implicit biases present in the higher education admission process (racial/ethnic, gender, political/religious ideology, sexual orientation, disability status, etc.), the social unconscious theory is the framework utilized for this research to ensure the most complete discussion of results. This researcher believes various types of admission officers' implicit biases may affect the admission process and that one type of implicit bias does not singularly affect the admission process. When considering interactions with applicants, it is imperative to understand the intersectionality of applicants' group affiliations. For example, an 18-year old African American male may be affected by implicit bias in the admission process differently than a 40-year old African American male. Though both may identify as the same racial/ethnic group and gender, implicit age bias by an admission officer may be a significant factor in the applicant's completion of the application process. It is important for admission officers' to understand and respect the individual aspects of each applicant, if possible, in their interactions throughout the admission process.

Higher Education Admissions

Admission processes can vary by institution or by program within an institution. Some institutions or programs may give preference to certain applicants, such as in-state residents, in an effort to meet goals defined by their educational missions. Many institutions employ

recruiters whose workload is divided by geographical area or academic program. These recruiters provide basic information on admission requirements and processes to prospective applicants and are the primary point of contact until the applicant submits an application. Many will travel or call prospective applicants to generate interest in the institution or program and refer applicants to an admission officer for more detailed information.

Overview of a Typical Admission Process

Once an application is submitted, the person officially becomes an applicant. At this point, admission officers become responsible for guiding applicants through the application completion process communicating, as needed, to applicants. The admission officers solicit supplemental documents necessary to be considered for admission including, but not limited to, official high school and/or college transcripts, official standardized test scores, letters of recommendation, and statements of purpose and notify applicants of the deadline for submission of these documents. Some admission officers follow an engagement plan detailing how often applicants are contacted regarding completion of their application and the method of communication utilized, email, phone, etc.

Once applicants complete the entire process, they are typically notified of their completion status. The application may be reviewed by the admission officer to determine whether the applicant meets minimum admission requirements set by the school or program. Some programs may have minimum test score or GPA requirements or in-state residency requirements (usually only taken into account for state funded public institutions) that when not met may cause the application to be rejected for not meeting minimum standards by the admission officer and prevent further review by an admission committee. If the application is submitted for a school or program with an open admission policy or an admission policy

guaranteeing admission based upon minimum academic standards and all requirements are met, the acceptance process including notifying the applicant of his or her acceptance status is initiated by the admission officer. Many junior colleges or community colleges utilize an open admission policy in which a certificate of completion of high school or General Equivalency Diploma (GED) is all that is required for admission. Also, many public state-funded institutions offer admission to all in-state applicants who meet minimum GPA and/or standardized test score requirements. State-funded institutions may have a separate admission process established for non-residents of the state which may include further review of out-of-state applicants who meet minimum academic standards defined by the institution by an admission committee or admission director. This further review may include, but is not limited to, evaluation of an admission essay, consideration of legacy status, or a holistic review process including an interview of the applicant.

If the application is submitted for competitive entry into an institution or program, the file is reviewed by an admission committee after all initial processing has been completed by an admission officer. Admission committees may review various aspects and qualities of an applicant, and many claim to use a holistic review process to assess the applicant's overall suitability for the program. Supplemental documents such as essays, resumes, letters of recommendation, or documentation of field experiences and observations may be considered. Interviews or skill assessments may be conducted to identify particular strengths and weaknesses of the applicant pertaining directly to the program for which he or she is applying. For competitive entry schools and programs, final decisions are made by the admission committee for the school or program, and notices of acceptance and rejection are initiated by a admission

committee chair. Competitive entry is commonly used at private institutions, highly selective institutions, and for graduate and professional academic programs.

Case Study Institution's Freshman Admission Process

The southern institution used for this case study is a four-year, public university. It enrolls more than 24,000 students annually at the undergraduate, graduate, and professional levels combined. It offers programs through multiple regional campuses within the state as well as online and hybrid programs and is comprised of 15 academic divisions. Admission processes vary significantly at the graduate and professional levels; therefore, this researcher will focus solely on admission officers who process freshman admission applications to prepare the case study concerning implicit bias since this admission process is more defined. At the institution, there are two types of admission personnel, admission counselors (recruiters) and admission officers. Two freshman admission processes exist, one for in-state residents and one for non-residents.

The admission application for all freshman students opens each July. Applicants submit an application online, and the application is the same for both in-state and non-resident students. Applicants are required to submit an application fee, official high school transcript showing completion of six semesters of high school coursework and completion or planned completion of an identified curriculum established by the higher education institution, and, in most cases, an official ACT or SAT score. Once all required documentation has been received by the institution's admission office, the assigned admission officer reviews the applicant's credentials to determine if the applicant meets one of the minimum admission criteria guaranteeing admission. Applicants who meet one of the guaranteed admission criteria are sent an acceptance letter. Applicants who have not received their high school diploma and completed the identified

curriculum are sent provisional acceptance letters stating the requirements necessary for full admission into the institution. In-state residents are guaranteed admission if they meet one of five defined minimum admission criteria options which include a minimum GPA on pre-defined coursework or high school rank and/or a minimum ACT or SAT score in Table 1. Non-residents are guaranteed admission if they meet one of the five defined minimum admission criteria which include a minimum GPA on pre-defined coursework and a minimum overall high school GPA and/or a minimum ACT or SAT score in Table 2. Both in-state and non-resident student athletes have the option to meet NCAA Division I standards for “full qualifiers” or “academic redshirts.”

Table 1

Minimum Admission Criteria Guaranteeing Acceptance for In-State Applicants

Option	GPA on identified high school curriculum	High school class rank	Standardized test score
1	≥ 3.20	-	-
2	≥ 2.50	-	ACT Composite ≥ 16 or Old SAT ≥ 770 or New SAT ≥ 860
3	-	Top 50%	ACT Composite ≥ 16 or Old SAT ≥ 770 or New SAT ≥ 860
4	≥ 2.00	-	ACT Composite ≥ 18 or Old SAT ≥ 860 or New SAT ≥ 940
5	Applicant meets NCAA Division I standards for student athletes who are “full qualifiers” or “academic redshirts.”		

Note. Old SAT scores refer to the sum of the scores on the critical reading and mathematics sections, and new SAT scores refer to the sum of the scores on the evidence-based reading and writing and mathematics sections.

Table 2

<i>Minimum Admission Criteria Guaranteeing Acceptance for Non-Resident Applicants</i>			
Option	GPA on identified high school curriculum	Overall high school GPA	Standardized test score
1	≥ 3.20	≥ 2.75	-
2	≥ 2.50	≥ 2.75	ACT Composite \geq 16 or Old SAT \geq 770 or New SAT \geq 860
3	≥ 2.00	-	ACT Composite \geq 22 or Old SAT \geq 1020 or New SAT \geq 1100
4	≥ 2.00	≥ 2.75	ACT Composite \geq 18 or Old SAT \geq 860 or New SAT \geq 940
5	Applicant meets NCAA Division I standards for student athletes who are “full qualifiers” or “academic redshirts.”		

Note. Old SAT scores refer to the sum of the scores on the critical reading and mathematics sections, and new SAT scores refer to the sum of the scores on the evidence-based reading and writing and mathematics sections.

If an applicant, either in-state or non-resident, who submits all required documentation does not meet one of the admission options guaranteeing admission after submitting an official high school transcript showing six semesters of completed high school work, he or she is sent a letter stating the admission decision has been postponed and is instructed to submit an official high school transcript after grades from the first semester of his or her senior year are available as well as any updated ACT or SAT scores. Any updated document is evaluated by the admission officer, and if receipt of one or both of these documents shows the applicant has met one of the admission criteria in Table 1 (for in-state applicants) or Table 2 (for non-residents), the applicant is sent a provisional acceptance letter stating the requirements necessary for full admission into the institution.

If an in-state applicant does not meet one of the admission criteria in Table 1 after the seventh semester of high school coursework, he or she is instructed to complete an ACCUPLACER exam, which was designed by the College Board and uses placement assessments and diagnostic assessments to assess an applicant's readiness to attend college, at an approved higher education institution within the state (The College Board, 2017). The in-state applicant's ACCUPLACER performance, GPA, and ACT or SAT are reviewed again by the admission officer, and the in-state applicant may be either provisionally admitted or asked to complete a developmental program which consists of four courses at a local community college during the summer after high school graduation. If the applicant fails one or more of these courses, he or she is denied admission to the university as a traditional freshman student. These applicants are encouraged to complete coursework at the community college level and reapply for entry into the university as a transfer student at a later date.

If a non-resident applicant does not meet one of the admission criteria in Table 2 after the seventh semester of high school coursework, he or she is asked to complete a Nonresident Admission Application Supplement. This supplemental information is reviewed along with all other documentation received by a non-resident subcommittee and ranked. A separate provost committee, comprised of university leadership, determines the minimum rank of non-residents that will be admitted for the upcoming academic term. All non-residents reviewed by the non-resident subcommittee who meet the minimum defined rank are sent either full or provisional admission letters based upon the requirements they have already completed.

Identified Biases in Higher Education Admission Processes

Literature related to higher education typically does not concern the admission process itself. When researching bias and college admission, literature exists related to **standardized**

tests (Fenderson & Fenderson, 2010; Hodara & Lewis, 2017; Improving the Effectiveness of Placement Tests, 2013; Nankervis, 2011; Sackett, Kuncel, Arneson, Cooper, & Waters, 2009; Soares, 2012; & Sternberg, 2012), **interview bias** (Alweis, Fitzpatrick, & Donato, 2015; Lumb, Homer, & Miller, 2010; Pau, et. al., 2013; & Reiter & McConnell, 2014), and **essay bias** (Greenwald & Banaji, 1995; Kirshner, Saldivar, & Tracy, 2011; & Paley, 1994) with respect to their influence on admission decisions, but again, these do not pertain to the admission process directly.

Standardized Test Bias

Though many oppose the use of standardized tests in college admission decisions, most institutions rely on these measures during the admission process primarily because standardized tests can be used to compare applicants at the national level (Fenderson & Fenderson, 2010; Hodara & Lewis, 2017; Nankervis, 2011; Sackett, Kuncel, Arneson, Cooper, & Waters, 2009; Soares, 2012; & Sternberg, 2012). Proponents of standardized test scores' role state high school grade point averages can vary greatly in their prediction of collegiate success. Opponents of standardized tests believe they can be gender, class, racial/ethnic, and/or language biased. Hodara and Lewis (2017) conducted a research study which determined high school grade point average was more predictive of college success for recent high school graduates, those who graduated within a year of entering college; however, high school grade point average did not consistently account for variance in student performance for those who entered college more than a year after completing high school. Their research study yielded consistent results for both urban and rural students in the state of Alaska; however, the study's findings have limitations because only data from Alaskan students was used (Hodara & Lewis, 2017). Some institutions have begun experimenting with admission criteria options that do not consider standardized test

scores based upon research such as this. Multiple studies at the national level would likely be needed in order to produce similar results before the majority of higher education institutions would agree to admit and place students without using standardized tests.

The institution used in this case study utilizes ACCUPLACER to determine whether to accept an in-state applicant who does not meet one of the pre-defined minimum admissions criteria. ACCUPLACER, a test developed and administered by The College Board, is one example of placement tests used to determine where a student should start in the academic curriculum, especially in the areas of English and mathematics (Improving the Effectiveness of Placement Tests, 2013). Because institutions are required to report on student learning outcomes more and use data related to student progression to show productivity, many are focused on successful remediation and development of underprepared students. The College Board asserts ACCUPLACER is a reliable and valid tool utilized to place students in developmental courses because it uses multiple measures to place students in the appropriate courses (Improving the Effectiveness of Placement Tests, 2013). The College Board claims it is imperative higher education institutions use multiple measures, including measures of non-cognitive abilities, to assess potential students, and it cites the Seymore-Campbell Matriculation Act, a case brought forth by the Mexican American Legal Defense and Education Fund because some thought standardized tests used for college admission in California were language biased, in its reasoning to do so (Improving the Effectiveness of Placement Tests, 2013). The California courts ruled standardized tests used to place students had to be examined and approved by the state to certify they were valid, reliable, and not language biased (Improving the Effectiveness of Placement Tests, 2013). To ward off bias present in the test questions themselves, The College Board suggests institutions purposely select questions related to students' backgrounds which can

provide valuable information to be utilized along with the diagnostic and skills scores when considering placement of students (Improving the Effectiveness of Placement Tests, 2013). Hodara and Lewis (2017) agreed with the consideration of applicants' non-cognitive abilities, characteristics that do not include metric measurements such as GPA and standardized test score, to predict success because in their study, GPA and standardized test score accounted for less than a quarter of the variance in student collegiate performance asserting non-measurable qualities such as ambition and motivation could significantly affect outcomes.

Most undergraduate applicants are required to submit either an ACT score or SAT score to be considered for entry into an institution or program. The ACT claims it measures skills currently taught in high schools throughout the United States, surveying secondary education personnel to accurately design a test that measures postsecondary success (ACT, 2017). Critics of the ACT state it is biased towards students from lower socioeconomic statuses (Fenderson & Fenderson, 2010). Camara and Harris (2015) state the ACT is a reliable and valid test to predict student success and explain the test's consistent scoring scale supports the idea that colleges can depend on the results to appropriately admit and place students in coursework. In an effort to promote equity, the ACT started the ACT Center for Equity in Learning which publishes blog posts and reports addressing equity and social justice issues; however, most of these reports relate to higher education access centered around college readiness and ACT access attributed to the cost of the test (ACT, 2017). In one blog post, the ACT (2017) defines underserved students as first generation, low socioeconomic status, and/or identifying as a racial/ethnic minority, and states the majority of these underserved high school students are not prepared to complete traditional freshman college coursework. However, in the blog post, the ACT attributes the barrier present hindering these students' success is reduced access to college and career

guidance; it does not admit test bias as a cause for reduced scores for these students (ACT, 2017).

One of the most widely used standardized tests for college admission, the SAT, is suspected of bias on many fronts. Nankervis (2011) claims the SAT quantitative portion is biased towards males claiming males score one third of a standard deviation higher than females in a national study. Nankervis (2011) states stereotype threat could be a major factor in perpetuating gender bias on the math section of the SAT which is akin to self-fulfilling prophecies being related to gender bias mentioned previously in this dissertation (Latu, Mast, & Stewart, 2015). Sackett et al. (2009) found correlation between SAT score and socioeconomic status, but they also found significant correlation between SAT scores and collegiate GPA indicating the SAT may be a good predictor of success in college but may not equitably serve students of low socioeconomic statuses. Soares (2012) presents statistical evidence indicating the SAT verbal test is biased toward white males and states high school grade point average is more predictive of college success than the standardized admission tests currently available.

Soares (2012) promotes the idea of test-optional higher education admissions agreeing with Hodara and Lewis (2017) and Sternberg (2012) that non-cognitive abilities may contribute more to collegiate success. Nankervis (2011) warns test-optional admissions may cause institutions to slide in collegiate rankings since many of these ranking organizations include student's test scores submitted for entry into the scores rubrics used to assess colleges. Soares (2012) and Nankervis (2012) imply standardized test scores not meeting defined minimum standards, which are used by admission officers to deny applicants, are perpetuating bias and inequity among applicants. He claims socioeconomic status accounts for more variance in SAT scores than high school GPA furthering his argument that the SAT is socioeconomically biased

and should not be heavily considered in the admission process (Soares, 2012). He postulates higher education institutions that consider SAT scores heavily in admission decisions will consistently increase the socioeconomic level of each future class of students leading to less student diversity (Soares, 2012). Sternberg (2012) participated in three research projects – the Rainbow Project, the Advanced Placement Project, and the Kaleidoscope Project – all of which were developed as alternate ways to conduct higher education admissions assessing non-cognitive abilities such as creativity and reasoning skills. He claims the final project, the Kaleidoscope Project, predicted collegiate success more than admission metrics, increased student engagement and involvement outside the classroom, was not subject to racial/ethnic bias, contributed to increased mean SAT scores and collegiate GPAs for subsequent class of entering freshmen, diversified the racial/ethnic makeup of the applicant pool, and was better received by stakeholders (Sternberg, 2012). It should be noted that the Kaleidoscope Project was severely limited since only one institution was researched for the study and applicants were able to choose to follow the established application protocol or participate in the Kaleidoscope Project allowing applicants to select an admission criteria they would increase their chance for admission (Sternberg, 2012).

Interview Bias

Interview bias in admissions has also been explored especially as it relates to medical school admissions. Gamez-Vargas & Oliva (2013) found that social background did not directly affect interview scores for medical school applicants and stated structured interviews can rid the interview process of bias related to social issues. The multiple mini interview (MMI) has gained traction in the medical school community and typically consists of seven to ten short interviews with various faculty, students, and administrators. Pau et al. (2013) stated the MMI did not

promote bias related to race, gender, or socioeconomic status and was not as susceptible to coaching or previous interview experience as longer full-length interviews. However, Alweis, Fitzpatrick, and Donato (2015) suggest the MMI, while not susceptible to interviewer bias, is susceptible to systematic bias stating biases exist against international applicants and introverted personality types. Reiter and McConnell (2014) conducted a study comparing the MMI to objective structured clinical examinations (OSCEs), which are assessments used to evaluate clinical skills of students in health-related academic programs consisting of multiple rounds of patient simulations where human actors portray patients citing the MMI process was not as objective as the OSCE process. These authors claimed an objective assessment would result in unanimous votes by an admission committee and state both the MMI process and OSCE process allowed for bias based upon the broad range of scores given to applicants and/or students (Reiter & McConnell, 2014). Reiter and McConnell (2014) stated while bias exists in both processes, the MMI has been proven to be indicative of medical student success within the academic curriculum when used properly just as the OSCE process has been proven to be both reliable and valid when assessing medical student clinical success. They stated that, while imperfect, both forms of assessment should still be used in medical school admissions and curriculums to evaluate applicants and students (Reiter & McConnell, 2014). The author of this dissertation is aware that some medical school admission chairs will standardize MMI interview scores using statistical analyses in an effort to reduce both interviewer biases and systematic biases present in the interview process.

When considering interview bias, elements of bias previously mentioned in this literature review concerning employment decisions may also be present in college admission processes. Gender bias predicated on self-fulfilling prophecies and stereotype threat could significantly

affect college admissions, especially for graduate and professional programs, which utilize interviews more than undergraduate admissions (Latu, Mast, & Stewart, 2015; Mendick & Moreau, 2013; Penta, 2010; & Robinson, 2016). Non-heterosexual applicants could also be subject to interview bias in conservative areas of the country or at conservative institutions just as homosexual job applicants were subject to sexual orientation bias in employment (Nadler, Lowery, Grebinoski, & Jones, 2014).

Essay Bias

When researching essay bias, the literature reviewed supports the presence of gender bias and socioeconomic status bias. Because socioeconomic status and race/ethnicity are sometimes closely related, the argument for the existence of essay bias could also extend to include racial/ethnic bias. Kirshner, Saldivar, and Tracy (2011) focused their research on first generation students stating many first generation students lack the guidance needed to successfully navigate the college admission process. In their work with first generation youth, they noticed many who lacked guidance would wait until close to the deadline to write their admission essays and submit their college applications (Kirshner, Saldivar, & Tracy, 2011). Late submission of the college application could reduce the amount of guidance and support an admission officer may be able to offer an applicant. Greenwald and Banaji (1995) surveyed research related to implicit bias and noted essays written by attractive individuals, both male and female, were generally rated higher when pictures of essay writers were supplied to evaluators; the researchers postulated that attractiveness was positively associated with traits such as trust, humor, and intelligence. This phenomenon also occurred when male evaluators judged essays written by female writers, rating the essays of more attractive females higher than those deemed to be less attractive (Greenwald & Banaji, 1995). In some cases, implicit gender stereotyping was evident because identical

essays submitted under both a male and female name were rated higher when submitted under the male name (Greenwald & Banaji, 1995).

Paley (2004) presented research directly related to college admission application essays. In her research, she stated applicants were asked to respond to a prompt in an open manner and instructed to focus more on content rather than mechanics. In her study, she worked with four high school students and four admission officers throughout the United States, three of whom were admission officers at private institutions. Essays written by students were submitted to admission officers at higher education institutions at which they did not plan to apply. Paley conducted an open forum with the high schools students to make concept maps to facilitate the writing process. Discussions with the high school students revealed some felt negatively exposed by and uneasy throughout the essay writing process and discussed ways in which they tried to tailor the essay towards what they believed an admission officer wanted to read rather than honestly answering the prompt provided. When discussing the essays submitted with the admission officers evaluating them, the admission officers did make comments regarding mechanics and technical writing aspects of the essays even though the prompts instructed students to focus more on content. Paley (1994) believed noting issues with mechanics was related to socioeconomic status bias and noted the power dynamic present in the college admission essay evaluation process.

Best Practices

“In the practice of their professions, AACRAO members carry responsibilities for conduct that balance societal, institutional, individual, and professional interests” (AACRAO, 2010). AACRAO (2010) identified primary ethical principles to encourage admission officers to be fair, honest, respectful, and consistently assess their performance to ensure their personal

beliefs and motivations do not negatively or unfairly affect stakeholders. AACRAO (2010) also provided 19 standards of practice to guide admission officers in their professional practice including “[promoting] broad and equal access to higher education for qualified students” and “[adhering] to principles of nondiscrimination and equality within the framework of institutional mission and prevailing law.” This researcher asserts admission officers should be encouraged to continuously study and reflect upon their processes, communications with applicants, and published reports in the field to stay abreast of emerging trends and improve their daily productivity and performance to serve applicants.

Possible Systematic Biases

Often higher education institutions utilize electronic application systems requiring applicants to submit applications online only. This can be a detriment to applicants of lower socioeconomic statuses, older applicants, visually-impaired students, and rural students with limited internet access (Gamez-Vargas & Oliva, 2013; Kirshner, Saldivar, & Tracy, 2011; Land & Ziomek-Daigle, 2013; & May & LaMont, 2014). Because most applicants are required to submit standardized test scores, applicants requiring test accommodations could experience systematic bias as well. Applicants who have non-traditional secondary education experiences such as high school abroad or those home-schooled may also be subject to systematic bias and be presented with roadblocks during the application completion process (Turner, 2016).

CHAPTER 3

METHODOLOGY

In conducting this research, the researcher aimed to have productive discussions with admission officers to understand and address implicit biases that may be present in collegiate admissions processes. One admission office was examined which processes freshman applications and is subject to a less-selective admission criteria in an effort to concentrate on the topic of implicit biases held by the study participants. Focus groups were conducted in order to identify common themes presented by the participants and evaluate if/where implicit biases affected the admission process. As a result of this research, the researcher believes this study will contribute to the body of work relating to best practices in higher education admissions, bring awareness to admission officers' implicit biases, and minimize the effects of these biases on the admission process. The researcher postulated some study participants would believe systematic biases affect the admission process, either solely or in conjunction with admission officers' implicit biases, and planned to explore the presence and challenges of systematic biases on higher education admissions. Through awareness of implicit bias and its potential effects on admissions, higher education will be more accessible to underrepresented groups and promote positive growth in regards to diversity and inclusion.

Research Design

The researcher conducted a case study using the admission office of a single public southern university. There were no supervisory personnel in the focus group discussions to

facilitate a more open discussion and reduce research subjects' fear of disciplinary action for expressing their thoughts. Two joint interviews were conducted with the Associate Director of Admissions and Assistant Director for Admissions who supervise these admission officers rather than have them participate in the focus groups since they consented to participate in the research. One week prior to the introductory session, an email was distributed to all identified admission officers and the Associate Director and Assistant Director of Admissions at the institution to (a) introduce the topic of implicit bias and explain the purpose of the study, (b) give an overview of the requirements and expectations of research subjects, (c) distribute an approved consent form which included a statement concerning confidentiality of the discussion, and (d) ask those interested in participating to complete a single IAT from the Other IATs column in Table 3 and either return the results of the test and consent form via email or bring them to the first scheduled discussion session. The Associate Director of Admissions and Assistant Director for Admissions participated in a joint interview on the same day as the initial focus group session and covered the same material presented in the focus group session. This researcher facilitated all discussions and limited each discussion to no more than one and a half hours long. The researcher made notes regarding physical attributes of the study such as body language and each participant's physical location in the room. This time limit encouraged all participants to stay on topic (Bogdan & Biklen, 2007). In this initial discussion, the researcher defined explicit bias, implicit bias, and systematic bias. The focus group discussion and interview were audio recorded, and study participants were asked to identify themselves before they speak during the discussion to facilitate accurate transcription of the session conducted by a third party transcription service (Bogdan & Biklen, 2007). However, this did not happen throughout the discussion and was notated with field notes. The researcher purposefully selected this

methodology of recording the sessions over the option to include a secondary note taker in the focus group in an effort to reduce the number of external personnel in the room. The researcher believed study participants might be more open in their discussions if external influences were limited since they already had an established personal history with each other. The focus group discussion was informal but included the following topics: (a) previous knowledge of implicit bias; (b) professional background and experience in admissions; (c) institution's freshman admission process; (d) the institution's strategic plan concerning access, diversity, and inclusion; and (e) an initial discussion of possible implicit bias and/or systematic bias present in the admission process.

Based upon the recommendations of the Kirwan Institute for the Study of Race and Ethnicity and other literature reviewed, the IAT was the test used to assess implicit biases in participants interviewed for this qualitative study (Bartlett, 2017; Blanton, 2015; Charles, 2009; Forscher et al., 2017; LeLacheur, 2008; Nadler, Lowery, Grebinoski & Jones, 2014; Staats, 2014; Staats, Capatosto, Wright, & Contractor, 2015; Staats, Capatosto, Wright & Jackson, 2016; & Vanoy, 2011). After the initial focus group and joint interview, the researcher asked each study participant to complete at least one IAT test from the first and second column in Table 3 within two weeks of the initial discussion and submit the results of the two tests taken prior to the second interview and focus group. Because gender and race have been the more heavily researched areas of implicit bias and tend to be the more obvious forms of explicit bias as well, the researcher thought it best to have test results from each participant in these areas to facilitate a more complete discussion when aggregate results were presented. Data was compiled and submitted by the admission officers and Associate and Assistant Directors. The researcher

analyzed the transcriptions of the initial discussions to identify themes to present at the second discussion.

Table 3

Pre-Selected IATs for Research Participants

Gender Based IATs	Racial/Ethnic Based IATs	Other IATs
Gender-Science IAT	Native IAT	Sexuality IAT
Gender-Career IAT	Arab-Muslim IAT	Religion IAT
	Skin-tone IAT	Disability IAT
	Asian IAT	Weight IAT
	Race IAT	Age IAT
	Weapons IAT	

Note. Each research participant was asked to complete at least one IAT from each column for a total of three IATs.

A similar protocol was followed for the second round of discussions concerning the way the discussion was moderated, recorded, and transcribed. Because the Associate Director and Assistant Director participated in the research study, the researcher scheduled a joint interview with them immediately preceding the second focus group session and covered the same material presented in the focus group session. In the second discussion, the researcher presented aggregate findings to both the admissions officers and the directors and served as the facilitator. Each session was audio recorded and transcribed just as the initial discussions. In the second discussion, the topics covered were: (a) whether admission officers' perceptions had changed concerning their implicit biases on the admissions process after discussing the group's aggregate results of the IATs; (b) how admission officer implicit bias may affect the process at their institution in the freshman admission process; (c) systematic bias present in the admission process; (d) whether implicit bias, systematic bias, or both significantly affect the admission

process; and (e) how the professional practice of higher education admissions can be improved to reduce the effects of both implicit bias and systematic bias.

Research Participants

I used a single admission office from a public southern university. I recruited the Associate Director for Admissions, Assistant Director for Admissions, and all admission officers who process freshman admission applications for both in-state applicants and non-residents, including international students, for the study. The researcher obtained complete participation of these seven individuals in the focus groups. Through participation, the researcher believes the perspectives presented by admission officers who work with separate populations and admission criteria enhanced the discussion and accounted for biases not yet hypothesized. The Assistant Director processed applications as well as performing supervisory duties of the admission processing staff, but the Associate Director did not process applications at the time of the study. The researcher believes it was vital for the directors to participate in the study as they were able to provide more information concerning the university's admission process and its role in meeting the educational mission and strategic plan of the institution as well as speak more to the initiatives used by the institution to promote diversity and inclusion.

Data Collection

I conducted two joint interviews with the Associate Director of Admissions and Assistant Director for Admissions who supervise the admission officers rather than have them participate in the focus groups and also conducted two focus groups with the admission officers who opted to participate. I was the facilitator of all discussions and audio recorded the interviews and focus groups. These recordings were transcribed by Rev.com, an online transcription service. This

service claims to be both secure and confidential, and electronic files are sent using encryption (How It Works). The researcher chose not to have research participants review the transcripts due to the group nature of the discussions and felt it was not appropriate to allow participants to review the entire transcript for their group. Transcriptions could not be divided by participant in a sensible manner due to the group nature of the discussions. After the initial focus group and interview, the researcher reviewed the IAT results submitted by each research participant and compiled all submitted results by individual test and test types (gender, racial/ethnic, and other) to present at the follow up discussions.

Data Analysis

The researcher developed a coding system and categories to organize the data from the interviews and focus groups during transcript analysis (Bogdan & Biklen, 2007). Of special interest by the researcher were the extremes presented in the discussions, the commonalities as well as dichotomous viewpoints, to identify areas of agreement and disagreement. To begin, the researcher identified areas of mutual agreement and disagreement within the individual focus groups from the first day of interviews. Viewpoints were compared across the two groups to analyze agreement and disagreement. Much of the first focus group and joint interview was used to establish good rapport with the participants. A similar method was used when analyzing responses from the second set of interviews comparing responses within groups and then across the two groups. Comments were compared to those of the first set of interviews to determine if any participants' opinions had changed since the first interview after reflection on their own IAT results. Because research on the topic was not prevalent at the time of the study, the researcher attempted to utilize areas where most or all study participants agree as baselines to understand the perspectives of the individuals and how they relate to the majority thought. Non-verbal

interactions between participants were also noted and compared to the transcription for further analysis of the situation and setting of the research.

Limitations

The research was limited in its scope because only a single admission office was used for the study. Regional, institutional, and cultural norms had a significant impact on the results as well as state issued mandates. Also, the admission criteria utilized by the admission officers in this study was fairly open; therefore, the effect of implicit bias on selective admission processes was not researched in depth and neither was graduate or professional admission processes. The study was also limited because the perspectives of others involved in the admission process – applicants, admission committee members, deans of admissions, and so on – were not be expressed in the discussions. These stakeholders may have experienced the effects of implicit bias or systematic bias differently. Lastly, the researcher attempted to limit personal thoughts on biases present in the admission process to gain new insights and expand base of knowledge to improve her own practice. In order to accomplish this, many questions in the discussions were semi-structured to allow for more authentic discussions of the topic.

CHAPTER 4

RESULTS

The research was conducted using a group of study participants representing both biological sexes, two racial groups, and a wide age range with diverse professional backgrounds as most only have admissions experience at the study institution. Because of this, in discussions, few had other experiences in admission to consider when responding. Throughout this research, it was determined admission officers function differently among institutions and admission processes vary greatly. However, the researcher believes this study begins a discourse towards researching the topic further.

Research Participants

The Associate Director, Assistant Director, and five freshman admission officers participated in this research study. All study participants were admission processing staff. None were involved in recruiting students to the institution. The gender breakdown of participants included two males and five females. The racial breakdown of participants was four Black or African American and three White. Study participants varied in age. Years of experience in higher education admissions ranged from less than one year to 18 years. All but two had experience in college admissions only at their current institution. One of the two had experience at another institution and had worked as a recruiter. Throughout the discussion of results, the gender neutral pronouns *zie/zim/zir/zieself* will be used to protect the identity of the research participants.

Initial Joint Interview and Focus Group Findings

Research Questions

Research questions for the two groups interviewed were similar. Participants in both groups were initially asked their name, job title, and to describe their professional experience related to higher education admissions including years of experience and current primary job responsibilities. Next, each participant was asked about their level of exposure to the topic of implicit bias and asked to share test results if they wanted to do so. The first group was asked a more specific question regarding the possibility of implicit biases changing throughout an individual's life span; however, this question was not explicitly asked of the second group due to time constraints. After this initial discussion of implicit bias, both groups were asked to describe the freshman admission process at the institution including the responsibilities of admission officers in the overall process and admission standards for the institution. Both groups were given the definition of systematic bias and asked whether these systematic biases could affect admissions at the institution. The final topic covered for both groups was awareness of the institution's strategic plan and its specific areas related to access, diversity, and inclusion. Participants were asked whether they, as individuals or as a group, could assist or hinder the institution in meeting its goal.

Implicit Bias

Prior to the first joint interview and focus group, study participants were asked to complete a single IAT related to sexuality, religion, disability, weight, or age. One participant did not complete the IAT prior to the first discussion; however, they provided results after the first session. Among the other six subjects, all but the disability IAT was taken. Results from the tests, listed in Table 4, varied from no preference between identified groups to moderate

preference between identified groups. Prior to their participation in this research study, most study participants had minimal or no exposure to the topic of implicit bias. One participant stated, “I had no knowledge of it until today, to be honest with you.” However, after learning the definition of implicit bias, most could give an example of experiencing this type of bias in their lives or seeing another be the victim of implicit bias. One participant alluded to it being common but not overt in their geographic area commenting, “I’ve never heard of it specifically called that. But I am from [omitted], so, like, growing up in a culture where those things are very prevalent.” One participant immediately self-reflected on the prevalence of implicit bias explaining, “Because a lot of time I think, and I know we’ve all been guilty of being biased towards somebody else just because of the way they are. And we might not say it but you’re still thinking it sometimes.”

Table 4

Results for Other IATs Taken by Participants

IAT Title	IAT Result
Age IAT	Slight Automatic Preference for Young People over Old People
Religion IAT	Slight Automatic Preference for Christianity over Islam Moderate Automatic Preference for Christianity over Islam
Sexuality IAT	No Automatic Preference between Straight and Gay People No Automatic Preference between Straight and Gay People Moderate Automatic Preference for Straight People over Gay People
Weight IAT	Moderate Automatic Preference for Thin People over Fat People

Two research participants believed implicit bias existed but were skeptical of the validity of the IAT indicating it may be a test of hand-eye coordination rather than implicit bias. One stated, “It’s like are they trying to confuse my hands,” while the other said, “I do think if you had someone that was just a complete racist sit down...and concentrate on it they could come out

looking like roses because if they concentrated on it then they...could manipulate it.” The researcher indicated literature existed that also posited this viewpoint as it was alluded to by Staats, Capatosto, Wright, and Jackson in a State of the Science Report released by the Kirwan Institute (2016). In discussing zir individual IAT results, one study participant determined most who shared results with preference for one group over another showed preference for the group to which zir belonged commenting towards another participant:

I think you see a little bit of yourself in your answers because like, you're heterosexual [and] you're thin. But I think your answer kind of reflects a little bit of who you are...even though you don't want it to...it still comes out.

This observation agreed with the Orthodox social unconsciousness theory mentioned in chapter two and implied all individuals may possess implicit bias against those who are different from themselves agreeing with Greenwald and Banaji's theory (1995).

University's Freshman Admission Process

Research participants agreed the university followed the admission process outlined in chapter two, but certain processes were clarified. All study participants agreed email was the primary form of communication with applicants, and applicants could view their current application and admission status via a self-service portal. Admission counselors (recruiters) could also use this system to check the status of applicants. All admission officers are uniformly trained, and their work is reviewed for a certain period of time when first hired to reduce inconsistencies in the admission process. Both admission officers and admission counselors have targeted numbers they are encouraged to meet. Residency determination (in-state, non-resident, or international) is made prior to the admission officer processing the application, and the determination is assigned by the application system based upon targeted questions on the

application. If there is a question regarding residency, a separate admission officer who was not interviewed works to resolve these questions and assign the application appropriately. The committee that ranks non-residents who do not meet the guaranteed admission criteria is made of faculty and staff across the institution, and admission officers cannot serve on this committee. A separate committee comprised of university leadership determines the minimum ranking of non-residents who have been reviewed by the subcommittee that will be admitted, and all applicants who meet this minimum rank are admitted. An audit process exists to ensure application documents are processed timely and in the order received.

Possible Biases in the University's Freshman Admission Process

Research participants unanimously agreed their implicit biases had minimal effect on their institution's freshman admission process because: (a) admission decisions for all freshman applicants must adhere to a minimum stated GPA and, if necessary, test score requirement determined by the state governing board – for in-state applicants – or the institution – for non-resident applicants; (b) applicants are assigned to admission officers based upon residency status and last name; (c) admission officers are uniformly trained and evaluate applicant documentation for complete applicants in the order received; (d) non-resident freshman applicants ranked by the subcommittee are processed similarly as in-state residents by the admission officers; and (e) admission officers do not recruit applicants. The admission officers commented utilizing lower grades to meet the GPA of the identified high school curriculum when higher grades were available could adversely affect applicants but stated this could be easily audited if an admission officer was suspected of engaging in this practice. One research participant commented:

When we first start...our work is actually checked to make sure that we are...doing it correctly, calculating the correct and highest GPA in any of the types of ways that we

evaluate, so there are, I think, are good checks and balances to make sure...we're following the protocol.

All admission officers agreed they rarely reviewed the admission application; instead, they evaluated the high school transcript and viewed the application only if an applicant's senior schedule was not printed on the high school transcript, which they believed further minimized the effect of their implicit biases on the freshman admission process. One stated, "The only thing I look at the application for is their senior schedule," and another commented, "I mean it's there if we need to look up something, but there's not anything that I need...So it's very straightforward." The group consensus indicated admission officers' implicit biases could affect the admission process if admission officers were required to view an applicant's entire application, but this did not occur in the institution's freshman admission process. For example, if an admission officer is responsible for determining residency status, ensuring all required documents were received, and evaluating for minimum admission criteria, zie would most likely be required to view the entire application packet. Zie may take note of the applicant's gender, race, etc. and – if implicitly biased against the applicant in any way – may process the application differently. Unlike the admission officers interviewed, the researcher believes admission officer implicit bias could affect the admission process at the institution. The researcher agrees with many of the research participants that compartmentalization of tasks and documents within the process as well as the ability to audit it could reduce the affects of admission officer implicit bias; however, many documents reviewed by the admission officers, such as high school transcripts, give demographic information about the applicant including gender and race. Unexplored implicit biases could still have an adverse effect on admissions at the institution.

After a discussion of systematic bias, research participants agreed little systematic bias was present in admission officers' roles within the institution's freshman admission process because: (a) application documents are processed in the order received which can be confirmed using available reports; (b) admission officers cannot serve on the non-resident subcommittee; (c) a separate provost committee determines the minimum non-resident rank which will be admitted; and (d) admission officers communicate with applicants in a standard way, via e-mail. It was postulated systematic bias could be present elsewhere in the freshman admission process due to in-state applicants having the option to complete a particular placement test for admission. Because only in-state residents are able to take the ACCUPLACER exam to gain admission to the university, one subject believed non-resident freshman could be at a disadvantage. The admission officers stated systematic bias in the recruitment process by admission counselors could be present because counselors may recruit in more affluent areas assuming applicants in those areas might have better GPAs and test scores in an effort to meet their quota. However, upon reflection, the researcher believes this also indicates implicit bias because literature cited states there can be a strong relationship between race and socioeconomic status. The admission officers briefly commented on being encouraged to process documents expeditiously for some applicants based upon their parents' ties to the institution, such as financial donors, but felt there was little bias in this practice because the applicants were also required to satisfy specific admission criteria to be admitted. One study participant explained:

I've gotten an email that [implied]...I don't want to say push a student through because they do have to meet [minimum admission criteria]...I mean they would've eventually have been admitted...it wasn't like we were just taking somebody that had a 1.5 [GPA].

The researcher believes this may be true for applicants who meet the guaranteed admission

criteria; however, this could factor into the admission process for applicants who do not meet the guaranteed admission criteria. For example, individuals on the non-resident subcommittee may assign a higher ranking if they are notified of parents' ties and donor status to the institution. Many institutions need donor support to function and recruit students. The admission officers agree that they felt they could bring examples of systematic bias to their supervisors, and supervisors would do their best to address the issues with institutional administration. Many replied with non-verbal affirmative body language after a research participant stated:

I think it would be bad to work in a place that you didn't think that you could go to your immediate supervisor... You can ask [our supervisors] any question you want, like no question is a dumb question. And so I'm very – I think we're very fortunate – to have them as our supervisors because they're very just open and honest with us.

However, one research participant implied while zie had support from zir superior, zie did not believe the institution would address issues without data commenting, “I think we're a data driven institution. If there's no data to back that, then I don't think our voice will be heard. That's just my personal opinion.” In opposition to this, another participant countered, “I would disagree, only because I've done it...I guess I should say it would depend on the situation.”

After the initial joint interview and focus group, the researcher identified areas where systematic bias could affect the freshman admission process which were not mentioned by the study participants. Systematic bias could be present in the admission process because reviewers on the non-resident subcommittee can see information on the applicant including GPA and test score in addition to their extracurricular activities, essay, etc. which could affect the rank assigned to applicants. These reviewers could theoretically inadvertently assign a higher rank for individuals with higher metrics when reviewing the subjective requirements of the applicant

perpetuating systematic biases previously mentioned where minority and lower socioeconomic applicants may have lower test scores and/or GPAs. The specific policies and procedures of the non-resident subcommittee were not completely debriefed in these interviews; therefore, the researcher postulated possible systematic biases based upon the information presented by the admission officers.

Admission officers evaluate complete applicants first before contacting incomplete applicants. One research participant stated, “When it's not peak season, [admission officers] go through and...look at file incomplete people [to] see if somebody slipped through the cracks, or do a check and balance type of thing.” Although applicants can view their completion status at any time and confirm whether required documents were received online, this quota may encourage a systematic bias that could affect underrepresented populations such as first-generation, low socioeconomic status, and minority applicants as these applicants may need more individualized support throughout the admission process from the institution. If admissions officers are only reviewing documents as they are received and not reviewing the entire application along with all documents, some applicants’ decisions may be delayed due to technical issues if the application does not correctly designate a student as complete.

Conversely, applicants with stronger support systems at home, such as those whose parents who have attended college or those who have a stay at home parent to assist them in navigating college admissions could have an advantage during the application cycle. This systematic bias could be minimized by considering various engagement plans which utilize a variety of communication methods for applicants based upon attributes identified on the application and consulting literature present in the field of diversity and inclusion to implement these plans.

Institution’s Strategic Plan and Practice

The institution's strategic plan includes a statement concerning increasing diversity at the institution among faculty, staff, and students. A discussion concerning whether admission officers could assist in meeting this goal ensued. Research participants agreed admission counselors had more influence in meeting this goal than admission officers; one research participant stated:

When we're evaluating a student's record, we don't know who or what they are. We're just looking at a transcript and evaluating. I think the recruiting side of our office has the ability to help the university meet their goal because they're going out into institutions, they're talking to students, they're selling the university to those students. I feel like they have the [ability] to help the university meet the goal...But the process inside of admissions, I don't feel like we have the possibility to help those students [and the institution] meet that goal because we don't know who the students are.

While many stated the institution encourages inclusion, none of the admission officers were aware of specific plans to address admission inclusion directly. The admission officers attend their state's professional organization's conference annually and indicated their supervisors were active in both regional and national professional organizations. A few indicated interest in learning more and becoming more active with these organizations to better the admission process at their institution and in higher education in general.

Final Joint Interview and Focus Group Findings

Aggregate IAT Results

In the final joint interview and focus group, aggregate results concerning all research subjects were presented. For the gender IATs, the results displayed in Table 5 indicated slight to strong association for females to family and males to career or females to liberal arts and males

to sciences. These results are consistent with the result trends associated with these tests on the Project Implicit website. Among the group of subjects, five of the six distinct race related IATs were completed, and results in Table 6 varied from little to no automatic preference to strong preference for various groups indicating results for race varied more than results for gender. Research participants disagreed whether they were surprised by both their own results as well as the group's results; those who were surprised mentioned specific interactions and relationships in their personal lives that were in opposition to their individual result. One participant self-reflecting, "I think bias is there; I just don't want it to be there...I think these test results are somewhat conducive of maybe my upbringing a little bit but not how I feel." Zie's body language was perceived by the researcher as being disappointed with zieself. Some participants were still weary of the IAT; one stated:

I just don't understand, I guess, how this can be accurate if like my fingers got confused and it told me I was wrong... I mean if they were telling you that you got the wrong answer when it's supposed to be how you perceive things, that's kind of interesting.

Zie argued that for the Gender-Career IAT one could see the word "management" and associate it with managing the family rather than management of others in the workplace.

Table 5

Results for Gender Based IATs Taken by Participants

Gender Based IAT Title	IAT Result	Frequency
Gender-Career IAT	Strong Automatic Association for Male with Career and Female with Family	2
	Moderate Automatic Association for Male with Career and Female with Family	2
Gender-Science IAT	Strong Automatic Association for Male with Science and Female with Liberal Arts	1
	Slight Automatic Association for Male with Science and Female with Liberal Arts	1

Note. One research participant did not submit a gender based IAT result.

Table 6

Results for Racial/Ethnic Based IATs Taken by Participants

Gender Based IAT Title	IAT Result	Frequency
Native IAT	Strong Automatic Association for American with White American and Foreign with Native American	1
Skin-tone IAT	Slight Automatic Association for Light Skinned People over Dark Skinned People	2
Asian IAT	Little or No Automatic Association between American and Foreign with Asian Americans Compared to European Americans.	1
Race IAT	Slight Automatic Preference for African Americans over European Americans	1
Weapons IAT	Slight Automatic Association of Weapons to White People and Harmless Objects to African Americans	1

Note. One research participant did not submit a racial/ethnic based IAT result.

Implicit Bias

The study participants contended admission officers' implicit biases did not affect the institution's freshman admission process because of the stated metric requirements, a check and

balance system to ensure documents are processed timely, and the reduced need to view the application itself. One study participant explained:

If there is an institution that had a holistic review process, where they were allowed to see more and know more about the student, then they probably could have a little bias toward a particular student over another student. But because our process is just black and white...I don't think we [are] ever given the opportunity to say that.

Another stated, "Well I'm sure...if they didn't have a set metric...then different people think different ways, so then I think it would be possible that that could happen." However, all agreed admission officer implicit bias could affect admission processes that required processors to review the entire application and were unable to be audited in a timely fashion to ensure equitable processing.

The consensus still existed that admission counselors' implicit biases were more likely to adversely affect the admission process than admission officers at the institution because counselors are recruiting the applicant pool; a few shared examples of their institution's counselors spending more time recruiting in affluent areas and high schools, typically private schools. One admission officer shared there is a policy for all institutions governed by the state board to attend certain high schools, though this policy could not be located in the institution's governing body's policies or bylaws. Another admission officer clarified that she believed it was an agreement between member universities in the state's professional organization for registrars and admission personnel to attend high schools and community colleges designated for certain recruitment events. Admission counselors are required to report on all recruitment activities completed, but the admission officers felt there were still inequities in the process and did not

know if a check and balance system existed to support an equitable recruitment process. One research participant stated:

I follow [admission counselors] on Instagram and...I don't see a lot of recruiting posts from [public school name omitted], but I do see a lot from...two big private schools...I don't know if I've ever seen one from...the more lower socioeconomic areas. Most of them are private schools that I see on there.

The researcher asked, “Do you feel...you should have a conversation with a recruiter and [say], ‘Hey, I saw you were in [town omitted], but..I didn't see that you went to this school. Did you go?’” One admission officer responded, “I think...we probably have the responsibility and should say something, but it wouldn't be taken [well] and...it's not [going to] help.” Another participant stated, “I feel if we saw something and we wanted to go to [supervisors’ names omitted] and them talk about it, yeah, but I don't even [know] if it would be well received if they were to go over there.” The researcher then asked if any admission officers had ever brought up the subject of inequitable recruiting to leadership. All agreed, while zir felt they could notify their immediate supervisors, zir could not affect change on the recruitment side because the two arms of the institutional admission process operated independently and believed it would agitate an already precarious relationship between the two types of staff. One admission officer stated zie believed the relationship between the admission officers and admission counselors was improving and felt it could be addressed in the future.

Systematic Bias

All research participants agreed systematic biases affected the admission process at their institution more than implicit biases. Some of the admission officers stated certain secondary schools did not appropriately counsel applicants on the core courses necessary to enter the

university, which puts individuals in that region at a disadvantage and perpetuates a cycle of reduced access to the institution. Zie explained, “I do have a preconceived notion about [high school name omitted]...It's not like the kids were dumb. It was like their school counselor had failed them miserably.” Zie stated the decision of which courses to take in high school is a shared responsibility between the applicant, their parent(s) or guardian(s), and high school counselor(s). Zie stated first generation students may be at a disadvantage because they may lack resources and information. One area mentioned in this scenario was a rural area where many were of low socioeconomic status. Also, systematic biases related to test scores and GPAs were cited as hindering the admission of individuals. Some study participants agreed racial minorities and applicants of low socioeconomic status are more adversely affected than other groups when systematic biases are considered because of research related to standardized test bias. One research participant said:

Racial minority. I can't really say gender...so I'm going to say racial minorities' GPAs and test scores are usually the lowest, and then, depending on where they're educated. So the students in the poverty-stricken area GPAs, they fall a little bit lower than other groups of minority students. So I feel like they would be at risk or affected more so than any other group of students because when you think about an institution as a whole, you want the best of the best. You want your GPA average to be high. You want your ACT average to be high. When you start selecting this group of students with these lower criteria and put them in with the mix of yours, you fear bringing your test scores and your GPAs and everything down. We don't want that, because we want our data to be that high number.

Some participants believe institutions as a whole are too dependent upon test scores and GPAs to demonstrate the quality of their student body causing the institutions to continuously increase standards and recruit high test-performing applicants, which may reduce the number of minority or low socioeconomic status students at the institution. One admission officer felt non-resident minority applicants may be most disadvantaged in the freshman admission process because all non-resident applicants are required to submit a standardized test score to be considered for admission.

The state statute allows in-state applicants whose GPA places them in the top 50% of their high school class along with a minimum test score be guaranteed admission to the university. One research participant agreed with the researcher, while this 50% rule can help account for regional differences and fair access to the institution across the state, the required standardized test score could diminish its effectiveness if the relationship between low socioeconomic status and low test scores is considered. Zie also stated that while the 50% rule could help some gain admission to the institution, it usually did not help students with reduced access to resources because most high schools do not provide class rank until the end of the senior year. Students being admitted using this criteria have a short window of time to prepare for their transition to the institution, usually the summer months between high school and fall semester freshman year. These students may not be able to find affordable housing, purchase a vehicle necessary for their commute, process the documents needed to be awarded needed financial aid, etc. and may ultimately postpone or decline their admission to the university.

Improving Institutional and Professional Practice

When asked about ways they could improve their professional practice and admission practices at their institution, most admission officers expressed a desire to do so. Some stated

they planned to be more aware of their implicit biases in case it may affect how they communicate with applicants and process admission information. One explained, “I think I will try to be more aware in my own personal self, of what I'm doing and how I'm doing it.” One admission officer stated office training for all admission officers on implicit bias would be beneficial and welcomed to prompt a discussion on the topic. Office directors echoed this desire as well stating, “I feel like with diversity and professional development, I think we can help educate the staff and decrease implicit bias within the admissions office.” One participant stated hiring a diverse group of admission officers could decrease the effect of implicit bias as well as promote an open environment for these diverse individuals to interact and learn about others of different backgrounds. This same research participant indicated staff training would be most beneficial if both admission officers and admission counselors participated together. When discussing which applicant groups may be most affected by implicit bias, there was agreement that LGBTQ+ students are heavily impacted by negative implicit bias indicating the culture of both the institution and surrounding community greatly factored into their attendance at the institution. A parallel was drawn between African Americans in the Civil Rights Era and LGBTQ+ students currently. LGBTQ+ students usually seek an inclusive institution and community with access to support resources, and one participant stated admission counselors should be aware of their possible implicit bias related to this group. One study participant stated admission officers could help combat systematic biases at the institution by clearly communicating alternative routes of admission to individuals who do not meet a minimum admission criteria when they first submit the application and felt admission officers did this often.

The institution's admission officers attend their state's professional organization's meeting, and the directors have the opportunity to participate in regional and national professional activities. One subject mentioned current conversations at the state level concerning competition between state community colleges regarding the recruitment of students in certain regions of the state versus the senior universities that can recruit statewide. Some of the four-year institutions, including the one examined in this research, have ties to community colleges in their areas. Because of this, some admission officers agreed systematic biases may be negatively affecting students at community colleges in rural areas further away from four year colleges and universities. Although some of these programs may hinder access for applicants at community colleges further from the institution, one research participant believed most partnerships between senior universities and junior colleges greatly benefitted transfer students who could be successful at senior institutions but did not meet minimum metrics – GPA and/or test score – to enter the institution directly from high school or those who needed to remain close to family due to financial or personal obligations.

CHAPTER 5

DISCUSSION

Admission officers in this case study identified more examples of systematic bias rather than implicit bias in their portion of the university's freshman admission process. The group perception was implicit bias existed in the recruitment of applicants but not in the processing of freshman applications at the institution. Most were able to identify ways to reduce the effect of systematic biases in their processes but agreed they could not address them directly. Some examples of systematic bias, such as the requirement of a standardized test score for all applicants – except in-state residents with a 3.2 high school GPA – were mandated by external entities, for instance the state governing board. While some admission officers believed the limitation of allowing only in-state freshman the option to complete the ACCUPLACER exam was a systematic bias put in place, I believe this is purposely done to allow more open admissions for in-state residents – since it is a state-funded institution – and does not necessarily indicate systematic bias since the institution's mission statement supports educating the state's population. All plan to be more cognizant of their interactions with applicants in case implicit bias is present as well as participate in efforts to reduce all biases when possible to improve admissions at their institution and in their state.

Upon review of the study transcripts and personal experiences, the researcher considers whether the participants would feel the same months after participating in this study. When comparing responses between the two focus group sessions for each group, few changes of perception of implicit bias and its effects on their admission process were noted. The interviews

occurred two weeks apart from each other. The researcher is unsure if this timeline allowed for true self-reflection especially considering many submitted the results of the second and third IATs days before the second focus group session. While systematic bias seems to be prevalent in many aspects of admissions both at the research institution and nationally, the researcher contends implicit bias affects it as well based upon her own perception of implicit bias.

In professional practice, an admission officer must be cognizant of implicit biases. While completing this dissertation, I was promoted to a newly created Director of Student Admissions position which included adjusting the organizational structure to manage the admission processing staff at my institution. This leadership position has leveraged an opportunity to introduce implicit bias to the admission processing staff and arrange for training opportunities as well as begin initial discourse of the topic with faculty and staff who contribute to admissions across the institution.

In retrospect, it may have been beneficial to spread out the two focus group sessions of this study to allow a longer period of self-reflection as well as incorporating a written self-reflection activity by research participants. Also, conducting this research in more than one admission office may have yielded more diversified perceptions since practice varies by institution. Through a broader study of the various admission processes among institution types, levels of higher education admission, and differing geographical locations, more opportunities to standardize and improve admission processes to reduce admission officer implicit bias on practice may present themselves.

The researcher postulates institutions could develop a quality enhancement plan (QEP) to identify and reduce implicit biases in the admission process. These plans may vary greatly due to the differences across institutional admission processes and, at times, within individual

institutions. A successful plan would most likely incorporate implicit bias training that encourages both individual self-reflection as well as group discussion of these reflections to understand others' points of view. Policies and practices would need to be reviewed to audit and classify where biases, both systematic and implicit, may exist in the process. To be most effective, this plan would need to span multiple admission cycles with a group review of identified goals, improvements, and a consideration of whether new biases have been introduced to the process.

Prior to developing a QEP, both the recruitment and admission process at the institution – or program within the institution – would need to be carefully studied and documented. A review of personnel available to completing the plan would be vital to identify the extent of the project. All relevant personnel should contribute to the development of the plan including student recruiters, admission processors, faculty and staff, and external stakeholders such as applicants, current students, alumni, and – if the program leads to a credential or license – hiring managers of these individuals. However, time limits and/or financial resources may dictate the overall scope of the project. When developing the QEP, operationalizing organizational staff to engage in the project may be fruitful; however, resources may limit the ability to incorporate those not currently affiliated with the institution such as prior denied applicants, institutional alumni, and employers of graduates. Those participating in the development and execution of the QEP should have a clear understanding of the project's goals and purpose. Subject matter experts should own their processes evaluating how they affect the admission process, their role in enhancing institutional outcomes, and reviewing current literature related to bias in their admissions role.

A necessary foundational step to the developing the QEP is education on both implicit and systematic biases. Institutional entities should participate in formalized implicit bias training which allows time for adequate self-reflection prior to researching and documenting the admissions process. In addition to implicit bias training, opportunities to research systematic bias should be presented as well. Orientation to bias could be conducted through workshops, seminars, or reviewing relevant literature. Complacency could derail a project of this scope, so it is imperative to continuously engage the QEP group. This could be done through encouraging personal journaling and assessment, book clubs, or regular meetings to discuss literature related to the topic. Those involved in the project may decide to complete IATs on a specific timetable to encourage constant self-reflection and assessment. Education of bias is also paramount when engaging participants outside the institution. For example, a survey may be deployed to denied applicants regarding their perceptions of implicit bias on the admission process. When engaging external entities, enough education of the topic should be included to collect relevant responses.

Possible areas of implicit bias should be noted as well as systematic biases that could be reduced. To be most effective, the plan would not only document the overall process but also state admission criteria, points of interactions with applicants, and identify attributes indicative of student success. The group may consider the significance of objective admission criteria – GPAs and test scores – as well as subjective admission criteria – interview scores, evaluations of personal statements and letters of recommendation, etc. – in predicting student success. Areas of the admission process vulnerable to systematic bias should be reviewed each admission cycle to leverage new resources and tools to decrease the effect of systematic bias. It may be prudent to evaluate the practices of other programs, disciplines, or institutions to implement novel strategies

to decrease systematic bias. There can be value in researching both similar and different entities to encourage divergent but valuable solutions.

Vital to any plan are clear measures for success. These measures should be identified during the creation of the plan to include not only student outcomes such as board exam scores, end of program GPA, employment rates, or others relative to learning outcomes but also institutional and community outcomes. Plan participants should postulate how a reduction in implicit bias in the process could enhance the program, institution, local community as well as global citizenry. Diversity of the student body may be reviewed as well as student satisfaction within the program or at the institution. The researcher hypothesizes the student body may become more diverse and student satisfaction may increase after implementation of a quality enhancement plan.

Typically, a quality enhancement plan can spiral into an iterative or subsequent plan based upon results. Personnel should be responsible for the results obtained and educate others on implicit bias. Due to its covert nature, implicit bias can be easily forgotten when not assessed. Participants should set personal goals as well as collaborate with others across the institution, and higher education in general, to further research and stay engaged with the topic. Due to the variance in admission processes and diverse nature of higher education institutions, a single identifiable solution to decrease implicit bias could not possibly exist. Admission personnel should determine whether they believe implicit bias exists, how it could be measured, and what their implicit biases may be.

Harvard University has conducted a successful self-study evident in institutional responses related to *Students for Fair Admissions, Inc. (SFFA) v. President and Fellows of Harvard College*. Also, some professional organizations such as the Association of American

Medical Colleges (AAMC) have produced resources for schools to review their practices and possible implicit biases. As literature related to implicit bias grows, it will most likely extend well beyond the areas of health care, human resources, and justifiable use of force in police involved shootings. Researching implicit bias in higher education admissions is necessary to expand access to higher education and promote diversity, inclusion, and equity.

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APPENDIX

APPENDIX

Research Timeline

Date	Activity
June 3, 2018	Email Solicitation Sent
June 12, 2018	First Joint Interview and Focus Group
June 19, 2018	Second Joint Interview and Focus Group

Email Solicitation

Hello!

I am a doctoral student at the University of Mississippi's Department of Higher Education working under the direction of Dr. Hephner LaBanc, who acting outside her administrative role as Vice Chancellor of Student Affairs and serving as my dissertation committee chair for the purposes of this research. I am seeking participants for a research study to determine whether college admissions officers believe their own implicit biases affect the college admissions process and am hoping you will decide to participate in the research. I believe results of this research could greatly improve the college admissions process for applicants as well as improve the professional practice of college admissions personnel.

Please review the attached consent form explaining the research study in depth.

If you are interested in participating, please review the following video of a TEDx Talk given by Dr. Benjamin Reese, a lead researcher in the field of implicit bias, to orient yourself to the topic of implicit bias. Throughout the video, he uses the term unconscious bias; however, implicit bias and unconscious bias are terms used interchangeably.

Video link: <https://youtu.be/ozno2y2sFTg>

After reviewing this video, please go to the Project Implicit website (<https://implicit.harvard.edu/implicit/takeatest.html>) and complete one of the following Implicit Association Tests (IATs):

Sexuality IAT
Religion IAT
Disability IAT
Weight IAT
Age IAT

Please record the name of you test and the result.

To confirm you participation in the study, please email the consent form to me at cdhardy1@go.olemiss.edu along with the test name and result of the IAT you took. Your specific results will not be shared in a way that connects it your identifying information.

The dates set aside for the two group interviews/focus groups are (date 1) and (date 2). A specific time will be determined within one week of each date.

If you have any questions, please do not hesitate to contact me.

Thank you in advance for your time and interest!

Initial Joint Interview Protocol

Introductions

- Please list your name and job title for recording purposes

Professional background and experience in admissions

- How many years of experience do you have in admissions?
- Please give me a broad description of your experience in university admissions and admissions processes at this institution and others.
- What are your main duties in your current position?

Previous knowledge of implicit bias

- Prior to receiving the introductory materials for this study, what has been your exposure level to the topic of implicit bias?
- Before taking the initial IAT for this research project, have you taken IATs previously?
 - If yes, have you taken any single IAT more than once and seen a change in your results?
 - If yes, was this surprising to you?
 - If no, do you believe its possible for results of an individual to change, or do you believe implicit bias as measured by the IAT is static for each individual?

Institution's undergraduate admissions process

- Please briefly describe the undergraduate admissions process at your institution.
- Is the process and/requirements the same for in-state, out-of-state, and international applicants?
 - Please highlight any differences present in the admissions process/requirements for each group.
- How and how often are the process and requirements evaluated and/or changed to fit the needs of the institution? Has this happened during your time at the institution?

Institution's strategic plan concerning access, diversity, and inclusion

- Are you aware of the goal to increase diversity and excellence within the institution's strategic plan?
- Do you believe the admissions processing staff has the ability to assist the university in meeting this goal?
 - If yes, what specifically has been put in place concerning staff development to assist the institution in meeting this goal?
- Can you think of any ways the admissions processing staff can hinder the university in meeting this goal?

Possible implicit bias and/or systematic bias present in the admissions process

- Based upon your knowledge of implicit bias, do you believe your own implicit bias or your staffs' implicit biases could affect admissions at your institution?
 - If yes, please explain how these implicit biases could come into play.
 - If no, why?

- Systematic bias is prevalent and documented in many aspects of the university admissions process (standardized tests, interviews, essay bias, etc.). Do you believe the admissions process is affected by systematic biases, implicit biases, or both? Does one have more of an effect than the other?
 - If the admissions process is affected more by systematic biases, do admissions officers have a responsibility to address this in professional practice?
 - How can systematic biases be reduced or corrected?
 - If the admissions process is affected by implicit biases of admissions processors, what steps do you believe should be taken at both the institutional level and professional level to address this issue and improve university admissions processes?

Cover follow up requests and discuss meeting time for second interview

Initial Focus Group Protocol

Introductions and professional background/experiences in admissions

- Please list your name, years of experience in university admissions, and applicant population with which you work currently for recording purposes. Throughout the focus group, please say your name prior to commenting to assist in the transcription of the discussion.
- Could one of you describe the main duties of your position within the admissions office? Does anyone else have anything to add to this description?

Previous knowledge of implicit bias

- Prior to receiving the introductory materials for this study, what has been your exposure level to the topic of implicit bias?
- Before taking the initial IAT for this research project, have you taken IATs previously?
 - If yes, have you taken any single IAT more than once and seen a change in your results?
 - If yes, was this surprising to you?
 - If no, do you believe its possible for results of an individual to change, or do you believe implicit bias as measured by the IAT is static for each individual?

Institution's undergraduate admissions process

- Could one of you please briefly describe the undergraduate admissions process at your institution? Does anyone else have anything to add to this?

Institution's strategic plan concerning access, diversity, and inclusion

- Are you aware of the goal to increase diversity and excellence within the institution's strategic plan?
- Do you believe the admissions processing staff has the ability to assist or hinder the university in meeting this goal?

Possible implicit bias and/or systematic bias present in the admissions process

- Based upon your knowledge of implicit bias, do you believe your own implicit bias could affect admissions at your institution?
 - If yes, please explain how these implicit biases could come into play.
 - If no, why?
- Systematic bias is prevalent and documented in many aspects of the university admissions process (standardized tests, interviews, essay bias, etc.). Do you believe the admissions process is affected by systematic biases, implicit biases, or both? Does one have more of an effect than the other?
 - If the admissions process is affected more by systematic biases, do admissions officers have a responsibility to address this in professional practice?
 - How can systematic biases be reduced or corrected?
 - If the admissions process is affected by implicit biases of admissions processors, what steps do you believe should be taken at both the institutional level and professional level to address this issue and improve university admissions processes?

Cover follow up requests and discuss meeting time for second interview

Final Group Interview and Focus Group Protocol

Present aggregate results of IATs of all staff participating in the study.

- What is your initial perception of these results?
- Are you surprised by the results?
 - If so, what surprised you most?

After seeing these group findings, has your perception on the ability of admission processors' implicit biases to affect the admissions process changed?

- If so, do you believe admissions staff implicit biases can affect it more or less than previously thought?
 - In what specific ways can admission processors' implicit biases affect the admissions process?
- If your perception changed, what caused this change?

Considering there is documented evidence of systematic biases in the university admissions process (test score bias, interview bias, essay bias, etc.), after seeing these results, has your opinion on whether implicit biases or systematic biases affect the university admissions process more changed?

- If yes, how has this changed?
- If no, why not?

Do you perceive university admissions to be significantly affected by implicit bias, systematic bias, or both? (Do not think about which affects it more, but which has the ability to significantly affect outcomes.)

- If you perceive admission processors' implicit biases have the ability to significantly affect the admissions process:
 - Which groups of applicants do you perceive are most affected by these implicit biases?
 - What responsibility do you have as a professional in admissions to decrease this effect?
 - How can we as admissions professionals improve our professional practice and daily practice to decrease the effect of implicit bias?
- If you perceive systematic biases have the ability to affect the admissions process:
 - Which groups of applicants do you perceive are most affected by systematic biases?
 - What responsibility do you have as a professional to decrease systematic bias and its effects?
 - What specifically would you propose to decrease systematic biases?
 - Do you believe you have a responsibility to address these concerns within your unit? Your institution? Your profession?
- After participating in this research study, are you more likely to advocate for your applicants?
 - If yes, how do you plan to do so?

VITA

Christi Denise Hardy, a native of Biloxi, Mississippi, received her Bachelor of Science (2008) and Master of Science (2011) degrees at Mississippi State University. Thereafter, she began work as a Student Admission Officer at the University of Mississippi Medical Center primarily working with admissions to allied health programs. As she learned more, she was promoted to Assistant Director then Director of Student Admissions at the institution. During this time, she pursued her Doctor of Education degree in the Department of Higher Education in the School of Education at the University of Mississippi. She is constantly learning and plans to expand her research on implicit bias, especially as it relates to admissions at academic health science centers.