Race and Ethnicity in the Hiring Process: An Experimental Study of Millennial Undergraduate Attitudes Using Career Electronic Portfolios

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RACE AND ETHNICITY IN THE HIRING PROCESS: AN EXPERIMENTAL STUDY OF MILLENNIAL UNDERGRADUATE ATTITUDES USING CAREER ELECTRONIC PORTFOLIOS

by

Adam Charles Swanson

Abstract of a Dissertation Submitted to the Graduate School of The University of Southern Mississippi in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

December 2015
ABSTRACT

RACE AND ETHNICITY IN THE HIRING PROCESS: AN EXPERIMENTAL STUDY OF MILLENNIAL UNDERGRADUATE ATTITUDES USING CAREER ELECTRONIC PORTFOLIOS

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The study examined whether undergraduate Millennial students living in different geographic regions of the United States evaluate a career electronic portfolio differently for racially diverse candidates. The researcher customized an online career e-portfolio for a fictitious candidate seeking to apply for a student leadership position at a college. The interactive e-portfolio contained a cover letter, resume, letter of recommendation, short biography, and a class project artifact. While the actual contents of the e-portfolio remained constant, a series of female-candidate photographs were manipulated to offer five unique study conditions. There was a career e-portfolio that displayed a photograph of a fictitious Asian candidate, a fictitious Black candidate, a fictitious Hispanic candidate, a fictitious White candidate, and control e-portfolio (no photograph). Millennial undergraduates were asked to play the role of a hiring manager at a mid-sized college, review the contents of one randomly selected e-portfolio, and provide an evaluation of the candidates. Over 70,000 invitations were sent to college students via personalized e-mail, departmental listservs, and college announcement memos. A total of 2,056 college students between the ages of 18-33 years participated in the study and all participants were enrolled at one of the eleven sponsoring colleges and universities located within four U.S. geographic regions. Eleven statistical analyses were
performed to better understand the evaluation trends. The first research objective explored how participants evaluated each of the study conditions controlling for all other variables; findings revealed that the control e-portfolio study condition received a statistically lower evaluation mean than the Asian, Black, and White fictitious candidates. Additionally, the Hispanic fictitious candidate received a statistically lower evaluation than the Black and Asian fictitious candidates. The second research objective analyzed the interaction between participant racial groups and study conditions. A planned contrast analysis revealed that participants evaluated the control study condition statistically lower than same-race and different-race candidates. The third research objective analyzed the influence of student classification on the model and discovered that seniors offered the most consistent evaluations. The last research objective analyzed the influence of the participants’ geographic regions on the model. The interaction between geographic region and the study conditions variable was not statistically significant.
DEDICATION

The researcher would like to recognize his amazing wife, Megan, and daughter, Sienna, for their patience, love, understanding, and support throughout this long journey.

They have been the foundation throughout this process and provided ongoing encouragement.
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CHAPTER I
INTRODUCTION

Abraham Lincoln introduced the Emancipation Proclamation of 1863 in the midst of the American Civil War and formally declared that slaves “are, and henceforward shall be free” (“Emancipation Proclamation,” 2014, p. 1). Three decades following the implementation of the Emancipation Proclamation, the government offered states financial incentives for providing educational opportunities to minorities. Through the passing of the second Morrill Land Grant of 1890, states could choose either to enroll minorities at their institutions through non-discriminatory admission practices or build new institutions for minorities, and as a result, seventeen historically black colleges and universities were constructed (“Land-Grant Tradition,” 2012).

W.E.B. Du Bois, the first African American student to obtain a doctoral degree from Harvard University, predicted that racial oppression and social inequality would eventually lead to rich debate in the upcoming century as he cited, “Herein lie buried many things which if read with patience may show the strange meaning of being black here at the dawning of the Twentieth Century. This meaning is not without interest to you, Gentle Reader; for the problem of the Twentieth Century is the problem of the color-line” (Du Bois, 1903, p. 1). When the U.S. Supreme Court rendered the decision in, Brown v. Board of Education in 1954, that racial segregation of educational institutions was unlawful, the very notion of minorities being able to share a classroom with white students infuriated some politicians to such extent that U.S. House of Representatives and Senators drafted and signed the Southern Manifesto which accused the Supreme Court of overextending its jurisdiction (Brown v. Board of Education, 1954; “Southern Manifesto
on Integration,” 2006, p. 1). Offering a rebuttal to the Southern Manifesto, the U.S. Supreme Court upheld its original decision through the case Cooper v. Aaron in 1958 and declared that the federal court decision could not be legally overturned by the U.S. Congress (“Southern Manifesto on Integration,” 2006).

The federal government took decisive action on those institutions that continued using discriminatory admission practices in higher education. When a Black applicant by the name of James Meredith was denied admission to The University of Mississippi, the U.S. Supreme Court ordered the institution to enroll him immediately (“James Meredith,” 2014). However, Governor Barnett was reluctant to integrate the Mississippi public schools and publicly asserted via a television appearance that “[Mississippi] will not surrender to the evil and illegal forces of tyranny ... [and] no school will be integrated in Mississippi while I am your governor” (“U.S. Marshals Service,” 2014, p. 1). On September 20, 1962, Meredith attempted to enroll in classes at the institution, but found that the registration building was blocked off by hundreds of rioters (“U.S. Marshals Service,” 2014). U.S. Attorney General Robert Kennedy and President John F. Kennedy intervened by sending 538 United States marshals and Army troops to The University of Mississippi campus and threatened to jail Barnett and charge the institution $10,000 each day they were not in compliance (“U.S. Marshals Service,” 2014; “General Interest,” 2010).

Recognizing that some Americans were strongly opposed to integrating educational institutions, there were others who supported and worked diligently to advocate for civil rights and equality for all citizens. During one Civil Rights demonstration, over 200,000 people assembled at the Lincoln Memorial on August 28,
1963 and listened to Dr. Martin Luther King, Jr. as he stood tall and confident at the podium, delivering the unforgettable *I Have a Dream* speech (“Martin Luther King Jr.,” 2009). The Civil Rights Movement gained momentum, and eventually the federal government passed the landmark Civil Rights Act of 1964 which ended racial segregation and made it illegal for employers to, “fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions or privileges or employment, because of such individual's race, color, religion, sex, or national origin” (Civil Rights Act, 1964, pp. 7152-15).

Colleges and universities in the early twentieth century were disproportionately represented by White students but more students from historically underrepresented racial groups began enrolling and pursuing a college education in the 1960s and 1970s (McClellan & Larimore, 2009). By 1976 just under 11 million United States residents were enrolled in higher education institutions during the fall semester and minorities had accounted for 15.7% of the college enrollment in the United States: 9.6% of students identified as Black, 3.6% Hispanic, 1.8% Asian or Pacific Islander, and .7% American Indian or Alaska Native (U.S. Department of Education, 2015). The total enrollment for minority students in higher education has increased steadily over the years to the extent that it is not atypical for a person from a minority community to visit a college campus today and be able to interact with students from all walks of life and racial and ethnic backgrounds. The National Center for Educational Statistics (NCES) reported that 37% of United States residents enrolled in higher education during the Fall 2010 term identified as racial minorities (U.S. Department of Education, 2015). Black students accounted for 15% of the college population, Hispanic students accounted for 13.5%,
Asian students accounted for 6.3%, American Indian/Alaska Native students accounted for 1%, and students who identified as being two or more races accounted for 1.6% (U.S. Department of Education, 2015). Moreover, the percentage of racial minorities who will be enrolled in higher education institutions in the year 2020 is projected to increase to approximately nine million students or just over 40% of the total college population as illustrated in Figure 1.1 (U.S. Department of Education, 2015).
Characteristics of the Millennial Generation College Students

This study limited participation to college students of the Millennial generation who were enrolled at higher education institutions in the United States. Pew Research Center reported that individuals representing the Millennial generation are more racially diverse and more educated than any other preceding generation (Taylor & Keeter, 2010; “Millennials in Adulthood,” 2014). One of the many distinguishing characteristics of this generation is their frequent use and dependency on technology as it was reported that 90% of the surveyed Millennial participants used the Internet occasionally, 75% created a “social networking profile,” 88% used a cell phone to text family and friends, and 74% valued technology (Taylor & Keeter, 2010). Additionally, Levine and Dean (2012), authors of Generation on a Tightrope: A Portrait of Today’s College Student, noted that Millennials are supportive of other racial and ethnic groups, feel more comfortable
discussing and expressing their opinions, and are more satisfied with the college experience.

Their attitudes on race and gender have become less polarized. And there is a greater sense of opportunity for diverse populations.... People of color are more likely to believe that the country has made racial gains and a number of initiatives necessary to protect against discrimination are less needed today. A majority of whites are likely to think that there needs to be greater diversity on campus and affirmative action continues to be necessary. Large majorities of whites and undergraduates of color have close friends of other races and support intergroup relationships. (Levine & Dean, 2012, p. 101)

Millennial Graduates Enter the Workforce

In the late nineteenth century the concept of obtaining a bachelor’s degree was perceived to be a lucrative investment; Henry Adams in 1871 commented that, “A degree from Harvard is worth money in Chicago” (Thelin, 2003, p. 10). The Bureau of Labor Statistics reported in 2012 that the median income for individuals without a high school diploma was $20,110, with a high school diploma was $35,170, with a bachelor’s degree was $67,140, and with a doctoral degree was $96,420 (U.S. Department of Labor, 2015). Additionally, the unemployment rate for individuals without a high school diploma was 9%, with a high school diploma was 6%, with an associate’s degree was 4.5%, with a bachelor’s degree was 3.5%, and with a master’s degree was 2.8% (“Earnings and Unemployment,” 2015). These data provide support to the notion that a college degree can be a sound financial investment in a competitive global market. Many Millennial
students come to college with the basic understanding and mindset that the time and money invested into an education will pay dividends throughout the span of a career.

Each academic semester, college graduates from degree-granting higher education institutions will begin the tedious process of tweaking their resumes, polishing their cover letters, and refining their interview skills, all in an attempt to land their first entry-level position. While some graduates will secure entry-level positions almost instantly, others might not be as lucky and will be forced to continue their job search post-graduation. In any matter, once a college graduate is hired by an organization, she or he will have an opportunity to apply her or his knowledge and begin making positive contributions to that organization. In time many of these graduates will have an opportunity to serve on employee search and selection committees and provide valuable input regarding the hiring decisions made within the organization during the span of their careers. In the upcoming decades, the Millennial generation workforce will inevitably serve as the next wave of hiring managers and have the autonomy of making critical hiring decisions for the organization.

Purpose of the Research

Millennial college students will serve as the next generation of hiring managers, and while there is an extensive body of research which explores hiring decision-making, many studies consider patterns of response associated with members of the preceding generations. This study is limited exclusively to Millennial college students who were enrolled at one of the eleven sponsoring higher education institutions in the United States and reported being between 18 to 33 years of age. The analysis of the data collected from
this study aided in the understanding of how Millennial students evaluate a series of racially diverse fictitious candidates with identical credentials.

Career e-portfolios replace the traditional leather-bound career portfolios and are now being used by the job-seeking Millennial graduates as a marketing tool to promote job skills, highlight background experiences, and display customized artifacts over the World Wide Web. Employers can easily access detailed information about candidates and their skillsets by navigating throughout the interactive pages of these personalized online portfolios. For the purpose of this research project, an online HTML career e-portfolio was created for a fictitious female candidate applying for a student leadership position at a mid-sized college. The portfolio contained a cover letter, resume, biography, letter of recommendation, class artifact, and candidate photograph. While all the contents of the e-portfolio remained constant, the researcher manipulated a series of female photographs so there were five unique study conditions: Asian fictitious candidate career e-portfolio, Black fictitious candidate career e-portfolio, Hispanic fictitious candidate career e-portfolio, White fictitious candidate career e-portfolio, and the control career e-portfolio (no photograph). Millennial college students enrolled at the sponsoring institutions were recruited by e-mail, and those who volunteered to participate were asked to assume the role of a hiring manager, review the contents of one randomly selected e-portfolio, and provide an objective evaluation of the candidate via a candidate evaluation form. The eight items on the candidate evaluation form were averaged and the mean evaluation was used as the dependent variable.
Research Objective #1

The first analysis explored how participants evaluated each of the five study conditions controlling for all other variables. Findings from the analysis revealed whether the difference in evaluation means for two or more study conditions was statistically significant. Allport’s (1954) intergroup contact theory maintains that increased positive contact between members of different racial groups can yield positive outcomes, including an overall reduction of racial prejudice. Given the diversity in higher education institutions today and the extent of daily interaction students have with members of different racial groups, the researcher predicts that the difference in CES means among the five conditions will not be statistically significant.

The second analysis was exploratory and analyzed the patterns of response associated with the six participant racial groups controlling for all other variables. The findings from this one-way ANOVA revealed how the different participant racial groups evaluated across all five study conditions and identified whether the differences in evaluation means between two or more racial participant groups was statistically significant. There is a lack of empirical evidence to support why one participant racial group would evaluate across all study conditions statistically higher than another racial participant group. The researcher predicted that there would not be a statistically significant difference in evaluation means detected among the participant racial groups.

Research Objective #2

The study further intended to understand how participants evaluated candidates of the same-race (e.g. White participant evaluating the fictitious White candidate) and different-race (e.g. White participant evaluating the fictitious Black/Asian/Hispanic
candidate) relative to the control e-portfolio. A new ‘simple conditions’ variable was created such that participants who evaluated a same-race candidate were coded a value of 1, participants who evaluated a different-race candidate were coded a value of 2, and participants who evaluated the control condition were coded a value of 3. First a one-way ANOVA was run using the entire dataset to determine if two or more levels of the simple conditions variable were statistically significant. A second analysis explored how each of the participant racial groups evaluated the three levels of the simple conditions variable. The findings from this analysis revealed whether the main effects and interaction term between the two variables were statistically significant. The last analysis examined how the different participant racial groups evaluated the five study conditions. Findings revealed whether the main effects and interaction between the participant racial groups and study conditions variables, were statistically significant.

The college student population is more diverse than ever before which would increase the frequency of the interactions between students of different racial and ethnic groups. Allport (1954) intergroup contact theory maintained that observed prejudice between different racial groups will be reduced as function of positive contact. Based on this theoretical model, the researcher predicted the differences in CES means among the three levels of the simple conditions variable would not be statistically significant. Additionally, the researcher predicted the interaction term in the second and third analyses would not yield statistical significance at the critical value, p<.05.

Research Objective #3

The third set of analyses added the student classification variable into the model and explored the patterns of response associated with freshmen, sophomore, junior, and
senior students. The first analysis ran the student classification variable in a one-way ANOVA using the entire dataset. Findings revealed how each group evaluated across all five study conditions, and whether two or more levels were statistically significant. A second analysis revealed how freshmen, sophomore, juniors, and seniors evaluated a candidate of the same-race and different-race relative to the control condition. The last analysis of this set evaluated the trends associated with how each of the student classification groups evaluated the five unique study conditions. Given the amount of data required for this analysis, the White Millennial participant group was the only participant racial group with a large enough sample size to be considered in the analysis.

Smith and Schonfeld (2000) stated that, “diversity remains an important imperative for the United States, and it is one in which higher education has an important role. Our campuses are laboratories for diversity issues that continue to evolve over time” (p. 17). A collection of student development perspectives are discussed in the next chapter and are fundamental to this research objective. If higher education institutions are successful at promoting holistic development and educating students on diversity in society then one could make the assumption that student racial identity development is likely to occur. The researcher predicted that seniors would evaluate the study conditions in a more consistent manner than freshmen, and the difference in CES mean for seniors would not be statistically significant among the five study conditions. The researcher predicted that seniors would offer consistent CES means for all five study conditions. In contrast, the researcher predicted that there would be more observed variation in CES means among the five study conditions for freshmen participants.
Research Objective #4

The last set of analyses was exploratory and examined the influence that student geographic region had on CES means. Findings revealed how participants living in different geographic regions evaluated the study conditions. The researcher did not find empirical-based research to support why participants of one geographic region would be more critical than others when evaluating diverse candidates, so the researcher predicted that there would not be a statistically significant interaction between the participant geographical region variable and study conditions variable.

Terminology

The term career electronic portfolio, abbreviated as e-portfolio, is synonymous to the leather bound career portfolio and is used to showcase career artifacts, including but not limited to a cover letter, resume, project works, personal philosophies, and letters of recommendation. An e-portfolio was customized for a fictitious female candidate who was applying for a Resident Assistant position at a mid-sized college. For the purpose of this study, a Resident Assistant (RA) is a paraprofessional student leader at a college who is responsible for building a positive living-learning floor community in a residence hall, coordinating educational and social programs for the residents on his or her floor, connecting students to campus resources, and enforcing housing and campus policies. Lastly, the Candidate Evaluation Scale (CES) represents all candidate evaluation items in the candidate evaluation form; the CES mean value will be used as the dependent variable for all analyses in this study.
Delimitations

One delimitation of the study is that it does not account for sex differences. The project incorporates a series of female candidate photographs but does not analyze data from fictitious male candidates. The study also restricted participation to Millennial college undergraduates who were enrolled at one of the sponsoring institutions and were between 18 to 33 years of age.

Assumptions

A 2013 United States Census Bureau report found that 83.8% of families own a computer, and 74.4% have access and use the Internet (File & Ryan, 2014). Given that this is an online study, an assumption was made that students would have access to Internet, own or have access to a compatible technological device, and check their student e-mail account on a regular basis. A second assumption was made that participants would spend time carefully reviewing the contents of the portfolios and providing honest evaluations of the candidate. The study was designed to take participants 10 minutes to complete the materials from start to finish. Lastly, an assumption was made that the participant sample would be diverse and representative of the Millennial college population.

Justification

An abundance of rich quantitative data will be extracted from this experimental online study. The Millennial generation is the most racially diverse generation in American history and data will provide an indication for how the undergraduates evaluate racial diverse candidates. Additional analyses will explore the extent to which student classification and geographic region influence the CES means. The results will add value
to the existing literature and can be used in higher education, employee recruitment and selection training of committee members, and business applications.
CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter will introduce the Allport’s intergroup contact theory and discuss why the principles of the theory are relevant. Next, a collection of racial identity development perspectives will be highlighted to provide the reader with a general understanding for how Millennial students develop racial identity. These racial and ethnic identity development models are particularly relevant to Research Objective 3 which analyzed CES means for freshmen, sophomore, junior, and senior participants. If higher education is successful at educating students on diversity and providing holistic developmental experiences, the researcher makes an assumption that students will leave higher education being in a more mature developmental stage of racial identity than incoming students. Next, critical race theory and a sample of related literature on racial inequality, hiring, and selection processes will be presented. Given that this study used an online career electronic portfolio in its design, an explanation of the types, emergence, and applications of the e-portfolios will be provided.

Intergroup Contact Theory

As previously noted, the percentage of non-White students enrolled in higher education is projected to increase to over 40% of the total student population by 2020 (U.S. Department of Education, 2015). College students of the Millennial generation are more racially diverse than any preceding generation which can lead to them having more exposure and daily interactions with students of different backgrounds and lifetime experiences. Smith and Schonfield (2000) state, “Having diversity in the population creates greater opportunities for individuals to be seen as individuals, thus breaking down
stereotypes” (p. 18). Allport (1954) introduced the intergroup contact theory, in *The Nature of Prejudice*, and noted that a reduction of racial prejudice could be achieved through positive contact being made between members of different groups. Prejudice would be optimally reduced when individuals are equivalent in status (e.g. friends, co-workers), work collaboratively (e.g. team sports), share common goals, and support the law and authority (Allport, 1954). Works (1961) put the theory to the test early on and found that promoting positive contact in an integrated housing arrangement contributed to a reduction of prejudice. A more recent study conducted by Brown, Brown, Jackson, Sellers, and Manuel (2003) examined racial attitudes of 375 White student athletes at predominantly White colleges who played team and individual sports (p. 1386). Athletic counselors distributed the Social and Group Experiences questionnaire, which was crafted to “assess concepts relevant to contact experiences with various racial groups in a variety of contexts and social attitudes about women and racial groups in the United States,” and analyzed the results for students who played individual and team sports (Brown et al., 2003, p. 1387). Findings revealed that the athletes who played on team sports with more interaction with Black athletes exhibited a “more tolerant racial attitude” than those athletes who played individual sports (Brown et al., 2003, p. 1394).

This study will examine how participants of each racial group evaluated a candidate of the same race and different race relative to the control e-portfolio. Millennial students are more racially diverse than any preceding generation, and in many college environments, students have frequent interactions and exposure with other students of differing racial backgrounds. Based on the principles of Allport’s (1954) intergroup
contact theory, the researcher predicted that none of the participant racial groups represented in the study would offer favoritism to a same-race candidate.

Racial Identity Development Models

Practitioners have used student racial identity development models to understand the process by which one develops racial identity. Although this study does not require students to complete a racial identity inventory, a fundamental understanding of the different identity development perspectives is relevant to this project. The student classification variable was added to the statistical models in the third set of analyses, and comparisons were made for freshmen, sophomores, juniors, and seniors. If colleges and universities are successful at educating students on diversity and promoting holistic development then positive racial identity development is likely to occur during their experience. With respect to the third objective, the researcher predicted that the variation in evaluation scores between the five study conditions would be minimal for upper-class students and that freshmen would lack consistency in their evaluations.

Racial Identity Development Perspectives for Black Students

The early model of psychological nigrescence was described in five sequential stages: pre-encounter, encounter, immersion-emersion, internalization, and internalization-commitment (Cross 1995; Cross & Fhagen-Smith, 2001, p. 243). Individuals in the pre-encounter stage often have little to no experience with racism as they believe that race plays a limited role within their community (Cross, 1995). These individuals accept a pro-white mentality, often feel ashamed to associate with being Black, and do not hesitate to interact with members of other racial groups (Cross, 1995). While in the encounter stage, Black students experience either one intense act or frequent
smaller acts of discrimination which prompts them to reevaluate the way they conceptualize racial equality in the world (Cross, 1995). Instead of embracing and promoting Whiteness as they had previously done in the pre-encounter stage, Black students begin to learn more about their culture and seek out a new pro-Black identity (Cross, 1995). The immersion-emersion stage is characterized by students who fully immerse themselves into Black culture and who at times become emotionally charged after realizing that inequalities do exist in the world (Cross, 1995). These students have a tendency to remove themselves from working with White individuals as well as project anger and frustration towards non-Blacks (Cross, 1995). Next, in the internalizations state, students begin to feel more secure about identifying as Black and begin to restore relationships with non-Black students (Cross, 1995). The final stage of the model, internalization – commitment is characterized by students embracing and taking a vested interest in combating problems of racial inequality in society (Cross, 1995). During this stage students stay current in the critical issues that impact this group and volunteer their time to enhance the community (Cross, 1995).

Jackson’s Black Identity Model (BID) offers a slightly different perspective in terms of how Black individuals develop racial identity (Jackson, 1976; Jackson, 2012). Jackson (2012) proposed that racism should still be incorporated in identity models but acknowledged that Black culture also has a profound impact on identity development.

The primary modification to my previous BID model presented here is seen in a more significant focus on the importance of Black culture as a major influence in four of the five stages, thus promoting an understanding of racial identity development that is construed not solely as a consequence of racism, but rather an
interweaving of both the effects of racism and elements that are part of the
heritage of Black culture that exists independently, to varying degrees, of the
primary influence of racism. (Jackson, 2012, p. 39)

The BID model outlines five unique developmental stages: naïve, acceptance,
resistance, redefinition, and internationalization (Jackson, 2012). Individuals are
represented in the naïve stage at an early age and do not conceptually understand the
differences that exist between racial groups or the concept of privilege (Jackson, 2012).
These children may have positive or negative racial experiences with their parents or
siblings, but in time, children eventually will learn more about the Black culture,
understand the racial inequalities that exist in society, and become more in tune with
differential treatment between groups (Jackson, 2012). The frequency and severity of
racist incidents and the extent to which the Black community offers support can influence
development. An individual is characterized in the acceptance stage when they
unconditionally accept the White perspective of thought and has an increased interest in
collaborating with White individuals rather than Black individuals (Jackson, 2012).
Jackson notes that this stage typically occurs during the teenage years. Individuals will
eventually come to the realization that fairness and equality do not exist in society and
move into the stage of resistance (Jackson, 2012). While in this stage, individuals
“recognize racism in its complex and multiple manifestations,” abandon their way of
seeing life events through the White perspective, and begin fighting against oppression
and racial injustices (Jackson, 2012, p. 43). Individuals do not become fully immersed
into the fabric of Black culture nor do they gain a true appreciation of Black teachings
and values until they enter the redefinition stage (Jackson, 2012). Individuals represented
in this fourth stage take an active stance in promoting their beliefs and are not hesitant to challenge racist perspectives (Jackson, 2012). Individuals who transition into the internationalization stage begin to understand their identity through a multifaceted lens, connect with other racial groups, and apply experiences to the black culture (Jackson, 2012). According to Jackson (2012), “A significant change in this last stage comes as a result of the consideration of Intersectionality, or the recognition that all salient social identities within a given context such as the United States have an influence on each other” (pp. 45-46).

Racial Identity Development Perspective for White Students

The White Identity Development Model (WIDM), founded by Janet Helms, contends that racism is at the core of White identity and that forms of racism can be observed within the individual, institutional, and cultural contexts (Helms, 1995). Helms argued that White individuals develop identity via six statuses: contact, disintegration, reintegration, pseudo-independence, immersion-emersion, and autonomy (Helms, 1995). Those associated with the contact status are completely oblivious to the concept of White privilege and are reluctant to interact with Black students due to their lack of experiences (Helms, 1995). A student advances to the disintegration status only after he or she views a blatant act of discrimination that opens his or her eyes to the inequality that exists among racial groups (Helms, 1995). As a result, White individuals feel uncomfortable interacting with Black individuals because they feel unprepared by their teachers and the underlying support system to talk about these issues. Students in the reintegration status can be highly charged and are not hesitant to act on emotion to protect White privilege (Helms, 1995). Next, students classified in the pseudo-independence status alleviate
tension by searching for a less emotional White identity, and some will even try to teach Black students to be more like White students (Helms, 1995). In the fifth status, immersion-emersion, students begin to accept an identity within a broader context and take proactive measures to protect Black individuals against forms of racial discrimination (Helms, 1995). Lastly, a student classified in the autonomy status eliminates prejudice and racist perspectives (Helms, 1995). The autonomy status is characterized by students actively seeking out information about racial inequality, advocating for non-White groups, and educating others in a proactive attempt to eliminate racism (Helms, 1995).

The White Racial Consciousness Model (WRCM) offers an alternative perspective and is organized into the non-achieved White consciousness and the achieved White racial consciousness statuses (Rowe, Bennett, & Atkinson, 1994). This is a non-linear model, so individuals can move freely throughout the model. Individuals characterized in the non-achieved White racial consciousness status will relate with one of the three racial ‘attitude types’ which include avoidant, dependent, or dissonant. Individuals with an avoidant attitude do not take interest in learning their racial identity, nor are they concerned with understanding other racial groups because they are oblivious to the influence of race in society (Rowe et al., 1994). Next, individuals in the dependent attitude type rely on other individuals’ input and beliefs about racial opinions. The individual moves out of this attitude type after internalization and reflection. Students in the dissonant attitude type still have some confusion about race, understand that their internal views on White identity conflict with others, and begin to seek out more information (Rowe et al., 1994).
Achieved White racial consciousness can be described in terms of four attitude types: dominative, conflictive, reactive, and integrative (Rowe et al., 1994, p. 133). Those represented in the dominative attitude type maintain that White individuals are superior and may engage in hostile exchanges with minorities, make demeaning racial remarks, or passively choose not to associate with minorities in their everyday interactions (Rowe et al., 1994). Those individuals in the conflictive type understand that discrimination is wrong, but they do not support the use of affirmative action practices which aims to equal the playing field because they believe that all people have an equal opportunity to succeed in society. Individuals with a reactive attitude type acknowledge the existence of racial inequality and White privilege in society, “The affect associated with the reactive type of anger, directed toward the dominant society and individuals who support the status quo, and guilt or shame, directed toward the society for perpetuating the known inequities and toward one’s self for having unknowingly participated or, at least, having been deceived” (Rowe et al., 1994, p. 140). Individuals with the integrative attitude understand their White identity in the context of society and take action to promote equality (Rowe et al., 1994).

Racial Identity Development Perspective for Asian Students

The Asian American Racial Identity Development (AARID) model takes into account how Asian Americans develop identity in a discriminatory society and the influence of acculturation over the years (Kim, 2012). The five stages represented in the AARID model are ethnic awareness, White identification, awakening to social political consciousness, redirection to an Asian American consciousness, and incorporation (Kim, 2012, pp. 145-148). Asian Americans in the ethnic awareness stage are younger than
pre-school age and have learned about ethnic experiences through interactions with their immediate and extended family (Kim, 2012). In general, the children who have more cultural experiences will have a better understanding of their self-concept than those children with limited Asian ethnic experiences (Kim, 2012). The next stage, *White identification* typically occurs as a result of a first time experience with others in the classroom (Kim, 2012). Asian Americans discover they are different than others and over time encounter negative experiences, sometimes in the form of overt teasing or bullying. Kim differentiates between children who develop White identity through active White identification as opposed to passive White identification (Kim, 2012). Asian American students who are immersed in a mostly White school district and neighborhood desire to be fully immersed into the culture and adopt White identity to fit in with the existing environment. From the child’s perspective, they do not want to be viewed as ‘Asian American’ by other Whites. Those who accept a passive White identity are surrounded by the members of the Asian American community in their schools and neighborhoods (Kim, 2012). These individuals continue to interact with other Asian individuals but give thought to wanting to be White. Individuals who transition into the *awakening to social political consciousness* become more in tune with “social and political understandings” in society and the prevalence of inequality in America (Kim, 2012, p. 147). After becoming more educated on the issue, individuals no longer feel that the acts of discrimination are their fault, and their feelings toward White people turn into feelings of disappointment (Kim, 2012). In the fourth stage, *redirection to an Asian American consciousness*, individuals continue to learn more about the Asian culture in American society, connect with other ethnic members, and take pride in identifying as Asian American (Kim, 2012).
Lastly, in the *incorporation* stage individuals understand what it means to be Asian American in relation to other social identities (Kim, 2012).

*Identity Development Model for Latina and Latino Students*

Gallegos and Ferdman (2012) approach Latino and Latina identity through an ethnoracial perspective, or a term which considers race and ethnicity together. The Latino and Latina Ethnoracial Identity Orientation model does not incorporate distinct sequential stages but rather describes identity development as a function of six orientations: *Latino integrated, Latino identified, subgroup identified, Latino as other, Undifferentiated/Denial, and White identified* (Gallegos & Ferdman, 2012). Gallegos and Ferdman contend that individuals are adaptive, and the orientation is based upon the context of their unique situation, “reinforc[ing] the idea that identity is in a constant state of flux and is continuously shifting, depending on the circumstances of people’s lives and how they are meeting the challenges they encounter.... We are interested in how external and internal forces interact to create certain typical patterns of identity among Latinos” (pp. 64-65).

*Critical Race Theory*

The data published by the United States Census Bureau of Statistics provides evidence that racial disparities do currently exist in society. For instance, Black and Hispanic citizens have a lower median income, $32,584 and $38,039, respectively, than White and Asian individuals, $51,861 and $65,469, respectively (“Income, Expenditures, Poverty and Wealth,” 2012). Approximately 42.7 million people in the United States are living in conditions of poverty and the poverty rate for White individuals was estimated at 11.6%, for Asian individuals was 11.6%, for Native Hawaiians and Other Pacific
Islanders was 17.6%, for Black individuals was 25.8%, for American Indians and for Alaska Natives was 27% (Macartney, Bishaw, & Fontenot, 2013). Additionally, a higher percentage of White (73%) individuals own houses relative to the Black individuals (44%), and the median net worth per household for White citizens is much higher (Dimock, Kiley, & Suls, 2013). In reference to life expectancy, White individuals live on average five years longer than Black counterparts (Dimock et al., 2013). Racial disparity can also be observed within state borders. For instance, in the state of Mississippi an American Human Development Project found that Black individuals make on average $10,000 less per year than White individuals and are 43% more likely to drop out of high school (Sharps, Lewis & Martins, 2009, p. 18).

Ayres and Siegelman (1995) conducted audits on car dealerships to determine whether or not the establishments would treat White prospective car buyers and Black prospective car buyers differently when negotiating a final price for a vehicle. Ayres and Siegelman trained White auditors and Black auditors on how to consistently negotiate car prices at a dealerships and asked these auditors to follow a “bargaining script” (p. 306). A total of 306 vehicles were negotiated by trained auditors at over 150 car dealerships around Chicago: 150 audits were completed by a White male auditor, 53 by a White female auditor, 60 by a Black female auditor, and 40 by a Black male auditor (Ayres & Siegelman, 1995). Ayres and Siegelman found that car dealerships offered the male and female White buyers a vehicle at a lower price than they offered the Black male and female counterparts. Black males were quoted for the same vehicle just over $1,000 more than White males, and Black females were quoted over $400 more than White female counterparts (Ayres & Siegelman, 1995).
Critical race theory (CRT) emerged in the 1970s after advocates presented the perspective that more work could be done to advance human civil rights and proactively address acts of discrimination (Delgado & Stefancic, 2001). Delgado and Stefancic (2001), both active contributors to critical race theory, offer the following perspective on critical race theory:

The critical race theory (CRT) movement is a collection of activists and scholars interested in studying and transforming the relationship among race, racism, and power. The movement considers many of the same issues that conventional civil rights and ethnic studies discourse take up, but places them in a broader perspective that includes economics, history, context, group-and-self-interest, and event feeling and the unconscious. (pp. 2-3)

Critical race theory seeks not only to understand the current social issues at hand and acts of racism but also to serve as a catalyst for positive change and transformation in society (Delgado & Stefancic, 2001). Critical race theory maintains the perspective that racism is infused within our society (Delgado & Stefancic, 2001). Findings from this research project revealed how individuals evaluated a candidate of their same-race (e.g. White student evaluating a White candidate), and a different-race candidate (e.g. White student evaluating an Asian/Black/Hispanic candidate) relative to the control e-portfolio.

Racial Discrimination in America and Relevant Research

In the 1970s, the Supreme Court rendered a decision in the Griggs v. Duke Power Company case (Griggs v. Duke Power Co., 2014). Black employees working for Duke Power Company alleged that their employer was requiring non-job related criteria for advancement opportunities and engaging in employment discrimination (Griggs v. Duke
Power Co., 2014). In 1955 Duke Power Company imposed a requirement for their employees wanting to advance within the organization that necessitated an employee have a high school diploma and complete the Wonderlic Personnel and Bennett Mechanical Comprehension intelligence tests (Griggs v. Duke Power Co., 2014). The concern brought forth by minority employees was that these two requirements did not directly relate to the position and were preventing a majority of Black workers from transferring into non-labor and higher-paying positions. As a direct result, White candidates were being promoted within the organization at a disproportionate rate to that of Black counterparts. Supreme Court Chief Justice Warren Burger ruled in favor of the minority employees because the employer could not provide evidence as to how its advancement requirements related to one’s job performance (Griggs v. Duke Power Co., 2014). Following the ruling of this case, employers learned that they would need to provide evidence detailing how their selection and job advancement criteria directly relate to the position.

(EEOC) was founded to provide enforcement against illegal discriminatory practices and ensure organizational compliance ("EEOC History," 2000). Employees have an opportunity to submit complaints to the EEOC at any time, and upon investigation, if the EEOC determines that an employer has unlawfully discriminated against an employee, punitive damages can be assessed. According to 2014 EEOC data, 31,073 racial discrimination charges were filed by applicants or employees in the United States, which represented 35% of all charges filed that year ("Charge Statistics," 2015). The EEOC race-related charges from 1997 to 2014 are displayed below in Figure 2.1.


While significant progress has been made over the years to reduce and prevent workforce discrimination, the perception by the public suggests that more work can still be done to achieve equality. A 2013 PEW Research Center survey asked participants, “How much progress toward Martin Luther King’s dream of racial equality do you think the U.S. has made over the last 50 years?” (Dimock et al., 2013, p. 1). Less than 50% of White, Black, and Hispanic individuals alike responded, “A lot” (Dimock et al., 2013, p.
Thirty-nine percent of Black respondents answered that some progress has been made while nearly one in four Black (27%) and Hispanic participants (23%) responded that little to no progress has been made (Dimock et al., 2013, p. 1). A second item asked participants, “How much more needs to be done in order to achieve racial equality?” (Dimock et al., 2013). To this, 79% of Black respondents, 48% of Hispanic respondents, and 44% of White respondents reported that a lot more work is still required (Dimock et al., 2013, p. 1).

Gladwell’s (2007) book titled, *Blink: The Power of Thinking Without Thinking*, alleges that humans often make instinctive and unconscious based judgments when processing stimuli in our complex social environment; “Snap judgments are, first of all, enormously quick: they rely on the thinnest slices of experience. But they are also unconscious” (Gladwell, 2007, p. 50). These split-second unconscious daily decisions can sometimes lead to faulty assumptions and unintentional bias (Gladwell, 2007). Individuals can unknowingly cast judgments within a matter of seconds about a person without actually knowing much about the person.

Researchers have attempted to understand what factors go into a hiring decision and research the different components of an employee selection process. However, researching hiring processes within an organization can sometimes prove to be difficult given that some employers are reluctant to provide sensitive hiring information on their candidates which include but are not limited to phone interview scripts and notes, interview evaluation forms, and specific rating metrics. One approach to understanding employee selection as it relates to racial discriminatory practices is through experimental auditing technique. Turner, Fix, and Stuyk (1991) conducted 476 audits in Chicago and
Washington D.C. for entry-level positions in the early 1990s. A total of ten Black male auditors and ten White male auditors were paired together, and the auditors received training so they could all respond to interview questions in a consistent manner (Turner et al., 1991). These auditors applied for entry-level positions by referencing local newspapers, and the reported findings yielded that employers advanced White candidates (20%) in the selection process at a higher rate than Black equivalents (7%) (Turner et al., 1991). A second finding was that the White auditors (15%) were offered jobs at a higher rate than Black counterparts (5%) (Turner et al., 1991).

Pager (2003) designed an experimental audit study to determine how fictitious Black candidates with and without a history of incarceration would compare against White counterparts when competing for entry-level positions in Milwaukee. White and Black trained auditors were randomly assigned 15 entry level job postings each week directly out of the Milwaukee Journal Sentinel, and callback data was collected from 350 audited employers (Pager, 2003). Findings revealed that the White candidate with a criminal history received a 17% callback rate whereas the Black candidate with a criminal history received a 5% callback rate (Pager, 2003). The White candidate without a criminal history received a 34% callback rate whereas the Black candidate without a criminal history received a 14% callback rate (Pager, 2003, p. 958). These data provide evidence that organizations are still discriminating against individuals on the basis of race. Pager offers the following closing remarks in the article: “The rank ordering of groups in this graph is painfully revealing of employer preferences: race continues to play a dominant role in shaping employment opportunities, equal to or greater than the impact of a criminal record” (Pager, 2003, p. 958).
Bertrand and Mullainathan (2004) designed a study titled, *Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination*. The project entailed distributing approximately 4,900 resumes to employers who were hiring for, “sales, administrative support, clerical, and customer services jobs” within the Boston and Chicago area (Bertrand & Mullainathan, 2004, p. 2). Researchers produced a high quality and low quality resume for each job opening and manipulated the names on the resume to be either a White sounding name, Emily Walsh and Greg Baker, or a Black sounding name, Lakisha Washington and Jamal Jones (Bertrand & Mullainathan, 2004, p. 2). Bertrand & Mullainathan collected callback rate data after sending out the resumes to employers. The study found that the Black sounding candidate names were less likely to receive callbacks (6.7%) than White sounding candidate names (10.08%). Furthermore, the callback rate for the White sounding names with a high quality resume yielded an 11% callback rate whereas the Black sounding name yielded a 6.99% callback rate (Bertrand & Mullainathan, 2004). In contrast, the low quality resume resulted in 8.8% callback rate for the White sounding names and a 6.41% for the Black sounding names (Bertrand & Mullainathan, 2004). In summarizing these findings, the White callback rate increased over two percentage points between the low quality (8.8%) and high quality resume conditions (11%). The Black candidates received fewer callbacks for interviews, and the rate of increase between low quality resume (6.41%) and high quality resumes was minimal (6.99%). Bertrand and Mullainathan stated that, “While one may have expected that improved credentials may alleviate employers’ fear that African American applicants are deficient in some unobservable skills, this is not the case in our data. Discrimination therefore appears to bite twice,
making it harder not only for African Americans to find a job but also to improve their employability” (p. 3).

The Emergence of the Career Electronic Portfolio

The dramatic changes in technology over the past century made a profound impact on the daily routines of humans throughout the world. On October 4, 1957, the Russians launched their first satellite, Sputnik, into space which resulted in President Eisenhower investing considerable resources into new technologies (“Sputnik,” 2007). The imminent concern of a nuclear warhead hitting home territory frightened many, so scientists were charged with brainstorming how intelligence and communication could be routed through a “decentralized network” (“The Cold War,” 1998, p. 1). It was commonly understood that centralized networks would be primary targets for the enemy, and if the enemy successfully destroyed a centralized network it would be devastating. The great minds of United States scientists came together and transformed a rather abstract concept into what would soon become a common day technological tool. By 1982 the infrastructure of the Internet was created, and by 1985, the first web domains ending in .com and .edu were registered to users (“PBS Timeline,” 1998).

Within the past three decades, Internet usage has increased exponentially. In 1995, there were 16 million users; in 2000, 304 million users; in 2005, 1.024 billion users; in 2010, 2.023 billion users; and in 2013 there were 2.749 billion users which equated to slightly less than 40% of the world population (“Statistics,” 2013; “Internet Growth Statistics,” 2014). Positive growth in Internet usage has been observed both by developed and underdeveloped countries around the globe. However, not surprisingly,
the usage rates per 100 inhabitants are much higher for developed countries (76.8%) than underdeveloped countries (30.7%) (“Statistics,” 2013).

Devices such as laptops, desktops, iPads, smart phones, Blu-ray players, and even flat screen televisions have been engineered to receive Internet and wireless connection. The Internet has served as a catalyst for making information readily accessible and is intertwined into the fabric of our culture. An estimated 182 billion e-mails are sent and received daily and 1.2 trillion Google searches are conducted each year. In 2013 there were an estimated 785,293,473 published websites, 1.49 billion people were registered Facebook users, and the global Internet sales yield over one trillion dollars each year (Radicati & Levenstein, 2013; “Zeitgeist 2012,” 2014; “Netcraft,” 2013; “Facebook Newsroom Keyfacts,” 2015; “B2C Ecommerce,” 2013).

The Internet has been utilized in recent years by candidates as a marketing tool to promote one’s work background, knowledge, skills and abilities to prospective employers. College graduates are entering the workforce at a time when global competition is elevated, and full-time work with competitive salaries and fringe benefits can no longer be taken for granted. One of the reasons college students attend institutions of higher learning is to obtain knowledge and skillsets in order to be successful in a career. The average amount of debt for the college graduates who took out student loans amounted to $28,400 (Reed & Cochrane, 2014). College graduates who hold a bachelor’s degree are less likely to be unemployed (3.4% unemployment rate) than individuals without a high school diploma (10.8% unemployment rate), with a high school diploma (7.3% unemployment rate), and an associate’s degree or some college (6.4% unemployment rate) (“The Employment Situation,” 2014, p. 7). Additionally, graduates
with a bachelor’s degree will produce on average $433.00 more per week than a person with only a high school diploma (“Earnings and Unemployment,” 2015). Even though more college graduates have been successful landing jobs, more individuals are being forced to settle for lower-paying jobs that have minimal qualifications (Rampell, 2013). Graduates are entering the workforce, but due to the competitive nature of the market these graduates are not always landing optimal entry-level positions.

The United States Census Bureau collected longitudinal data to determine how many jobs an average person holds from the age of 18 to 46 and reported that a Baby Boomer Generation employee with a bachelor’s degree changed jobs 11.8 times over a 28 year span (“Number of Jobs,” 2012). The use of technology has made it easier for college graduates to search for positions online, market their experiences and skillsets, and network with professionals in their field. In 2013 LinkedIn had over 259 million members world-wide and contributed in 5.7 billion internal searches in just one year (“Press Center,” 2014). College graduates who setup a LinkedIn account are able to customize an online profile page with their educational background, work accomplishments, and relevant skillsets. Employers can recruit strategically by taking the opportunity to view profiles, announce job postings, and send personalized messages. Professional networking and job posting websites can provide a win-win scenario for both candidates and employers alike.

Showcasing career electronic portfolios has also become increasingly popular over the years because it allows candidates to present a comprehensive collection of career artifacts via a personalized and interactive website. A primary advantage of using an electronic portfolio over a traditional leather-bound portfolio is that the e-portfolio can
be sent to dozens of employers simultaneously upon the click of a mouse. Digital portfolios have piqued the interest of higher education administrators throughout the nation, and the data presented by The Campus Community Project show that the number of e-portfolios created at higher education institutions is on the incline (Green, 2010).

The Electronic Portfolio Action and Communication webpage references dozens of web-based systems that can be used for building and maintaining e-portfolios, including Blackboard, Carbonmade, Chalk and Wire, eFolio, iWebFolio, Mahara, PebblePad, Seelio, Transfolios, Weebly, and Wordpress (Chen, 2013). Greenberg (2004) identified three basic types of digital portfolios including the showcase portfolio, structured portfolio, and learning portfolio. One important characteristic of showcase portfolios is that all the artifacts and media are already created prior to working on the portfolio and contain thoughtful reflection integrated into the project (Greenberg, 2004). Showcase portfolios encompass career portfolios, and the student can post artifacts such as a resume, cover letter, references, research papers, or class presentations. Florida State University provides an abundance of information on career e-portfolios via their Career Center webpage and encourages students to utilize their user-friendly Blackboard platform to create a portfolio, “The FSU Career Portfolio prepares students for the world of work through planning, reflection, skill development, and portfolio documentation” (“The Career Center,” 2014). The Career Center publishes information on its webpage and details how to set up a portfolio, what information to include in a portfolio, and research on career portfolios.

A second type of portfolio that Greenberg (2004) defines is called a structured portfolio. Institutional educators provide the student a list of all the learning objectives
that need to be included in the portfolio, and these portfolios are often used for
“demonstrating accomplishments for certification or fulfillments of specific
requirements” (Greenberg, 2004, p. 32). Some program coordinators create a list of
objectives for the students while other coordinators incorporate certification matrices
(Greenberg, 2004). However, in both conditions, the students are asked to complete the
applicable parts of their portfolio each time an objective is mastered (Greenberg, 2004).
Structured portfolios can still be used as a job-marketing tool; the primary difference
between the two is that the structured portfolio includes an interactive matrix that
illustrates how each standard or objective was met (Greenberg, 2004).

Lastly, a learning e-portfolio is fluid and continually evolving over time. A
program coordinator who promotes learning portfolios may ask for students in a
classroom or a third-party to review other portfolios and provide meaningful feedback
(Greenberg, 2004). Since learning portfolios continually evolve over time, the portfolios
are shaped by internal student reflection, real life experiences, and the diverse
perspectives offered by others who review the portfolio (Greenberg, 2004).

The State of Minnesota offered a comprehensive e-portfolio solution to its
students and has received two national awards for its innovative strategic efforts
(Cambridge, 2008). The state has made tremendous strides in terms of promoting the use
of this technology and investing resources into an electronic portfolio initiative.
Beginning in 2002, the students, staff, and faculty affiliated with the public colleges and
universities were able to create an e-portfolio through eFolio free of charge to the user.
The number of new users increased by about 1,300 per month between the years 2002 to
2005, and by June of 2005 over 32,000 students, faculty, and staff created portfolios.
Currently over 250,000 user e-portfolios have been created over the years through this statewide initiative (“eFolioMinnesota,” 2013). Cambridge (2008) sought to understand how the e-portfolios were being used, and how the program benefited its users and sent out an online survey to users in 2004. After extracting this quantitative data, phone interviews were conducted with select participants “whose response to the survey were representative of the general patterns” in an effort to collect rich qualitative data (Cambridge, 2008, p. 1231). Cambridge (2008) found that 75% of users reported using the e-portfolio to “document knowledge, skills, and abilities,” 56% for “educational planning,” 47% for “finding a job,” 42% for “tracking development,” 40% for “evaluation within a course,” and 36% for “performance monitoring” (p. 1234). The findings of this research illustrate that e-portfolios are being used in a variety of ways (Cambridge, 2008).

The faculty and staff at LaGuardia Community College located in New York City serve an internationally diverse group of 13,000 students. Many of their students come from low-income households, require college preparation classes, and identify as first-generation college students (Eynon, 2009). The institution adopted an e-portfolio program in an effort to reach out to this population, and participation rates increased rather quickly for the institution in a relatively short period of time (Eynon, 2009). Students have the option of creating an e-portfolio using a portfolio platform or by using website creation software programs such as Adobe Dreamweaver or Web Designer (Eynon, 2009). Recognizing that the program has evolved over the years, Eynon notes that the program has increased retention rates for this student population. Moreover, the retention rates for the 2005-2006 fall to spring academic year were five percent higher for
the group of students who created e-portfolios (75.5%) relative to the group that opted out of the experience (70%) (Eynon, 2009).
CHAPTER III

METHODOLOGY

This research project intended to enhance understanding of the attitudes Millennial students possess toward racially diverse candidates and explore the patterns of response associated with four specific research objectives. The first objective intended to examine the influence of the study conditions variable and participant racial group variable independently. A one-way analysis of variance (ANOVA) was first run to explore how Millennial undergraduates evaluated the five study conditions controlling for all other variables: Asian fictitious candidate, Black fictitious candidate, Hispanic fictitious candidate, White fictitious candidate, and Control. The findings revealed whether there was a statistically significant difference in Candidate Evaluation Scale (CES) means between two or more levels of the variable. A second exploratory analysis was run using a one-way ANOVA to understand how each of the Millennial participant racial groups evaluated candidates across all five study conditions. This particular analysis revealed whether there was a statistically significant difference in the CES means between two or more participant racial and ethnic groups. [Statistical Analyses 1A-1B]

The second research objective examined how the racial and ethnic groups, represented by the study participants, evaluated the different study conditions. Moreover, the first analysis aimed to understand whether Millennial undergraduates evaluate a fictitious candidate of the same race (e.g. Black participant evaluating the fictitious Black candidate) more or less favorably than a candidate of a different race (e.g. Black participant evaluating the fictitious Asian/White/Hispanic Candidate) relative to the
control e-portfolio (no photograph). A new “simple conditions” variable was created such that participants who evaluated a same race e-portfolio were coded a value of 1, participants who evaluated a different race e-portfolio were coded a value of 2, and participants who evaluated the control e-portfolio were coded a value of 3. Adding to the previous model, the second analysis revealed how the participant racial and ethnic groups evaluated the three levels of the simple conditions variable. The last analysis in this set focused on the interaction between participant racial groups and all five study conditions. The findings revealed how each participant racial groups evaluated each of the five study conditions and whether this interaction was statistically significant. [Statistical Analyses 2A-2C]

A student classification variable was introduced into the model and three statistical analyses were performed to understand the patterns of response associated with Millennial freshmen, sophomore, juniors and seniors. The first analysis detected whether the CES means between the four levels of the variable were statistically significant, controlling for all other variables. A second analysis was run by adding the simple conditions variable into the previous model, and detected whether freshmen, sophomore, junior and seniors evaluate a fictitious candidate of the same race, different race, and control e-portfolio differently. Lastly, the third analysis explored the relationships and trends associated with the student racial group, student classification, and the study conditions variable. [Statistical Analyses 3A-3C]

The fourth research objective examined the influence of a participant’s geographic region on the model. Controlling for all other variables, the first analysis compared overall means by geographic region and determined whether two or more
levels of the variable were statistically different. The second analysis was run to reveal how participants in each geographic region evaluated a fictitious candidate of the same-race, difference race, and the control e-portfolio. The last analysis in this series examined the statistical relationships associated with the following three variables: student racial group, student geographic region, and the study conditions variable. [Statistical Analyses 4A-4C]

Strategic Recruitment of Colleges and Universities

Higher education institutional sponsors were recruited by using both stratified random sampling and convenience sampling techniques. With respect to the stratified random sampling technique, the researcher extracted a file with the names of all higher education institutions with enrollment exceeding 1,000 students in the United States from the National Center for Education Statistics, and then, through the use of a randomizer function, assigned each institution a randomized value ranging from zero to one. The data were clustered by geographic region, and then the randomized values were filtered in descending order. The researcher selected the institutions with the three lowest randomized values per geographic region, and because the file clustered institutional data into nine geographic regions, a total of 27 institutions were randomly selected. The contact information for college administrators and housing directors at these institutions was obtained through an online Google search.

The college contacts were sent a personalized invitation to sponsor the project via an e-mail that included a basic overview of the project and a hyperlink to an administrator recruitment website, www.highereducation-jobs.com and additional project information (see Appendix A to view screenshots of the recruitment website). The
sponsor recruitment website was customized for college administrators and displayed four webpages: Project Overview, Raffled Merchandise, Institutional Sponsor Deadlines, and Review the Study Materials. The “Project Overview” webpage introduced the research objectives and information pertaining to the methodology for recruiting students. The “Raffled Merchandise” webpage contained information about the raffled prize incentives, process for selecting the winners, and the rules. The “Institutional Sponsor” webpage detailed the process for how to sponsor the project and included the required documentation. Lastly, the “Review the Study Materials” webpage allowed administrators to review all the online study materials.

Convenience sampling techniques were also used to recruit institutional sponsors. The researcher contacted a few college administrators and on-campus housing directors to determine if there was interest in sponsoring the project. The same recruitment memo that was sent to the contacts who were selected by stratified random sampling was also sent to the contacts in the researcher’s network.

A total of eleven institutions representing four geographic regions of the United States agreed to sponsor this research project. The administrators who agreed to sponsor the project were asked to sign a “Permission to Solicit Research Participants Electronically Agreement Form” and send the researcher, after receiving a formal letter confirming project approval from The University of Southern Mississippi (USM) Institutional Review Board (IRB), a spreadsheet with the names and e-mail addresses of their students. While some colleges approved sponsorship with a confirmation of USM IRB approval letter, three sponsors requested for the researcher to complete a second IRB application using their research request application and have the project formally
reviewed on each site. The researcher coordinated the research request process and obtained approval to collect data from all institutional sponsors.

Experimental Research Design

The researcher customized a career portfolio using a Moto CMS template for a fictitious female candidate who was applying for a Resident Assistant position. After the e-portfolio was constructed, the e-portfolio file was duplicated five times. Five subdirectory folders were created under the Public HTML domain folder which created one unique web address for each of the five study conditions. The subdirectory URLs were created using a long sequence of randomly generated characters in an effort to prevent participants from guessing the website addresses and discovering the purpose of the study. For instance, the web address for the control e-portfolio was http://highereducation-jobs.com/zzcyfkf1vyhsngqncwzhfcvysfojsulfblcrbljrbzpux.

Using an experimental research design, participants were randomly assigned to one of the five career e-portfolios by using a randomization function in Qualtrics. After participants reviewed the study instructions and clicked a forward arrow to continue, the design was set up in such a way that participants had an equal probability of being directed to any one of the five career e-portfolios. Participants would review the contents of only one e-portfolio, and then provide an evaluation of the candidate via a Qualtrics Candidate Evaluation Form.

The Candidate Evaluation Form was duplicated five times, labeled internally in Qualtrics to differentiate among the five unique conditions, and hyperlinked accordingly to each study condition. For instance, the Asian candidate career e-portfolio button ‘Evaluate Candidate’ linked directly to the Qualtrics Asian Candidate Evaluation Form.
The data from the five Candidate Evaluation Forms were extracted from Qualtrics, transferred into one master file, and analyzed using statistical software.

_Recruitment Memo Sent to Students_

Recruitment memos were sent electronically to potential participants between the dates of April 21, 2014 to May 16, 2014 (see Appendix B). Four out of the eleven institutional sponsors requested for the study link to be sent internally by an employee at the college rather than providing the directory information to the researcher. The researcher agreed to allow these four institutions, who collectively enrolled over 42,000 students, to send the recruitment e-mails internally via a housing and institutional listserv. A recruitment e-mail was sent by the researcher to the college contact, and then these invitation notifications were distributed to students.

Seven of the eleven college sponsors agreed to send the researcher an Excel spreadsheet with the requested directory information (n=31,831). The researcher uploaded these directory files into a Qualtrics panel and sent personalized e-mails with unique survey tokens to these students. One follow-up reminder e-mail was sent to the students who had not participated. Potential participants were informed in the recruitment e-mail that they must be between the ages of 18-33 years and be enrolled as an undergraduate student at one of the sponsoring colleges or universities.

_Study Materials and Instrumentation_

_Qualtrics Informed Consent Form_

Students who elected to participate in the study clicked a hyperlink in the body of the recruitment memo and were directed to the informed consent form (see Appendix C). The informed consent form included the researcher’s contact information, a description
of the study, associated benefits and risks, confidentiality statement, and a participant assurance statement. None of the items in the survey materials used a forced response format which allowed participants who were not comfortable responding to a particular item and opportunity to not answer. Before participating in the study, participants were required to agree to the research terms and verify their age: “I Agree to these terms – I verify that I am 18 years of age or older.” Participants who did not agree to the research terms or were under the age of 18 received this automated message: “You indicated that you do not agree to the research terms and/or are not an undergraduate between the ages of 18-33 years; therefore, you will not be permitted to complete this study. Thank you for your time and interest in this study.”

*Qualtrics Raffle Incentive Information Page*

Participants who accepted the research terms were directed to a raffle incentive page that offered information about the raffle process (see Appendix D). Participants could submit their name into a raffle for a chance to win an e-mailed $25.00 Amazon Gift Card (20 available), a $50.00 Amazon Gift Card (4 available), or a $150.00 Amazon Gift Card (1 available). Although participants were able to remain anonymous, those who chose to participate in the raffle were asked to provide their name and contact information at the end of the study. In an effort to ensure anonymity of responses, the raffle survey was an independent survey and was not tied to the study data.

*Qualtrics Participant Instructions Page*

Participants received specific study instructions and were asked to play the role of a hiring manager at a mid-sized university (see Appendix E). Participants clicked on the forward arrow at the bottom of the screen to advance.
From this point forward we ask that you play the role of a manager at a mid-sized university to hire one fictitious candidate. Read a position summary to which a fictitious candidate is applying for. Review the fictitious candidate's career electronic portfolio which contains an array of career artifacts, including a cover letter, resume, letter of recommendation, and project works. Following a thorough review of one candidate’s electronic portfolio, you will complete an evaluation form on the candidate, a short demographic form, and be given an opportunity to enter the raffle for a chance to win an Amazon gift card.

*Qualtrics Resident Assistant Job Summary*

Participants were then asked to review a short job summary of the Resident Assistant position (see Appendix F). The researcher obtained permission from The University of Southern Mississippi Department of Residence Life to use and modify an existing Resident Assistant job description for this project. Participants read the job summary and clicked on the forward arrow to continue.

It should be noted that when participants clicked the forward arrow at the bottom of the screen, individuals had an equal probably, \( P(X) = .2 \), of reviewing any one of the five career e-portfolios: Asian candidate e-portfolio, Black candidate e-portfolio, Hispanic candidate e-portfolio, White candidate e-portfolio, and the control e-portfolio (no photograph). Participants reviewed and provided an evaluation for only one candidate e-portfolio.

*HTML Career Electronic Portfolio*

The researcher customized a career electronic portfolio for a fictitious candidate, named Amanda Cunningham, who was applying for a Resident Assistant position (see
The five e-portfolios were duplicated and contained the same cover letter, resume, letter of recommendation, short biography, and class artifacts (see Appendix H to view application artifacts). The contents of the e-portfolio were reviewed by a small panel of Residence Life professionals who had practical experience with hiring, training, and supervising Resident Assistants. The subject matter expert panel was charged with reviewing the artifacts and ensuring that the credentials of the fictitious candidates were ‘average’ in an effort to prevent data from being positively or negatively skewed.

The MotoCMS HTML e-portfolio was designed to allow participants the autonomy of navigating freely to the different pages and popups of the portfolio rather than restricting material in a defined sequence. A hyperlink with the Resident Assistant job summary was added to the top of the e-portfolio to allow participants an opportunity to re-read the job summary, if needed. After reviewing the contents of the e-portfolio, participants clicked on the Candidate Evaluation Form button that was located on the last webpage, Evaluate. To view five screenshots of the career e-portfolio MotoCMS HTML template see Figure 3.1 – 3.5 below.
Figure 3.1. Career Electronic Portfolio Screenshot - Cover Page. The text above the menu reminds participants to review all the contents of the e-portfolio before completing the evaluation, “Review the contents of tabs 1-4 first. Then click on tab 5 to evaluate the candidate.” Participants could access the Resident Assistant position summary at any time by clicking on the link, “Click here if you need to review the job summary.”

Figure 3.2. Career Electronic Portfolio Screenshot - About Me. The About Me page included a short biography of the candidate and the history of past work and volunteer experiences.
Figure 3.3. Career Electronic Portfolio Screenshot - Career Artifacts. The Career Artifacts page linked to a cover letter pop-up page, a resume pop-up page, and a letter of recommendation pop-up page. The right side of the page highlighted the fictitious candidate’s education, work experiences, and technology skills.

Figure 3.4. Career Electronic Portfolio Screenshot - Project Works. The project works page included the topics that the fictitious candidate presented on in class and a sample presentation.
Figure 3.5. Career Electronic Portfolio Screenshot - Evaluate Candidate. The last page of the e-portfolio displayed a button which directed participants to the Candidate Evaluation Form.

Candidate Photographs – Study Conditions (Independent Variable)

A formal process was followed in selecting candidate photographs to pick candidate photographs that were similar in age, level of attractiveness, and facial expressions. All the royalty-free stock pictures were purchased directly from iStockphoto, www.istockphoto.com (see Appendix M for purchase history).

A total of 53 undergraduate students, graduate students, and professional staff members at The University of Southern Mississippi completed an online survey to evaluate the series of photographs. More specifically, participants were asked to review the photographs and attribute an age and a level of attractiveness on a scale from one to ten (1 unattractive --- 10 highly attractive) for each candidate photograph. The participant sample was composed of 62% Non-Hispanic White, 32.1% African American, 1.9% American Indian, and 3.8% selected the category ‘Other.’ The level of attractiveness across the photographs varied such that the attributed mean score for the Black candidate
photograph was 5.69, the White candidate photograph was 5.72, the Asian candidate photograph was 6.98, and the Hispanic candidate photograph was 7.81. The attributed mean age for the Asian candidate in the photograph was 20 years, the White candidate was 21 years old, the Hispanic candidate was 22 years, and the Black candidate was 25 years old. The researcher acknowledges that the variation in attractiveness and age is a source of error in the model and may potentially influence results of the study. A professional photographer altered the shirt and folder colors in each photograph to improve consistency across photographs. The four female candidate photographs of the series along with their attributed mean age and attractiveness are displayed below in Figure 3.6.

### Asian Candidate Photograph

<table>
<thead>
<tr>
<th>Attributed Mean Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
</tr>
<tr>
<td>18</td>
</tr>
</tbody>
</table>

![Original and Edited Images](http://highereducation-jobs.com/zzpqxlupwvquimenndkhiwjdwpuskkecixbldplao)

### Attributed Mean Level of Attractiveness

<table>
<thead>
<tr>
<th>Attributed Mean Level of Attractiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>
### Black Candidate Photograph

<table>
<thead>
<tr>
<th>Attributed Mean Age</th>
<th>Original</th>
<th>Edited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td><img src="image1" alt="Original" /></td>
<td><img src="image2" alt="Edited" /></td>
</tr>
<tr>
<td>Attributed Mean Level of Attractiveness</td>
<td>5.69</td>
<td>24.89</td>
</tr>
<tr>
<td>Hispanic</td>
<td><img src="image3" alt="Original" /></td>
<td><img src="image4" alt="Edited" /></td>
</tr>
<tr>
<td>Attributed Mean Level of Attractiveness</td>
<td>7.81</td>
<td>21.65</td>
</tr>
</tbody>
</table>

Career E-Portfolio URL:  
http://highereducation-jobs.com/zzbjszimyjefotnelhanypzwltxgzcakxctzfswvigfocs

### Hispanic Candidate Photograph

<table>
<thead>
<tr>
<th>Attributed Mean Age</th>
<th>Original</th>
<th>Edited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td><img src="image5" alt="Original" /></td>
<td><img src="image6" alt="Edited" /></td>
</tr>
<tr>
<td>Attributed Mean Level of Attractiveness</td>
<td>5.72</td>
<td>21.24</td>
</tr>
</tbody>
</table>

Career E-Portfolio URL:  
http://highereducation-jobs.com/zzcvmqvevpqwyktrzqlrqysqzqpymlqyswxybytnuphz

### White Candidate Photograph

<table>
<thead>
<tr>
<th>Attributed Mean Age</th>
<th>Original</th>
<th>Edited</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td><img src="image7" alt="Original" /></td>
<td><img src="image8" alt="Edited" /></td>
</tr>
<tr>
<td>Attributed Mean Level of Attractiveness</td>
<td>5.72</td>
<td>21.24</td>
</tr>
</tbody>
</table>

Career E-Portfolio URL:  
http://highereducation-jobs.com/zzwsmgwvpuwmwnjsesqgjkywboflhkdjzsetsbfvvedey
Figure 3.6. Pictorial Stimuli: Attributed Age & Level of Attractiveness of All Four Fictitious Candidate Photographs

Qualtrics Candidate Evaluation Form - Dependent Variable

The Qualtrics Candidate Evaluation Form displayed eight items of the Candidate Evaluation Scale (CES) in a formatted matrix, and all items used a seven point Likert rating scale: Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neither Agree Nor Disagree (4), Somewhat Agree (5), Agree (6), Strongly Agree (7) (see Appendix I to see the Candidate Evaluation Form). The mean of all eight CES items was calculated and used as the dependent variable in statistical models.

- This applicant would be a great resource to his/her residents:
- This applicant is self-motivated:
- This applicant would serve as a positive role model:
- This applicant is likely to be promoted in the department within two years:
- This applicant is likely to connect with students of diverse backgrounds:
- This applicant is a team player:
- This applicant is qualified for the position:
- I would hire this applicant:

The researcher added the CES items to a Qualtrics Candidate Evaluation Form and produced five duplicates of the form so there was one evaluation form per study condition. The five Candidate Evaluation Forms were labeled internally in Qualtrics and hyperlinked to the corresponding e-portfolio. Participants evaluated the candidate and then clicked on the forward arrow at the bottom of the screen to advance.
Qualtrics Demographics Form

Next, participants completed a short demographic questionnaire that asked participants about their college or university, age, current class standing, race/ethnicity, enrollment status (part-time vs. full-time), residence status (on-campus vs. off-campus), and residence during upbringing (“I grew up in an urban community,” “I grew up in the suburb community,” “I grew up in a rural community,” “NA – I lived in more than one city growing up”). Participants clicked on the forward arrow at the bottom of the screen to advance (see Appendix J).

Qualtrics Study Follow-Up Questions

A follow-up question was asked to better understand how participants identified the race of the fictitious candidate: “The electronic portfolio you reviewed included a picture of the fictitious candidate. In your personal opinion which race/ethnicity would this applicant most likely identify with?” Participants could respond with the following response alternatives: American Indian or Alaska Native, Asian, Asian American, Pacific Islander, Black or African American, Hispanic, Latino, or Spanish Origin, White, Non-Hispanic, I do not remember. Those participants who evaluated the control e-portfolio were not asked this follow-up question. Two additional distractor items were added to this form to prevent participants from discovering what the project was about. One distractor item asked participants, “The electronic portfolio you reviewed included a letter of recommendation. Do you recall the job title of the person who wrote the letter of recommendation for the fictitious candidate?” The second distractor item asked participants, “The electronic portfolio you reviewed included a resume. Do you recall where the fictitious candidate previously worked?” After completing these follow-up
questions, participants clicked on the forward arrow at the bottom of the screen to advance (see Appendix K).

*Qualtrics Raffle Form*

Participants were routed to an independent raffle survey, which was not linked to the survey responses, and given an opportunity to submit their name into a raffle for a chance to win an e-mailed $25.00 Amazon Gift Card (20 available), a $50.00 Amazon Gift Card (4 available), or a $150.00 Amazon Gift Card (1 available). The winners of the raffle were selected using computer randomization software and notified via e-mail. Upon the successful submission of the raffle form, participants received an automated message on the screen thanking them for participating in the study (see Appendix L).
CHARTER IV

ANALYSIS OF DATA

A total of eleven higher education institutions sponsored the project, and these institutions were located within four geographic regions of the United States. By the end of the data collection period, over 70,000 students were sent recruitment memos, and 2,056 Millennial undergraduates completed the online study materials. All participants agreed to the research terms, indicated that they were between the ages of 18-33 years, and were enrolled at one of the eleven sponsoring institutions. The raw data collected from the instruments were extracted from the Qualtrics survey software, consolidated into one master spreadsheet, and coded and analyzed in SPSS.

Participant Demographics

The majority of participants who completed the demographic items were between the ages of 18 and 22 (82.6%), while the remaining 17.4% identified between the ages of 23 to 33 years. Thirteen students opted to not report demographic information. There was a consistent representation from the four student classification groups such that 513 students identified as freshman (25%), 568 students identified as sophomores (28%), 474 as juniors (23%), and 489 as seniors (24%). Additionally, it was observed that the vast majority of participants identified as being full-time students (n=1,961; 96%) in comparison to part-time students (n=82, 4%). More participants reported living on-campus (n=1,277, 62%) than living off-campus (n=769, 38%). Forty eight percent of the total participant pool was enrolled at an institution in the Southeast region (n=971), 26% of the participants were enrolled in the New England Region (n=531), 20% were enrolled in the Southwest Region (n=417), and 6% were enrolled in the Great Lakes Region.
The sample was disproportionately represented by White, Non-Hispanic Millennial undergraduates (n=1,431) in comparison to that of Black or African American participants (n=271), Asian, Asian American, or Pacific Islander participants (n=129), Hispanic, Latino, or Spanish Origin participants (n=89), Multiracial or Other participants (n=80), and American Indian or Alaska Native participants (n=45). The characteristics of the Millennial student sample are displayed in 4.1 – 4.2 and Table 4.1.

Figure 4.1. Characteristics of the Millennial Student Sample: Age Distribution

Figure 4.2. Characteristics of the Millennial Student Sample: Participant Race & Ethnicity.
Table 4.1

Characteristics of the Millennial Student Sample: Class Standing, Enrollment Status, Residence, Upbringing Status, & US Geographic Regions

<table>
<thead>
<tr>
<th>Class Standing</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>513</td>
<td>24.9%</td>
<td>25.1%</td>
<td>25.1%</td>
</tr>
<tr>
<td>Sophomore</td>
<td>568</td>
<td>27.6%</td>
<td>27.8%</td>
<td>52.9%</td>
</tr>
<tr>
<td>Junior</td>
<td>474</td>
<td>23.0%</td>
<td>23.2%</td>
<td>76.1%</td>
</tr>
<tr>
<td>Senior</td>
<td>489</td>
<td>23.8%</td>
<td>23.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Missing</td>
<td>14</td>
<td>.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2058</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enrollment Status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time</td>
<td>1961</td>
<td>95.3%</td>
<td>96.0%</td>
<td>96.0%</td>
</tr>
<tr>
<td>Part-Time</td>
<td>82</td>
<td>4.0%</td>
<td>4.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Missing</td>
<td>15</td>
<td>.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2058</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Residence</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Campus</td>
<td>1277</td>
<td>62.1%</td>
<td>62.4%</td>
<td>62.4%</td>
</tr>
<tr>
<td>Off-Campus</td>
<td>769</td>
<td>37.4%</td>
<td>37.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Missing</td>
<td>12</td>
<td>.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2058</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Upbringing Status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I grew up in a rural community</td>
<td>622</td>
<td>30.2%</td>
<td>30.4%</td>
<td>30.4%</td>
</tr>
<tr>
<td>I grew up in a suburb community</td>
<td>923</td>
<td>44.8%</td>
<td>45.1%</td>
<td>75.6%</td>
</tr>
<tr>
<td>I grew up in an urban community</td>
<td>269</td>
<td>13.1%</td>
<td>13.2%</td>
<td>88.7%</td>
</tr>
<tr>
<td>NA - I lived in more than one city growing up</td>
<td>231</td>
<td>11.2%</td>
<td>11.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Missing</td>
<td>13</td>
<td>.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2058</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geographic Region</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southwest Geographic Region</td>
<td>417</td>
<td>20.3%</td>
<td>20.5%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Great Lakes Geographic Region</td>
<td>119</td>
<td>5.8%</td>
<td>5.8%</td>
<td>26.3%</td>
</tr>
<tr>
<td>New England Geographic Region</td>
<td>532</td>
<td>25.9%</td>
<td>26.1%</td>
<td>52.4%</td>
</tr>
<tr>
<td>Southeast Geographic Region</td>
<td>971</td>
<td>47.2%</td>
<td>47.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Missing</td>
<td>19</td>
<td>.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2058</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attributed Race/Ethnicity of the Candidate Photographs

After the submission of their candidate evaluations, participants were asked to classify the race of the fictitious candidate in which they evaluated. “The electronic portfolio you reviewed included a picture of the fictitious candidate. In your personal opinion which race/ethnicity would this applicant most likely identify with?” Those students who evaluated the control e-portfolio did not receive this item because they did not see a photograph in e-portfolio. Participants were asked to respond to two additional
distractor items that were intentionally added to prevent participants from discovering the purpose of the study.

Findings from the item which asked participants about the candidate’s race revealed that the vast majority of the 392 participants who reviewed the Asian career e-portfolio and responded to this item, classified the female as an Asian candidate (n=367, 93.6%). Less than 7% of participants who reviewed the Asian e-portfolio either could not correctly identify what she looked like or classified her in a different racial group. A total of 425 participants were randomly assigned to evaluate the Black candidate and answered the follow-up item. The majority of participants (n = 402, 94.6%) responded that the individual would identify as Black or African American. Less than 5% of participants either did not remember what the candidate looked like or classified her in a different racial group. Participants who evaluated the Hispanic candidate were more inconsistent in their responses which contributed to error in the model and may have potentially influenced the evaluation results. A total of 403 participants responded to this follow-up item and just over half classified the candidate as Hispanic, Latino, or Spanish Origin (n=227, 56.3%). One out of every four participants classified the candidate as White, Non-Hispanic (25%) while the remaining 18.6% of participants either did not remember what she looked like or classified her in a different racial group. Lastly, the vast majority of the 413 participants who evaluated the White candidate and completed this follow-up item classified the candidate as White, Non-Hispanic (95.6%). Less than 5% of the participants either did not recall what the candidate looked like or classified the individual in a different racial group. A visual display of the attributed race and ethnicity of the candidate photographs can be found in Figure 4.3.
Participants of the study were asked a follow-up question after completing the CES. The chart displays the participant attributed race/ethnicity by count of all four fictitious candidate photographs.

Internal Consistency of the Candidate Evaluation Scale

After reviewing the contents of the e-portfolio, participants were asked to respond to all eight items of the Candidate Evaluation Scale (CES) using a seven-point rating scale: Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neither Agree Nor Disagree (4), Somewhat Agree (5), Agree (6), and Strongly Agree (7). All items were positively worded, and a Cronbach Alpha coefficient was generated to measure internal consistency. The value ($\alpha = .912$) provided evidence of a high level of internal consistency among all eight items. Additional findings revealed that the Cronbach Alpha would not directly increase as a result of removing any one particular item from the scale. The mean value of all eight items of the CES was derived and used as the dependent variable for all the subsequent analyses. Table 4.2 presents the CES item total statistics.
Table 4.2

Item Total Statistics – Candidate Evaluation Scale

<table>
<thead>
<tr>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach’s Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1) This applicant is likely to connect with students of diverse backgrounds:</td>
<td>40.342</td>
<td>42.960</td>
<td>.601</td>
</tr>
<tr>
<td>#2) This applicant would be a great resource to his/her residents:</td>
<td>39.943</td>
<td>43.394</td>
<td>.781</td>
</tr>
<tr>
<td>#3) This applicant is self-motivated:</td>
<td>39.825</td>
<td>44.025</td>
<td>.699</td>
</tr>
<tr>
<td>#4) This applicant would serve as a positive role model:</td>
<td>39.656</td>
<td>43.947</td>
<td>.742</td>
</tr>
<tr>
<td>#5) This applicant is a team player:</td>
<td>39.969</td>
<td>44.441</td>
<td>.652</td>
</tr>
<tr>
<td>#6) This applicant is likely to be promoted in the department within two years:</td>
<td>40.650</td>
<td>41.824</td>
<td>.692</td>
</tr>
<tr>
<td>#7) This applicant is qualified for the position:</td>
<td>39.988</td>
<td>41.937</td>
<td>.794</td>
</tr>
<tr>
<td>#8) I would hire this applicant:</td>
<td>40.097</td>
<td>40.275</td>
<td>.804</td>
</tr>
</tbody>
</table>

Research Objective #1 - Results

Detecting Differences in the Way Undergraduate Millennial Students Evaluate the Five Career E-Portfolios | All Participants (n=2,056) [Statistical Analysis #1A]

The first research objective sought to understand whether there would be a statistically significant difference in the way participants evaluated the five study conditions. Findings revealed that the Black fictitious candidate received the most positive overall CES mean (M = 5.820, SD = .8955, n = 430), the Asian candidate received the second highest evaluation (M = 5.803, SD = .8824, n = 393), the White candidate received the third highest evaluation (M = 5.719, SD = .8690, n = 424), the Hispanic candidate received the fourth highest evaluation (M = 5.673, SD = 1.027, n=410), and the control group (no photograph) received the lowest overall evaluation (M
= 5.590, SD=.9491, n=399). The CES mean for each study condition is displayed in Figure 4.4.

Figure 4.4. Candidate Evaluation Scale Mean Data from all Participants: Candidate Evaluation Scale Mean for Each Study Condition (n=2,056). [Analysis 1A]

Figure 4.5 and Table 4.3 display evaluation trends for each item of the CES. The greatest variation was observed in item #1 which asked participants to evaluate whether, “This applicant is likely to connect with students of diverse backgrounds.” For this particular item, the Black fictitious candidate received the most favorable mean (M = 5.847, SD=1.1342, N=430), and the control portfolio was evaluated less favorably, (M = 5.128, SD=1.3858, N=398). The means for each item of the CES is displayed in Figure 4.5 and Table 4.3.
**Figure 4.5.** Candidate Evaluation Scale Mean Data from All Participants: Graph of CES Means for Each Individual Item [Analysis 1A]

**Table 4.3**

*Descriptive Statistics: CES Mean Per Item Split By Study Condition*

<table>
<thead>
<tr>
<th>Study Conditions</th>
<th>Candidate Evaluation Scale</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian Candidate Photograph</td>
<td>Item #1: This applicant is likely to connect with students of diverse backgrounds:</td>
<td>392</td>
<td>5.691</td>
<td>1.245</td>
</tr>
<tr>
<td></td>
<td>Item #2: This applicant would be a great resource to his/her residents:</td>
<td>393</td>
<td>5.906</td>
<td>0.989</td>
</tr>
<tr>
<td></td>
<td>Item #3: This applicant is self-motivated:</td>
<td>393</td>
<td>5.982</td>
<td>1.063</td>
</tr>
<tr>
<td></td>
<td>Item #4: This applicant would serve as a positive role model:</td>
<td>392</td>
<td>6.153</td>
<td>1.030</td>
</tr>
<tr>
<td></td>
<td>Item #5: This applicant is a team player:</td>
<td>393</td>
<td>5.845</td>
<td>1.113</td>
</tr>
<tr>
<td></td>
<td>Item #6: This applicant is likely to be promoted in the department within two years:</td>
<td>393</td>
<td>5.226</td>
<td>1.283</td>
</tr>
<tr>
<td></td>
<td>Item #7: This applicant is qualified for the position:</td>
<td>393</td>
<td>5.837</td>
<td>1.120</td>
</tr>
<tr>
<td></td>
<td>Item #8: I would hire this applicant:</td>
<td>393</td>
<td>5.784</td>
<td>1.204</td>
</tr>
<tr>
<td>Black Candidate Photograph</td>
<td>Item #1: This applicant is likely to connect with students of diverse backgrounds:</td>
<td>430</td>
<td>5.847</td>
<td>1.134</td>
</tr>
<tr>
<td></td>
<td>Item #2: This applicant would be a great resource to his/her residents:</td>
<td>430</td>
<td>5.865</td>
<td>0.990</td>
</tr>
<tr>
<td></td>
<td>Item #3: This applicant is self-motivated:</td>
<td>430</td>
<td>6.023</td>
<td>1.022</td>
</tr>
<tr>
<td></td>
<td>Item #4: This applicant would serve as a positive role model:</td>
<td>430</td>
<td>6.165</td>
<td>.996</td>
</tr>
<tr>
<td></td>
<td>Item #5: This applicant is a team player:</td>
<td>430</td>
<td>5.902</td>
<td>1.056</td>
</tr>
<tr>
<td></td>
<td>Item #6: This applicant is likely to be promoted in the department within two years:</td>
<td>429</td>
<td>5.159</td>
<td>1.267</td>
</tr>
<tr>
<td></td>
<td>Item #7: This applicant is qualified for the position:</td>
<td>429</td>
<td>5.837</td>
<td>1.220</td>
</tr>
</tbody>
</table>
Table 4.3. (continued)

<table>
<thead>
<tr>
<th>Hispanic Candidate Photograph</th>
<th>Item #8: I would hire this applicant: 430  5.756  1.282</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item #1: This applicant is likely to connect with students of diverse backgrounds: 410  5.363  1.376</td>
<td></td>
</tr>
<tr>
<td>Item #2: This applicant would be a great resource to his/her residents: 410  5.802  1.135</td>
<td></td>
</tr>
<tr>
<td>Item #3: This applicant is self-motivated: 410  5.854  1.250</td>
<td></td>
</tr>
<tr>
<td>Item #4: This applicant would serve as a positive role model: 410  6.039  1.159</td>
<td></td>
</tr>
<tr>
<td>Item #5: This applicant is a team player: 409  5.768  1.183</td>
<td></td>
</tr>
<tr>
<td>Item #6: This applicant is likely to be promoted in the department within two years: 410  5.122  1.361</td>
<td></td>
</tr>
<tr>
<td>Item #7: This applicant is qualified for the position: 410  5.759  1.228</td>
<td></td>
</tr>
<tr>
<td>Item #8: I would hire this applicant: 410  5.680  1.355</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>White Candidate Photograph</th>
<th>Item #8: I would hire this applicant: 424  5.142  1.377</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item #1: This applicant is likely to connect with students of diverse backgrounds: 424  5.873  1.017</td>
<td></td>
</tr>
<tr>
<td>Item #2: This applicant would be a great resource to his/her residents: 424  5.993  1.000</td>
<td></td>
</tr>
<tr>
<td>Item #3: This applicant is self-motivated: 424  5.993  1.000</td>
<td></td>
</tr>
<tr>
<td>Item #4: This applicant would serve as a positive role model: 423  6.203  .9815</td>
<td></td>
</tr>
<tr>
<td>Item #5: This applicant is a team player: 424  5.837  1.043</td>
<td></td>
</tr>
<tr>
<td>Item #6: This applicant is likely to be promoted in the department within two years: 424  5.160  1.267</td>
<td></td>
</tr>
<tr>
<td>Item #7: This applicant is qualified for the position: 424  5.851  1.078</td>
<td></td>
</tr>
<tr>
<td>Item #8: I would hire this applicant: 424  5.691  1.267</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Candidate Photograph</th>
<th>Item #8: I would hire this applicant: 398  5.128  1.386</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item #1: This applicant is likely to connect with students of diverse backgrounds: 399  5.739  1.104</td>
<td></td>
</tr>
<tr>
<td>Item #2: This applicant would be a great resource to his/her residents: 399  5.917  1.075</td>
<td></td>
</tr>
<tr>
<td>Item #3: This applicant is self-motivated: 399  5.917  1.075</td>
<td></td>
</tr>
<tr>
<td>Item #4: This applicant would serve as a positive role model: 398  6.065  1.034</td>
<td></td>
</tr>
<tr>
<td>Item #5: This applicant is a team player: 399  5.709  1.128</td>
<td></td>
</tr>
<tr>
<td>Item #6: This applicant is likely to be promoted in the department within two years: 399  4.982  1.374</td>
<td></td>
</tr>
<tr>
<td>Item #7: This applicant is qualified for the position: 398  5.676  1.159</td>
<td></td>
</tr>
<tr>
<td>Item #8: I would hire this applicant: 399  5.501  1.380</td>
<td></td>
</tr>
</tbody>
</table>

A one-way ANOVA was run using all 2,056 student records. The study conditions variable (5 levels) was added to the model as the independent variable and CES mean as the dependent variable. The CES mean was derived by averaging all eight items of the candidate evaluation form which used a seven point rating scale. The critical value of p<.05 was used to detect statistically significant difference.
Levene’s Test for Homogeneity of Variance

An ANOVA is a relatively robust test when the group sizes are similar but not as robust in situations where there are reported violations of homogeneity of variance. The Levene’s test is used to determine whether the assumption of homogeneity of variance is violated. Using the criterion of p<.05, the variances among the five study condition groups were not statistically significantly different, and no violation was reported, $F(4, 2051) = 1.845, p = .118$.

ANOVA Output: Interpretation of the Main Effect

The F-value in the ANOVA table was statistically significant indicating that participants evaluated two or more of the five study conditions statistically different, $F(4, 2,051) = 4.269, p = .002$. A planned contrast analysis was run to identify which levels of the study conditions variable were statistically different.

Planned Contrasts Output

Planned contrast procedures are used when testing a specific research hypothesis and were used to detect differences in the means among the five study conditions. The output generated from a planned contrast revealed that the control e-portfolio yielded a statistically lower mean than the Asian candidate e-portfolio ($p = .001$), Black candidate e-portfolio ($p < .001$), and White candidate e-portfolio ($p = .046$). The Hispanic candidate e-portfolio ($M = 5.673$) received the second lowest CES mean and was significantly lower than the Asian ($p = .047$) candidate e-portfolio and Black candidate e-portfolio ($p = .022$). There were no other statistically significant differences detected among the levels of the study conditions variable at the critical value, p<.05.
An exploratory analysis was run to understand the evaluation trends among the participant racial groups represented in the study. The findings offered from this analysis reveal how the participant racial groups evaluated across all study conditions controlling for all other variables. Upon review of the preliminary descriptive statistic output, it was observed that participant racial group sample sizes varied drastically such that there were 45 American Indian or Alaska Native participants who completed the study; 80 Multiracial or Other participants; 89 Hispanic, Latino or Spanish Origin participants; 129 Asian, Asian American, or Pacific Islander participants; 271 Black or African American participants; and 1,431 White, Non-Hispanic participants.

The Black participants evaluated candidates across all five study conditions most favorably (M = 6.005, SD = .936, n = 271), White, Non-Hispanic participants gave the second highest CES mean (M = 5.716, SD = .900, n = 1,430), American Indian or Alaska Native participants gave the third highest CES mean (M = 5.703, SD = .926, n = 45), Multiracial and Other participants gave the fourth highest CES mean (M = 5.633, SD = 1.059, n = 80), and Hispanic, Latino, or Spanish participants gave the fifth highest CES means (M = 5.4358, SD = .904, n = 89). The Asian, Asian American, and Pacific Islander participants gave the lowest evaluation scores across all five study conditions (M = 5.417, SD=1.008, n = 129). A one-way ANOVA was run using 2,044 records to explore the differences in CES means for each of the participant racial groups. Findings from this analysis revealed whether two or more levels of the participant racial group variable were
statistically significant. The CES mean for each participant racial group is displayed in Figure 4.6.

![Figure 4.6. Candidate Evaluation Scale Mean Data From All Participants: Graph of CES Means for Each Participant Racial Group (n=2,044). [Analysis 1B]](image)

**Levene’s Test for Homogeneity of Variance**

Using the critical value of $p<.05$, there was no reported violation of homogeneity of variance since the group variance was not statistically different, $F(5, 2038) = 1.578$, $p=.163$, $\eta^2 = .024$.

**ANOVA Output: Interpretation of the Main Effect**

The findings from the one-way ANOVA output found that two or more levels of the participant race variable yielded statistical significant results, $F(5, 2,038) = 9.871$, $p<.001$, $\eta^2 = .024$. A follow-up planned contrast analysis was run to detect where the statistical differences exist.

**Planned Contrasts Output**

Planned contrast procedures were used to detect whether specific means of the variable differed. The participant racial group variable was recoded to allow for a simple last planned contrast comparison to be analyzed for each participant racial group. The
output from the comparison revealed that Black participants evaluated candidates in this study statistically higher than every other participant racial group represented in the study, including American Indian or Alaska Native participants (p=.041); Asian, Asian American, or Pacific Islander participants (p<.001); Hispanic, Latino, or Spanish Origin participants (p<.001); Multiracial or Other participants (p=.001); and White Non-Hispanic participants (p<.001).

An additional finding revealed that White Non-Hispanic participants offered the second highest CES mean and was statistically higher than Asian, Asian American, or Pacific Islander participants (p<.001) and Hispanic, Latino, or Spanish Origin participants (p=.005). There were no other statistically significant differences found among the participant racial groups at the critical value, p<.05.

**Research Objective #2 - Results**

*Detecting Differences in the CES Means by Simple Conditions Variable | All Study Participants (n=2,056) [Statistical Analysis #2A]*

The second objective of the research project explored how Millennial undergraduate racial groups evaluated a fictitious candidate of the same-race (e.g. Black participant evaluating a fictitious Black candidate) and different-race (e.g. Black participant evaluating a fictitious Asian/Hispanic/White candidate) relative to the control condition. A new “simple conditions” variable was created for this analysis. Participants who evaluated an e-portfolio of the same race were coded a value of 1.00, participants who evaluated an e-portfolio of a different race were coded with a value 2.00, and participants who evaluated the control e-portfolio (no photograph) were coded a value of 3.00. A total of 390 participants reviewed and evaluated a same-race e-portfolio, 1,267
participants evaluated a different-race e-portfolio, and 399 participants evaluated the control e-portfolio with no photograph. Participants were more inclined to evaluate same-race candidates ($M = 5.748$, $SD = .932$, $n = 390$) and different-race candidates ($M = 5.755$, $n=1,267$, $SD=.919$) collectively higher than the control group ($M = 5.590$, $SD=.949$, $n=399$). The CES mean for the three levels of the simple conditions variable is presented in Figure 4.7.

![Figure 4.7](image)

*Figure 4.7. Candidate Evaluation Scale Mean Data from All Participants: Graph of CES Means for the Simple Conditions (n=2,056). [Analysis 2A]*

A one-way ANOVA was first run using the entire dataset of 2,056 records to determine if there was a statistically significant difference among these three levels of the simple conditions variable. The simple conditions variable was added as the independent variable, and the CES mean was added as the dependent variable.

*Levene's Test of Equality of Error Variances for Analysis 2A*

The Levene’s test was run to determine if there was homogeneity of variance in the model. Using the criterion of $p<.05$, the variances between the groups was not statistically significant and no violations were reported, $F(2, 2053) = .947$, $p = .396$. 
ANOVA Output: Interpretation of the Main Effect

The main effect revealed that two or more levels of the simple condition variable were statistically different $F(2, 2,053) = 5.033, p = .007, \eta^2 = .005$. A planned contrast analysis was run to determine where the differences in levels exist.

Planned Contrasts Output

The findings from the simple last planned contrast revealed that participants evaluated the control e-portfolio statistically lower than participants who evaluated a same-race e-portfolio ($p=.016$). Additionally, participants who evaluated the control e-portfolio evaluated the candidate statistically lower than a different-race e-portfolio ($p=.002$). There were no other statistically significant differences in the model.

Detecting Differences in CES Means when Factoring in Simple Study Conditions and Participant Race | Asian, Black, Hispanic, and White Participants ($n=1,919$) [Statistical Analysis #2B]

Expanding upon the previous model, the participant racial group variable was added so that observations could be made regarding how members of a distinct participant racial group evaluate a same-race and different-race candidate, relative to the control condition. A two-way ANOVA was run by adding the simple conditions variable (3 levels), the participant racial groups variable (6 levels) as the fixed factors and the CES mean as the dependent variable. Simmons, Nelson, and Simonsohn (2011) recommend having 20 or more observations per cell to reduce the chances of making false-positive statements, “Samples smaller than 20 per cell are simply not powerful enough to detect most effects, and so there is usually no good reason to decide in advance to collect such a small number of observations” (p. 1363). The American Indian or Alaska Native and
Multiracial and Other participant groups had less than 20 participants per cell, so these data were excluded from the analysis. After removing these data, a total of 1,919 participant responses were used for the factorial ANOVA. Two ANOVA cells yielded less than 20 participants such that there were 16 Asian, Asian American, and Pacific Islander participants who evaluated the Asian fictitious candidate and 14 Hispanic, Latino, or Spanish Origin participants who evaluated the Hispanic candidate. The analysis included these two groups because mean cell size for each of the subgroups was much greater than 20 per cell. It is important that the reader be cautious when interpreting the findings of the statistical output for these two participant racial groups because there is a greater risk of making false-positive statements and because the findings may lack generalizability.

*Preliminary Output: Descriptive Statistics*

The Black, Hispanic, and White participant racial groups evaluated the different-race candidates higher than the same-race and control conditions as illustrated in Figure 4.8. Black participants evaluated different-race candidates (M = 6.063, SD = .8594, n = 162) higher than the Black candidate (M = 5.982, SD = 1.1062, n = 63) and higher than the control portfolio (M = 5.829, SD = .9741, n = 46). The Hispanic participants evaluated different-race candidates (M = 5.514, SD = .8583, n = 55) slightly higher than the Hispanic candidate (M = 5.464, SD = 1.2456, n = 14) and control portfolio (M = 5.464, SD = 1.2456, n = 14). Lastly, the White Non-Hispanic participants evaluated the candidates of a different race (M = 5.751, SD = .8992, n = 854) higher than that of the White candidate (M = 5.722, SD = .8672, n = 286) and control portfolio (M = 5.606, SD=.9277, n=290). In contrast, the Asian American participants evaluated the Asian
candidate slightly higher (M = 5.555, SD = .7879, n = 16) than that of the different-race photographs (M = 5.383, SD = 1.071, n = 91) and control portfolio (M = 5.455, SD = .8978, n = 22). A factorial ANOVA was run to detect statistical differences in the two main effects, participant racial groups and study conditions, and the interaction term.

![Graph](image)

**Figure 4.8.** Candidate Evaluation Scale Mean Data From Asian, Black, Hispanic, and White Participants: Interaction Graph of Participant Racial Group and Simple Conditions (n=1,919). [Analysis 2B]

<table>
<thead>
<tr>
<th>Simple Condition</th>
<th>Participant Race/Ethnicity</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant is the Same Race/Ethnicity as Photograph</td>
<td>Asian, Asian American, Pacific Islander</td>
<td>16</td>
<td>5.555</td>
<td>0.788</td>
</tr>
<tr>
<td></td>
<td>Black or African American</td>
<td>63</td>
<td>5.982</td>
<td>1.106</td>
</tr>
<tr>
<td></td>
<td>Hispanic, Latino, or Spanish Origin</td>
<td>14</td>
<td>5.464</td>
<td>1.246</td>
</tr>
<tr>
<td></td>
<td>White, Non-Hispanic</td>
<td>286</td>
<td>5.722</td>
<td>0.867</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>379</td>
<td>5.748</td>
<td>0.927</td>
</tr>
<tr>
<td>Participant is a Different Race/Ethnicity than Photograph</td>
<td>Asian, Asian American, Pacific Islander</td>
<td>91</td>
<td>5.383</td>
<td>1.071</td>
</tr>
<tr>
<td></td>
<td>Black or African American</td>
<td>162</td>
<td>6.064</td>
<td>0.849</td>
</tr>
<tr>
<td></td>
<td>Hispanic, Latino, or Spanish Origin</td>
<td>55</td>
<td>5.514</td>
<td>0.858</td>
</tr>
<tr>
<td></td>
<td>White, Non-Hispanic</td>
<td>854</td>
<td>5.751</td>
<td>0.899</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1162</td>
<td>5.755</td>
<td>0.919</td>
</tr>
</tbody>
</table>
Table 4.4. (continued).

<table>
<thead>
<tr>
<th></th>
<th>Asian, Asian American, Pacific Islander</th>
<th>22</th>
<th>5.455</th>
<th>0.898</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Black or African American</td>
<td>46</td>
<td>5.829</td>
<td>0.974</td>
</tr>
<tr>
<td></td>
<td>Hispanic, Latino, or Spanish Origin</td>
<td>20</td>
<td>5.200</td>
<td>0.743</td>
</tr>
<tr>
<td></td>
<td>White, Non-Hispanic</td>
<td>290</td>
<td>5.606</td>
<td>0.928</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>378</td>
<td>5.603</td>
<td>0.928</td>
</tr>
<tr>
<td>Total</td>
<td>Asian, Asian American, Pacific Islander</td>
<td>129</td>
<td>5.417</td>
<td>1.008</td>
</tr>
<tr>
<td></td>
<td>Black or African American</td>
<td>271</td>
<td>6.005</td>
<td>0.936</td>
</tr>
<tr>
<td></td>
<td>Hispanic, Latino, or Spanish Origin</td>
<td>89</td>
<td>5.436</td>
<td>0.904</td>
</tr>
<tr>
<td></td>
<td>White, Non-Hispanic</td>
<td>1430</td>
<td>5.716</td>
<td>0.900</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1919</td>
<td>5.723</td>
<td>0.924</td>
</tr>
</tbody>
</table>

Levene’s Test for Homogeneity of Variance

The Levene’s test was run to determine if there was homogeneity of variance in the model. Using the criterion of \( p < .05 \), the variances between the groups was not statistically significant, and no violations were reported, \( F(11, 1,907) = 1.307, p = .214 \).

Table 4.14.

ANOVA Output: Interpretation of the Main Effect

Findings from the ANOVA output revealed that the main effect of the participant racial group variable was statistically significant which is consistent with the findings in Analysis 1B \( F(3, 1,907) = 9.618, p < .001, \eta^2 = .015 \). Recall from Analysis 1B, which analyzed the participant racial group variable independently using 2,044 records, that Black participants evaluated the series of e-portfolios statistically higher than all the other racial participant groups. The planned contrast analysis also revealed that White participants evaluated e-portfolios statistically higher than Asian, Asian American, or Pacific Islander participants and Hispanic, Latino, or Spanish Origin participants.

The main effect of the simple conditions variable was not statistically significant, \( F(2, 1,907) = 1.563, p = .210, \eta^2 = .020 \). Recall from Analysis 2A, which analyzed the simple conditions variable independently using all participant data, that participants
evaluated the control group statistically lower than the other two conditions. The main effect in Analysis 2B being not significant can be attributed to there being fewer participant responses included in the analysis and the difference in statistical models. Lastly, the interaction term of the participant racial groups and the simple conditions variable was not statistically significant, $F(6, 1,907) = .388, p = .887, \eta^2 = .001$.

Detecting Differences in CES Means When Factoring in Participant Racial Groups and Study Conditions | Asian, Black and White Participants (n=1,830) [Statistical Analysis #2C]

An alternative and more precise approach to understanding how participant racial groups evaluated across the series involved exploring the patterns of response associated with each of the five study conditions. An independent factorial ANOVA was run by adding participant racial groups (6 levels) and study conditions (5 levels) as the fixed factors and the CES mean as the dependent variable. The analysis considered 1,830 records from Asian, Asian American, or Pacific Islanders participants; Black or African Americans participants; and White, Non-Hispanics participants. The other Millennial participant groups, including American Indian or Alaska Native participants; Multicultural and Other participants; and the Hispanic, Latino, or Spanish Origin participants were excluded from the analysis due to inadequate sample sizes.

Preliminary Output: Descriptive Statistics

The Asian, Asian American, and Pacific Islander participants gave the Asian fictitious candidate the highest evaluation ($M = 5.555, SD = .7879, n = 16$), the White candidate the second highest evaluation ($M = 5.531, SD = .9724, n = 32$), the control e-portfolio the third highest evaluation ($M = 5.455, SD = .8977, n = 22$), the Hispanic
candidate the fourth highest evaluation (M = 5.352, SD = 1.253, n = 32), and the Black
candidate received the lowest overall evaluation (M = 5.245, SD = .9623, n = 27).
The Black or African American participants gave their highest evaluation to the Asian
fictitious candidate (M = 6.164, SD = .6795, n = 57), second highest evaluation to the
White candidate (M = 6.061, SD = .8017, n = 51), third highest evaluation to the Black
candidate (M = 5.982, SD = 1.106, n = 63), fourth highest evaluation to the Hispanic
candidate (M = 5.960, SD = 1.037, n = 54), and the least favorable evaluation to the
control e-portfolio (M = 5.829, SD=.9741, n=46).

Lastly, the White, Non-Hispanics participants gave their highest evaluation to the
Black fictitious candidate (M = 5.836, SD = .8156, n = 299), the second highest
evaluation to the Asian candidate (M = 5.744, SD = .8984, n = 273), the third highest
evaluation to the White candidate (M = 5.722, SD = .8671, n = 286), the fourth highest
evaluation to the Hispanic candidate (M = 5.668, SD = .9762, n = 282), and the lowest
evaluation to the control e-portfolio (M = 5.606, SD=.9277, n=290). The two-way
ANOVA output revealed whether the interaction between the study conditions and
participant racial group variables yielded statistical significance at the critical value
p<.05. Trends associated with the three participant racial groups are displayed in Figure
4.9.
Figure 4.9. Candidate Evaluation Scale Mean Data from Asian, Black, and White Participants: Interaction Graph of Participant Racial Groups and Study Conditions (n=1830). [Analysis 2C]

Table 4.5

Descriptive Statistics: CES Mean by Participant Racial Group & Study Condition

<table>
<thead>
<tr>
<th>Participant Race</th>
<th>Study Condition (5)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian, Asian American, Pacific Islander</td>
<td>Asian Candidate Photograph</td>
<td>16</td>
<td>5.555</td>
<td>0.788</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>27</td>
<td>5.245</td>
<td>0.962</td>
</tr>
<tr>
<td></td>
<td>Hispanic Candidate Photograph</td>
<td>32</td>
<td>5.352</td>
<td>1.253</td>
</tr>
<tr>
<td></td>
<td>White Candidate Photograph</td>
<td>32</td>
<td>5.531</td>
<td>0.972</td>
</tr>
<tr>
<td></td>
<td>Control Candidate Photograph</td>
<td>22</td>
<td>5.455</td>
<td>0.898</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>129</td>
<td>5.417</td>
<td>1.008</td>
</tr>
<tr>
<td>Black or African American</td>
<td>Asian Candidate Photograph</td>
<td>57</td>
<td>6.164</td>
<td>0.679</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>63</td>
<td>5.982</td>
<td>1.106</td>
</tr>
<tr>
<td></td>
<td>Hispanic Candidate Photograph</td>
<td>54</td>
<td>5.960</td>
<td>1.037</td>
</tr>
<tr>
<td></td>
<td>White Candidate Photograph</td>
<td>51</td>
<td>6.061</td>
<td>0.802</td>
</tr>
<tr>
<td></td>
<td>Control Candidate Photograph</td>
<td>46</td>
<td>5.829</td>
<td>0.974</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>271</td>
<td>6.005</td>
<td>0.936</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>Asian Candidate Photograph</td>
<td>273</td>
<td>5.744</td>
<td>0.898</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>299</td>
<td>5.836</td>
<td>0.816</td>
</tr>
<tr>
<td></td>
<td>Hispanic Candidate Photograph</td>
<td>282</td>
<td>5.668</td>
<td>0.976</td>
</tr>
<tr>
<td></td>
<td>White Candidate Photograph</td>
<td>286</td>
<td>5.722</td>
<td>0.867</td>
</tr>
<tr>
<td></td>
<td>Control Candidate Photograph</td>
<td>290</td>
<td>5.606</td>
<td>0.928</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1430</td>
<td>5.716</td>
<td>0.900</td>
</tr>
<tr>
<td>Total</td>
<td>Asian Candidate Photograph</td>
<td>346</td>
<td>5.805</td>
<td>0.875</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>389</td>
<td>5.819</td>
<td>0.892</td>
</tr>
<tr>
<td></td>
<td>Hispanic Candidate Photograph</td>
<td>368</td>
<td>5.683</td>
<td>1.019</td>
</tr>
</tbody>
</table>
Table 4.5. (continued).

<table>
<thead>
<tr>
<th></th>
<th>CES Mean</th>
<th>Levene’s Test for Homogeneity of Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Candidate Photograph</td>
<td>369</td>
<td>5.752</td>
</tr>
<tr>
<td>Control Candidate Photograph</td>
<td>358</td>
<td>5.625</td>
</tr>
<tr>
<td>Total</td>
<td>1830</td>
<td>5.737</td>
</tr>
</tbody>
</table>

Note. Dependent Variable: CES Mean

Levene’s Test for Homogeneity of Variance

Using the criterion of p<.05 for interpreting the Levene’s Test of Equality of Error Variances, no violation of homogeneity of variance was found since the variance between groups was not significantly different, $F(14, 1815) = 1.349, p=.171$.

Interpretation of the Main Effects and Interaction

A main effect for the participant racial group variable yielded a statistical difference which is consistent with the findings from Analysis 1B, $F(2, 1,815) = 18.431, p < .001, \eta^2 = .020$. The findings from Analysis 1B revealed that Black participants evaluated across all study conditions statistically higher than the other five participant racial groups. Additionally, the planned contrast analysis found that White participants evaluated across all the study conditions statistically higher than Asian and Hispanic participant groups. A discussion of this main effect which uses data from all racial participant groups (n=2,044), and not just three subgroups (n=1,830), is made in Analysis 1B.

The main effect of the study conditions variable was not statistically significant, $F(4, 1,815) = .984, p = .415, \eta^2 = .002$. This finding is inconsistent with the findings of Analysis 1A which revealed that participants evaluated the control e-portfolio statistically lower than the Asian, Black, and White candidate e-portfolios. The planned contrast analysis also found that participants evaluated the Hispanic candidate statistically lower than the Asian and Black e-portfolios. A discussion of this main effect which considered
all participants responses (n=2,056) and not just three subgroups (n=1,830) can be referenced in Analysis 1A. Lastly, the interaction between participant racial groups and the study conditions was not statistically significant; therefore, it is not necessary to run a simple effect analysis, $F(8, 1,815) = .731, p = .664, \eta^2 = .003$.

Research Objective #3 - Results

Detecting Differences in the CES Mean by Student Classification | All Study Participants (n=2,043) [Statistical Analysis 3A]

The third set of analyses were run to explore the influence that student classification had on CES means. Each of the four student classification groups had consistent representation as there were 513 freshmen participants, 568 sophomores, 474 juniors, and 488 seniors. As illustrated in Figure 4.10, freshmen evaluated candidates across all study conditions the highest ($M = 5.792, SD=.8505$), sophomores the second highest ($M = 5.730, SD=.9874$), seniors the third highest ($M = 5.713, SD=.9524$), and juniors gave the lowest marks to the candidates ($M = 5.634, SD=.9096$). A simple one-way ANOVA was run using 2,043 records to detect statistically significant differences among the freshmen, sophomore, junior, and senior participants.

![Figure 4.10](image-url)
Levene’s Test for Homogeneity of Variance

Using the criterion of \( p < .05 \) when interpreting the Levene’s test, there is no reported violation of the homogeneity of variance assumption, \( F(3, 2039) = 2.325, p = .073 \).

ANOVA Output: Interpretation of the Main Effect

The main effect of the student classification variable was not statistically significant, \( F(3, 2039) = 2.074, p = .065, \eta^2 = .004 \). A follow-up analysis was not conducted since the CES means among the four levels of student classification variable were not significantly different.

Detecting Differences in CES Means When Factoring in the Student Classification and Simple Conditions Variable | All Study Participants (n=2,043) [Statistical Analysis 3B]

Adding upon the previous model, the second analysis considers the simple conditions variable (3 levels). Findings from this analysis reveal how undergraduate Millennials of each student classification evaluate across the three levels of the simple conditions variable. An independent factorial ANOVA was run by adding the simple conditions variable and student classification variable as fixed factors and CES mean as the dependent variable.

Preliminary Output: A Review of Descriptive Statistics

A total of 2,043 records, consisting of 513 freshman, 568 sophomores, 474 juniors, and 488 seniors were analyzed. Additionally, a total of 389 participants reviewed a same-race candidate e-portfoio, 1,256 evaluated a different-race candidate, and 398 evaluated the control e-portfoio.
Freshmen evaluated a candidate of the same race more favorably ($M = 5.899$, $SD = .802$, $n = 106$) than a candidate of a different race ($M = 5.805$, $SD = .858$, $n = 328$) and the control e-portfolio ($M = 5.595$, $SD = .860$, $n = 79$). The CES means of sophomore participants were slightly lower across all levels of the study conditions variable. Sophomores evaluated the same-race candidates ($M = 5.750$, $SD = .911$, $n = 101$) and different-race candidates ($M = 5.779$, $SD = .970$, $n = 348$) rather consistently, but gave their lowest marks to the control e-portfolio ($M = 5.571$, $SD = 1.087$, $n = 119$). Juniors evaluated the candidates of a different race the highest ($M = 5.722$, $SD = .887$, $n = 270$), the candidate of the same-race second highest ($M = 5.568$, $SD = 1.068$, $n = 95$), and the control e-portfolio the lowest ($M = 5.451$, $SD = .773$, $n = 100$). Lastly, seniors showed consistency in their evaluations across all three levels of the simple conditions variable. Seniors evaluated a same-race candidate ($M = 5.750$, $SD = .9296$, $n = 87$), different-race candidate ($M = 5.695$, $SD = .9480$, $n = 301$) and the control group ($M = 5.738$, $SD = .993$, $n = 100$) all within a tenth of a point. Figure 4.11 shows the evaluation trends associated with the four levels of the student classification variable.
**Figure 4.11.** Candidate Evaluation Scale Mean Data from All Participants: Interaction Graph of the Student Classification and Simple Conditions Variable (n=2,043). [Analysis 3B]

Table 4.6

**Descriptive Statistics – CES Mean by Simple Condition & Student Classification**

<table>
<thead>
<tr>
<th>Simple Condition (3)</th>
<th>Current Class Standing (4)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant is the Same Race/ Ethnicity as Photograph</td>
<td>Freshman</td>
<td>106</td>
<td>5.899</td>
<td>0.801</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
<td>101</td>
<td>5.750</td>
<td>0.911</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>95</td>
<td>5.568</td>
<td>1.068</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>87</td>
<td>5.750</td>
<td>0.930</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>389</td>
<td>5.746</td>
<td>0.932</td>
</tr>
<tr>
<td>Participant is a Different Race/ Ethnicity than Photograph</td>
<td>Freshman</td>
<td>328</td>
<td>5.805</td>
<td>0.858</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
<td>348</td>
<td>5.779</td>
<td>0.970</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>279</td>
<td>5.722</td>
<td>0.887</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>301</td>
<td>5.695</td>
<td>0.948</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1256</td>
<td>5.753</td>
<td>0.918</td>
</tr>
<tr>
<td>Control</td>
<td>Freshman</td>
<td>79</td>
<td>5.595</td>
<td>0.860</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
<td>119</td>
<td>5.571</td>
<td>1.086</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>100</td>
<td>5.451</td>
<td>0.773</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>100</td>
<td>5.738</td>
<td>0.993</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>398</td>
<td>5.588</td>
<td>0.949</td>
</tr>
<tr>
<td>Total</td>
<td>Freshman</td>
<td>513</td>
<td>5.792</td>
<td>0.851</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
<td>568</td>
<td>5.730</td>
<td>0.987</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>474</td>
<td>5.634</td>
<td>0.910</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>488</td>
<td>5.713</td>
<td>0.952</td>
</tr>
</tbody>
</table>
|                      | Total                      | 2043| 5.719| 0.929       

**Levene’s Test for Homogeneity of Variance**

Using the criterion of p<.05 for interpreting the Levene’s Test of Equality of Error Variances probability value, there was no evidence to support a violation of homogeneity of variance, $F(11, 2031) = 1.537$, p=.112.

**ANOVA Output: Interpretation of the Main Effects and Interaction**

The ANOVA output yielded a statistically significant main effect between two or more levels of the simple conditions variable $F(2, 2031) = 4.664$, $p=.010$, $\eta^2 = .005$ which is consistent with the findings in Analysis 2A. Findings from Analysis 2A revealed that participants evaluated the control e-portfolio significantly lower than the same-race
and different-race conditions. The interpretation of this main effect which utilized the entire dataset can be found in Analysis 2A.

The main effect for student classification yielded a significant F-value, $F(3, 2031) = 2.752, p = .041, \eta^2 = .004$ which is inconsistent with the findings from Analysis 3A, $F(3, 2039) = 2.074, p = .065, \eta^2 = .004$. The critical probability value was approaching significance at $p<.05$ in Analysis 3A. It is meaningful to observe that freshmen evaluated across the study conditions the highest ($M = 5.792, SD = .8505$), sophomores gave the second highest CES mean ($M = 5.730, SD = .9874$), seniors gave the third highest CES mean ($M = 5.713, SD = .9524$), and juniors were lowest in their evaluations ($M = 5.634, SD = .9096$). Lastly, the interaction between student classification and the simple conditions variable had no statistical influence on the CES means $F(6, 2031) = 1.251, p = .227, \eta^2 = .004$.

*Detecting Differences in the CES Mean When Factoring Student Classification and Study Conditions for White Millennial Participants (n=1,428) [Statistical Analysis 3C]*

The last analysis of the third series explored the trends associated with student classification variable (4 levels), participant racial groups variable (6 levels), and the study conditions variable (5 levels). Given that each participant racial group would need a sample size of at least 400 participants (4 student classification groups x 5 study conditions x 20 per cell) the White participant group was the only racial group with a large enough sample size to be considered in the analysis. Moreover, this analysis was limited to exploring trends associated with White Millennial participants, so the participant racial group variable was removed from the model. A two-way ANOVA was
run using the study conditions variable (5 levels) and student classification variable (4 levels) as fixed factors and the CES mean as the dependent variable.

**Preliminary Output: Descriptive Statistics**

The responses from a total of 1,428 White Millennial participants were considered in the model and were composed of 350 freshmen, 400 sophomores, 335 juniors, and 343 seniors. A total of 272 participants were randomly assigned to evaluate the Asian candidate, 299 to evaluate the Black candidate, 282 to evaluate the Hispanic candidate, 285 to evaluate the White candidate, and 290 to evaluate the control condition e-portfolio (no photograph).

White freshmen evaluated the White candidate the highest (M = 5.848), the Black candidate the second highest (M = 5.799), the Hispanic candidate the third highest (M = 5.790), the Asian candidate the fourth highest (M = 5.670), and the control e-portfolio received the lowest marks (M = 5.608). Sophomores evaluated the Black candidate most favorably (M = 5.917) followed by the Asian candidate (M = 5.810), White candidate (M = 5.779), Hispanic candidate (M = 5.663), and the control e-portfolio (M = 5.649). Juniors gave their highest marks to the Black candidate (M = 5.854), followed by the Asian candidate (M = 5.782), White candidate (M = 5.572), Hispanic candidate (M = 5.521), and control e-portfolio (M = 5.439). The trends associate with the four student classification and five study conditions levels is shown in Figure 4.12. The variation in CES means across all study conditions for seniors were consistent among the five study conditions. The difference between the highest and the lowest CES mean amounted to just over one-tenth of a point. The Black candidate received the highest evaluation (M = 5.784) which was followed by the Asian candidate (M = 5.717), the control e-portfolio
(M = 5.725), Hispanic candidate (M = 5.670), and the White candidate (M = 5.661). A factorial ANOVA was run to determine whether the two main effects and interaction term were statistically significant.

Figure 4.12. Candidate Evaluation Scale Mean Data from White Millennial Participants: Interaction Graph of Student Classification and Study Conditions (n=1,428). [Analysis 3C]

Table 4.7

Descriptive Statistics – CES Mean by Student Classification & Study Conditions

<table>
<thead>
<tr>
<th>Current Class Standing (4)</th>
<th>Study Condition (5)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>Asian Candidate Photograph</td>
<td>70</td>
<td>5.670</td>
<td>0.963</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>64</td>
<td>5.799</td>
<td>0.744</td>
</tr>
<tr>
<td></td>
<td>Hispanic Candidate Photograph</td>
<td>82</td>
<td>5.790</td>
<td>0.896</td>
</tr>
<tr>
<td></td>
<td>White Candidate Photograph</td>
<td>74</td>
<td>5.848</td>
<td>0.710</td>
</tr>
<tr>
<td></td>
<td>Control Candidate Photograph</td>
<td>60</td>
<td>5.608</td>
<td>0.894</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>350</td>
<td>5.749</td>
<td>0.847</td>
</tr>
<tr>
<td>Sophomore</td>
<td>Asian Candidate Photograph</td>
<td>83</td>
<td>5.810</td>
<td>0.954</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>74</td>
<td>5.917</td>
<td>0.818</td>
</tr>
<tr>
<td></td>
<td>Hispanic Candidate Photograph</td>
<td>78</td>
<td>5.663</td>
<td>1.039</td>
</tr>
<tr>
<td></td>
<td>White Candidate Photograph</td>
<td>73</td>
<td>5.779</td>
<td>0.683</td>
</tr>
<tr>
<td></td>
<td>Control Candidate Photograph</td>
<td>92</td>
<td>5.649</td>
<td>0.985</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>5.759</td>
<td>0.913</td>
</tr>
</tbody>
</table>
Table 4.7. (continued).

<table>
<thead>
<tr>
<th></th>
<th>Asian Candidate Photograph</th>
<th>Black Candidate Photograph</th>
<th>Hispanic Candidate Photograph</th>
<th>White Candidate Photograph</th>
<th>Control Candidate Photograph</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior</td>
<td>59</td>
<td>5.782</td>
<td>0.851</td>
<td>68</td>
<td>5.854</td>
<td>0.782</td>
</tr>
<tr>
<td></td>
<td>67</td>
<td>5.521</td>
<td></td>
<td>69</td>
<td>5.572</td>
<td>1.035</td>
</tr>
<tr>
<td></td>
<td>69</td>
<td>5.439</td>
<td></td>
<td>72</td>
<td>5.627</td>
<td>0.741</td>
</tr>
<tr>
<td></td>
<td>335</td>
<td>5.627</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>60</td>
<td>5.717</td>
<td>0.795</td>
<td>93</td>
<td>5.784</td>
<td>0.889</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>5.670</td>
<td></td>
<td>69</td>
<td>5.661</td>
<td>0.934</td>
</tr>
<tr>
<td></td>
<td>66</td>
<td>5.725</td>
<td></td>
<td>66</td>
<td>5.718</td>
<td>1.046</td>
</tr>
<tr>
<td></td>
<td>343</td>
<td>5.718</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>272</td>
<td>5.747</td>
<td>0.899</td>
<td>299</td>
<td>5.836</td>
<td>0.816</td>
</tr>
<tr>
<td></td>
<td>282</td>
<td>5.668</td>
<td></td>
<td>285</td>
<td>5.718</td>
<td>0.867</td>
</tr>
<tr>
<td></td>
<td>290</td>
<td>5.606</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1428</td>
<td>5.716</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Levene’s Test for Homogeneity of Variance

Using the criterion of \(p<.05\) for interpreting the Levene’s Test of Equality of Error Variances probability value, there is no evidence to support a violation of homogeneity of variance, \(F(19, 1408) = 1.231, p=.223\).

ANOVA Output: Interpretation of the Main Effect and Interaction

The main effect of the student classification variable was not statistically significant, \(F(3, 1408) = 1.417, p=.236, \eta^2 = .003\) which is consistent with the findings of Analysis 3A. Although the finding is not statistically significant, it is meaningful to observe the trend that sophomores collectively gave the highest CES mean (\(M = 5.759, SD = .913, n = 400\)), which was followed by freshmen (\(M = 5.749, SD = .847, n = 350\)), seniors (\(M = 5.718, SD=.917, n =343\)), and juniors (\(M = 5.627, SD=.918, n =335\)). In reference to the study conditions variable, there was a statistically significant main effect between two or more conditions, \(F(4, 1408) = 2.219, p=.027, \eta^2 = .008\). A planned
contrast analysis was run to determine which conditions were statistically different.

Lastly, there was no observed statistical significance of the interaction term between student classification and the study conditions variable, $F(12, 1408) = 6.904, p=.740, \eta^2 = .006$.

**Interpretation of Planned Contrasts**

Planned contrast procedures are used when testing a specific research hypothesis and were used to detect differences in the means among the five study conditions. A simple last planned contrast analysis revealed that controlling for all other variables, White Millennial undergraduates evaluated the Black candidate ($M = 5.83$) significantly higher than both the Hispanic candidate ($M = 5.67$, $p = .019$) and control condition ($M = 5.61$, $p=.002$). There were no other statistically significant findings of the planned contrast analysis. The CES means for each of the study conditions is shown in Figure 4.13.

![Figure 4.13](Analysis3C.png)

*Figure 4.13.* Candidate Evaluation Scale Mean Data from White Millennial Participants: Graph of the CES Means for Each Study Conditions ($n=1,428$). [Analysis 3C]
Research Objective #4 - Results

Detecting Differences in the CES Mean by Geographic Region | All Study Participants (n=2,038) [Statistical Analysis 4A]

The fourth set of analyses explored the influence of geographic region on participant’s evaluation of the study conditions. Before running an analysis with any other variables, a simple one-way ANOVA was run using 2,038 records to determine if there was a significant main effect among the four geographic regions. Participants in the Southeast geographic region evaluated fictitious candidates across the five study conditions the highest (M = 5.868, SD = .940, n = 971), Great Lakes participants evaluated the second highest (M = 5.813, SD = .734, n = 119), Southwest region participants evaluated the third highest (M = 5.632, SD = .925, n = 417), and the New England participants gave the lowest evaluations (M = 5.506, SD = .889, n = 531). Figure 4.14 provides a visual presentation of the mean CES for all participants by geographical region.

Figure 4.14. Candidate Evaluation Scale Mean Data From All Participants: Graph of CES Means for the Geographic Regions (n=2,038). [Analysis 4A]
Levene’s Test for Homogeneity of Variance

Using the critical value of \( p < .05 \), there is evidence to support a violation of the homogeneity of variance assumption since the critical value was statistically significant at \( p < .05, F(3, 2034) = 2.724, p = .043 \).

ANOVA Output: Interpretation of the Main Effect and Interaction

The ANOVA output revealed that two or more levels of the participant geographic region were statistically significant, so a planned contrast analysis and post hoc test was run to determine where the difference exists, \( F(3, 2034) = 16.629, p < .001, \eta_p^2 = .029 \).

Post Hoc Test Output

Given that there was a violation of homogeneity of variance, and equal variances in the population cannot be assumed, a Post Hoc Games-Howell procedure was run and analyzed. The output revealed that the Southeast participants (\( M = 5.868 \)) evaluated across the study conditions significantly higher than participants from the Southwest region (\( M = 5.632, p < .001 \)) and New England region (\( M = 5.506, p < .001 \)). Additionally, Great Lakes participants (\( M = 5.813 \)) evaluated across all five study conditions higher than New England participants (\( M = 5.506, p = .001 \)). No other comparisons were statistically significant.

Detecting Differences in CES Means When Factoring in Geographic and Study Conditions | All Study Participants (\( n = 2,038 \)) [Statistical Analysis 4B]

Analysis 4B added the simple conditions variable to the previous model and explored how participants representing the four geographic regions evaluated a candidate of the same race and different race relative to the control group. One ANOVA cell for
Great Lakes region participants yielded less than 20 records, but the data for this region were analyzed since the average cell size calculated to 39.67. The reader should use caution when interpreting results from the Great Lakes region because including data with an ANOVA cell of less than 20 can increase the risk of making false-positive statements. An independent factorial ANOVA was run using 2,038 records to explore how participants enrolled at institutions in different geographic regions evaluated the three simple conditions.

**Preliminary Output: A Review of Descriptive Statistics**

A total of 417 participants represented the Southwest geographic region, 119 represented the Great Lakes region, 531 represented the New England region, and 971 represented the Southeast region. Additionally, 390 participants reviewed an e-portfolio of the same-race, 1,251 evaluated an e-portfolio with a candidate of a different-race, and 397 evaluated the e-portfolio with no photograph (i.e. control group).

The Southwest participants evaluated the same-race candidate \( (M = 5.649) \) and different-race candidates \( (M = 5.727) \) fairly consistently whereas the control e-portfolio received a less favorable evaluation \( (M = 5.321) \). A similar pattern was observed for the Great Lakes participants such that the evaluation of the same-race \( (M = 5.885) \) and different-race candidate \( (M = 5.877) \) were very close in value, and the control group received the lowest CES mean \( (M = 5.391) \). The range of CES means for New England participants was minimal. New England participants gave their highest evaluation to the candidate of a different race \( (M = 5.558) \), the second highest evaluation to the candidate of the same race \( (M = 5.470) \), and the lowest evaluation to control e-portfolio without a photograph \( (M = 5.356) \). Lastly, the difference in CES means for Southeast region
participants among all three levels amounted to just over one-twentieth of a point. Participants of the Southeast region gave their highest evaluation to the participants of the same race ($M = 5.895$), second highest evaluation to participants of a different race ($M = 5.869$), and lowest evaluation to the e-portfolio without a photograph ($M = 5.836$). An independent factorial ANOVA was conducted to detect statistical significance in the main effects and interaction term. The trends associated with the US geographic region and simple study conditions variable is shown in Figure 4.15.

![Graph of Candidate Evaluation Scale Mean Data From All Participants: Interaction Graph of Student Geographic Region and Simple Conditions (n=2,038).](image)

**Figure 4.15.** Candidate Evaluation Scale Mean Data From All Participants: Interaction Graph of Student Geographic Region and Simple Conditions (n=2,038). [Analysis 4B]

**Table 4.8**

*Descriptive Statistics – CES Means by Geographic Region & Simple Condition*

<table>
<thead>
<tr>
<th>Geographic Region</th>
<th>Simple Condition</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southwest Geographic Region</td>
<td>Participant is the Same Race as Photograph</td>
<td>74</td>
<td>5.649</td>
<td>0.987</td>
</tr>
<tr>
<td></td>
<td>Participant is a Different Race than Photograph</td>
<td>259</td>
<td>5.727</td>
<td>0.848</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>84</td>
<td>5.321</td>
<td>1.031</td>
</tr>
<tr>
<td>Great Lakes Geographic Region</td>
<td>Participant is the Same Race as Photograph</td>
<td>25</td>
<td>5.885</td>
<td>0.366</td>
</tr>
<tr>
<td></td>
<td>Participant is a Different Race than Photograph</td>
<td>78</td>
<td>5.877</td>
<td>0.795</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>16</td>
<td>5.391</td>
<td>0.751</td>
</tr>
</tbody>
</table>
Table 4.8. (continued).

<table>
<thead>
<tr>
<th>Geographic Region</th>
<th>Participant is the Same Race as Photograph</th>
<th>91</th>
<th>5.470</th>
<th>0.798</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Participant is a Different Race than Photograph</td>
<td>343</td>
<td>5.558</td>
<td>0.925</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>97</td>
<td>5.356</td>
<td>0.828</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geographic Region</th>
<th>Participant is the Same Race as Photograph</th>
<th>200</th>
<th>5.895</th>
<th>0.987</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Participant is a Different Race than Photograph</td>
<td>571</td>
<td>5.869</td>
<td>0.932</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>200</td>
<td>5.836</td>
<td>0.920</td>
</tr>
</tbody>
</table>

Levene’s Test for Homogeneity of Variance

There is evidence to support a violation of homogeneity of variances, $F(11, 2026) = 2.111, p=.017$.

ANOVA Output: Interpretation of the Main Effect and Interaction

The main effect of the simple conditions variable was statistically significant, $F(2, 2026) = 6.954, p=.001, \eta^2 = .007$ which is consistent with Analysis 2A. The finding of Analysis 2A, which analyzed the variable using the entire dataset, found that participants evaluated the control e-portfolio ($M = 5.588, SD = .949, n = 398$) statistically lower than the same-race candidate ($M = 5.746, SD = .933, n = 1,256, p =.021$) and different-race candidate ($M = 5.753, SD = .9185, p = .003$).

The levels within the participant geographic region variable were also statistically significant, $F(3, 2026) = 19.364, p<.001, \eta^2 = .005$. Findings from Analysis 4A revealed that the Southeast participants ($M = 5.868$) evaluated candidates statistically higher than participants representing the Southwest ($M = 5.632, p<.001$) and New England geographic regions ($M = 5.506, p<.001$). A post hoc test also revealed that Great Lakes participants ($M = 5.813$) evaluated candidates higher than New England participants ($M = 5.506, p=.001$). Given that an analysis has already been conducted on the geographic region variable with the entire dataset, the researcher did not run additional planned contrasts or post hoc test. Review Analysis 4A for the interpretation of this main effect.
Lastly, the interaction between participant geographic region and simple condition was not statistically significant, $F(6, 2026) = 1.636, p = .113, \eta^2_p = .005$. There was no statistical interaction between a participant’s geographic region and how those individuals evaluated within the three levels of the simple conditions variable.

Detecting Differences in CES Means When Factoring in Participant Geographic Region and Study Conditions | White Millennial Participants (n=1,427) [Statistical Analysis 4C]

The final analysis of this series explored how Millennial undergraduates of the four geographic regions evaluated the five study conditions. The only participant racial group with a sufficient sample size for the analysis was the White Millennial participant group. A factorial ANOVA was run by using the participant geographic region (4 levels) and study condition variables (5 levels) as fixed factors and the mean CES as the dependent variable.

Preliminary Output: Descriptive Statistics

A total of 1,427 records from White Millennial students were considered, and of this sample, 277 White participants were located in the Southwest region, 106 in the Great Lakes region, 377 in the New England region, and 667 in the Southeast region. In reference to the study conditions variable, 272 participants evaluated the Asian candidate, 299 evaluated the Black candidate, 281 evaluated the Hispanic candidate, 286 evaluated the White candidate, and 289 evaluated the control condition.

White Millennial participants representing the Southwest geographic region evaluated the Black candidate the most favorably ($M = 5.872$), the Asian candidate received the second highest CES mean ($M = 5.821$), the White candidate the third highest
CES mean (M = 5.648), the Hispanic candidate the fourth highest CES mean (M = 5.635), and the control condition the lowest (M = 5.387).

Great Lakes participants evaluated the Black candidate the most favorably (M = 6.049) followed by the Hispanic candidate (M = 6.004), White candidate (M = 5.851), Asian candidate (M = 5.835), and control condition (M = 5.391).

Next, the New England region participants evaluated all the different-race candidates higher than the White candidate. The Black candidate received the highest CES mean (M = 5.754) followed by the Hispanic candidate (M = 5.509), Asian candidate (M = 5.472), White candidate (M = 5.377), and control condition (M = 5.360).

Lastly, White Millennial participants in the Southeast geographic region evaluated the White candidate the highest across all study conditions. The White candidate received the highest CES mean (M = 5.915), the Asian candidate received the second highest evaluation (M = 5.866), the control condition received the third highest evaluation (M = 5.854), the Black candidate received the fourth highest evaluation (M = 5.843), and the Hispanic candidate received the lowest evaluation (M = 5.696). The trends associated with the US geographic region variable and study conditions variable are displayed in Figure 4.16.
Figure 4.16. Candidate Evaluation Scale Mean Data from White Millennial Participants: Graph of Geographic Regions and Study Conditions (n=1,427). [Analysis 4C]

Table 4.9

Descriptive Statistics – CES Mean by Geographic Region & Study Conditions

<table>
<thead>
<tr>
<th>Geographic Region (4)</th>
<th>Study Conditions (5)</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southwest Geographic Region</td>
<td>Asian Candidate Photograph</td>
<td>51</td>
<td>5.821</td>
<td>0.680</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>57</td>
<td>5.872</td>
<td>0.677</td>
</tr>
<tr>
<td></td>
<td>Hispanic Candidate Photograph</td>
<td>52</td>
<td>5.635</td>
<td>1.141</td>
</tr>
<tr>
<td></td>
<td>White Candidate Photograph</td>
<td>55</td>
<td>5.648</td>
<td>0.897</td>
</tr>
<tr>
<td></td>
<td>Control Candidate Photograph</td>
<td>62</td>
<td>5.387</td>
<td>0.975</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>277</td>
<td>5.665</td>
<td>0.903</td>
</tr>
<tr>
<td>Great Lakes Geographic Region</td>
<td>Asian Candidate Photograph</td>
<td>22</td>
<td>5.835</td>
<td>0.614</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>18</td>
<td>6.049</td>
<td>0.487</td>
</tr>
<tr>
<td></td>
<td>Hispanic Candidate Photograph</td>
<td>29</td>
<td>6.004</td>
<td>0.662</td>
</tr>
<tr>
<td></td>
<td>White Candidate Photograph</td>
<td>21</td>
<td>5.851</td>
<td>0.378</td>
</tr>
<tr>
<td></td>
<td>Control Candidate Photograph</td>
<td>16</td>
<td>5.391</td>
<td>0.751</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>106</td>
<td>5.854</td>
<td>0.620</td>
</tr>
<tr>
<td>New England Geographic Region</td>
<td>Asian Candidate Photograph</td>
<td>71</td>
<td>5.472</td>
<td>1.032</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>84</td>
<td>5.754</td>
<td>0.924</td>
</tr>
<tr>
<td></td>
<td>Hispanic Candidate Photograph</td>
<td>81</td>
<td>5.509</td>
<td>0.769</td>
</tr>
<tr>
<td></td>
<td>White Candidate Photograph</td>
<td>73</td>
<td>5.377</td>
<td>0.821</td>
</tr>
<tr>
<td></td>
<td>Control Candidate Photograph</td>
<td>68</td>
<td>5.360</td>
<td>0.845</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>377</td>
<td>5.504</td>
<td>0.889</td>
</tr>
<tr>
<td>Southeast Geographic Region</td>
<td>Asian Candidate Photograph</td>
<td>128</td>
<td>5.866</td>
<td>0.893</td>
</tr>
<tr>
<td></td>
<td>Black Candidate Photograph</td>
<td>140</td>
<td>5.843</td>
<td>0.831</td>
</tr>
</tbody>
</table>
Table 4.9 (continued).

<table>
<thead>
<tr>
<th>Photograph Type</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic Candidate Photograph</td>
<td>119</td>
<td>5.696</td>
<td>1.068</td>
</tr>
<tr>
<td>White Candidate Photograph</td>
<td>137</td>
<td>5.915</td>
<td>0.879</td>
</tr>
<tr>
<td>Control Candidate Photograph</td>
<td>143</td>
<td>5.854</td>
<td>0.899</td>
</tr>
<tr>
<td>Total</td>
<td>667</td>
<td>5.838</td>
<td>0.913</td>
</tr>
<tr>
<td>Asian Candidate Photograph</td>
<td>272</td>
<td>5.752</td>
<td>0.890</td>
</tr>
<tr>
<td>Black Candidate Photograph</td>
<td>299</td>
<td>5.836</td>
<td>0.816</td>
</tr>
<tr>
<td>Hispanic Candidate Photograph</td>
<td>281</td>
<td>5.663</td>
<td>0.975</td>
</tr>
<tr>
<td>White Candidate Photograph</td>
<td>286</td>
<td>5.722</td>
<td>0.867</td>
</tr>
<tr>
<td>Control Candidate Photograph</td>
<td>289</td>
<td>5.612</td>
<td>0.924</td>
</tr>
<tr>
<td>Total</td>
<td>1427</td>
<td>5.718</td>
<td>0.897</td>
</tr>
</tbody>
</table>

**Levene’s Test for Homogeneity of Variance**

The Levene’s test statistic provides evidence that the assumption of homogeneity of variance was violated, $F(19, 1407) = 1.772$, $p = .021$.

**ANOVA Output: Interpretation of the Main Effect and Interaction**

The main effect of participant geographic region variable was statistically significant, $F(3, 1407) = 12.658$, $p < .001$, $\eta^2 = .026$. A simple last planned contrast revealed that White Millennial students enrolled at an institution in the Southeast region, evaluated across all study conditions statistically higher than Southwest participants ($p = .01$) and New England participants ($p < .001$). Additionally, the White Millennial participants living in the Great Lakes region evaluated the candidates statistically higher than the New England region ($p = .001$). No other comparisons from the simple last planned contrast yielded statistical significance.

The levels of the study conditions variable also yielded statistical significance $F(4, 1407) = 4.007$, $p = .003$, $\eta^2 = .011$ which is consistent to the finding yielded in Analysis 3C. The finding of Analysis 3C found that White participants evaluated the Black candidate ($M = 5.836$) significantly higher than the Hispanic candidate ($M = 5.668$, $p = .019$) and control portfolio ($M = 5.606$, $p = .002$). A follow-up test will not be run given
that this main effect has already been interpreted for this White participant group in Analysis 3C. Lastly, the interaction between participant geographic region and the study conditions variable was not statistically significant, \( F(12,1407) = 1.661, p=.070, \eta^2 = .014 \).
CHAPTER V
RESEARCH CONCLUSIONS AND DISCUSSION

The findings of this study were based upon data collected from 2,056 Millennial-aged undergraduates enrolled at eleven sponsoring institutions located in four geographic regions of the United States. The project aimed to enhance the understanding of the attributed attitudes Millennial students possess toward racially diverse candidates, and more specifically, explore the patterns of response associated with the following outlined research objectives.

Research Objective #1 [Statistical Analysis 1A-1B]

The first analysis was run to detect statistical differences in the CES means among the following five study conditions: Asian fictitious candidate, Black fictitious candidate, Hispanic fictitious candidate, White fictitious candidate, and control (no photograph). The researcher predicted that there would be no statistical differences among the five levels of the variable. Findings revealed that Millennial students evaluated the control e-portfolio statistically lower than the Asian, Black, and White fictitious candidates. The phenomena of participants being more critical when evaluating a portfolio without a photograph could be of particular interest to candidates who are actively engaged in a job search. Some institutions that support career e-portfolio programs encourage their students to incorporate a variety of media into their portfolio, including but not limited to a professional photograph and videos. This particular finding suggests that students who create a career e-portfolio are better served and perceived more favorably for posting a photograph of themselves on their website than if they were to omit a photograph. Some organizations utilize networking websites, such as LinkedIn,
to recruit new talent. From an application standpoint, employers who use these online networking sites could train hiring managers and recruiters about the importance of evaluating online profiles in an objective manner and based on the knowledge, skills, and abilities.

A second planned contrast analysis detected that Millennial undergraduates evaluated the Hispanic candidate statistically lower than the Asian and Black candidates. Although the difference between means accounts for less than a fifth of a point on a seven point rating scale and has a small effect size, the Hispanic candidate was not evaluated as favorably as the other candidates. A 2007 study published by Pew Research, titled “As Illegal Immigration Issue Heats Up, Hispanics Feel a Chill” polled 2,003 Hispanics and questioned individuals about the current extent of discrimination Hispanics face in the United States (Clark et al., 2007). The study reported that 64% of phone survey participants responded that discrimination against Hispanics was a ‘major problem’ in the United States, and 40% answered that either a family member, close friend, or the phone respondent experienced acts of racial discrimination in the past five years (Clark et al., 2007). It is important that institutions of higher learning continue their efforts in educating students on diversity and promoting rich holistic developmental experiences.

The reader should use caution and be mindful when interpreting the results for the Hispanic photograph since only 56.3% of participants who evaluated this portfolio classified the candidate as Hispanic, Latino, or Spanish Origin. The United States Census Bureau defines the Hispanic and Latino population “as a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of
race” (Humes, Jones, & Ramirez, 2011, p. 2). In 2010 over 50 million Americans identified as Hispanic or Latino origin: 53% identified with being White, 2.5% as Black or African American, 1.4% as being American Indian and Alaska Native, 0.4% as being Asian, 0.1% as Native Hawaiian and Other Pacific Islander, 36.4% some other race, and 6% as two or more races (Humes et al., 2011). Given the vast number of individuals who identify as Hispanic and Latino Origin, it may prove difficult to find one photograph that is representative of this group.

An exploratory analysis was conducted to understand how participant racial groups evaluated across all five study conditions. The one-way ANOVA yielded a statistically significant finding with Black participants evaluating across all study conditions statistically higher than all other participant racial groups. Additionally, White, Non-Hispanic participants evaluated across all study conditions statistically higher than Asian, Asian American, or Pacific Islander participants and Hispanic, Latino, or Spanish Origin participants. Given the lack of empirical research, the researcher predicted that there would be no statistical difference in CES means among the six levels of the variable. Additional research can explore this observed phenomena and seek to understand the possible factors for why some racial groups collectively evaluate candidates more favorably than others.

Research Objective #2 [Statistical Analysis 2A-2C]

The second research objective explored the trends associated with how each of the participant racial groups evaluated the study conditions. The first analysis was run using a one-way ANOVA with 2,056 records to detect significant differences among the three levels of the ‘simple conditions’ variable. Findings revealed that participants who were
randomly assigned to the control condition evaluated that e-portfolio statistically lower than participants who evaluated a same-race and different-race candidate e-portfolio. This finding was consistent with the ANOVA output from Analysis 1A which offered support that including a photograph on a career e-portfolio can have a positive influence on the overall candidate evaluation. It is a meaningful to observe that the difference in CES means between participants who evaluated an e-portfolio with a same-race photograph \( (M = 5.748) \) and different-race photograph \( (M = 5.755) \) was less than one-tenth of a point.

One explanation as to why participants evaluated the same-race and different-race conditions so consistently may be attributed to the work of administrators, faculty, and staff at colleges and universities. For many years post-secondary institutions have cultivated a culture which celebrates diversity and holistic student development. Astin (1993) reported that positive outcomes are likely to occur when institutions support diversity within the institution and provide students opportunities to participate in multicultural discussions and events.

Another possible explanation for the consistency in CES means between the two levels could be explained through Allport’s intergroup contact theory (1954). Allport maintained that a reduction of prejudice can be achieved through positive contact with members of different racial groups (Allport, 1954). Knowing that the composition of the student population is the most diverse in American history, these results might actually be a reflection of the ongoing positive student interactions Millennial students are having within and outside their racial groups.
Analysis 2B identified how participants in different racial groups evaluated a fictitious candidate of the same race and different race relative to the control condition. The interaction term between the participant racial group and the simple condition variable was not statistically significant, yet it is meaningful to interpret the patterns in the data. Consistent with Analysis 1B, findings revealed that Black participants evaluated all three levels of the simple condition variable the highest, White participants evaluated all three levels the second highest, and Asian and Hispanic participants offered the lowest CES means. Lastly, the third analysis of the series analyzed how Asian, Black and White participant groups evaluated each of the five study conditions. The interaction term between the participant race variable and study conditions variable was not statistically significant.

Bertrand and Mullainathan (2004) discovered when sending out resumes with Black traditional sounding names and White traditional sounding names, employers had a tendency of favoring White sounding names over Black sounding names. There is a lack of evidence to support that the White candidate was evaluated statistically higher than the other study conditions. The circles in the figure below show the CES mean for same-race conditions. Consistent with Analysis 2A there is a lack of statistical evidence that supports one participant racial group evaluated the same-race condition statistically higher. Although there are numerous explanations as to why these results conflict with previous research, one possible explanation is that the study limited participation to the Millennial generation. Had this study solicited responses from members of all generations, the patterns may have looked much different. Additionally, this study was not an experimental audit study whereby real hiring managers made the evaluations.
There may be a difference between the decision-making processes that occurs in real-life hiring situations (i.e. callbacks for job interviews) in comparison to what occurs in an online study.

**Research Objective #3 [Statistical Analysis 3A-3C]**

The third set of analyses introduced the student classification variable into the model. The first analysis examined how the CES means varied among the four student classification groups and findings revealed that the main effect for the student classification was not statistically significant.

The researcher predicted that seniors would evaluate the five study conditions in a more consistent manner than freshmen. Analysis 2B was run to explore how freshmen, sophomores, juniors, and seniors evaluated a career e-portfolio of the same race, different race, and control condition. Findings revealed no statistical interaction between the simple condition and student classification variable. The seniors offered the most consistent evaluations across the three levels of the simple condition variable. Seniors evaluated the same race ($M = 5.750$), different race ($M = 5.695$), and control group ($M = 5.738$) within one-tenth of a point and were more consistent in their evaluations than any other student classification group.

Seniors evaluated among the three levels of the simple condition variable within one-tenth of an evaluation point. One might offer the perspective that students with more experiences in higher education will develop and reach a more mature racial identity stage than students with limited to no higher education experience. Students with a more mature developmental stage of racial identity may have greater awareness of racial issues in the context of society and be more likely to evaluate diverse candidates consistently. In
contrast, there was slightly more variation in CES means by freshmen, sophomore and junior students. Although participants were not asked to complete a racial identity inventory, the consistent evaluations offered by seniors could be an indication that racial identity development is occurring throughout the higher education experience. As a potential application and use for results, institutions who invite students to participate in a student interview process should be mindful that freshmen may be less consistent; therefore, organizations may benefit from investing resources into training students on how to evaluate objectively and consistently.

The last analysis of the series originally intended to analyze the study condition variable (5 levels), student classification variable (4 levels) and participant racial group variable (6 levels). However, the only participant racial group with a large enough sample size for the analysis was the White participant group; therefore, the participant racial group variable was removed from the model. The two-way ANOVA which considered 1,428 White Millennial responses reported a statistically significant main effect for the study conditions variable. A planned contrast analysis found that White Millennial undergraduates evaluated the Black candidate (M = 5.836) statistically higher than the Hispanic candidate (M = 5.668, p=.019) and control portfolio (M = 5.606, p=.002). White Millennial participants offered their most favorable evaluation to the Black candidate during their sophomore, junior, and senior year. The interaction between the student classification and study conditions variable was not statistically significant.

Helms (1995) noted in the White Racial Identity Development Model that White individuals develop through six sequential statuses which include: contact, disintegration, reintegration, pseudo-independence, immersion-emersion, and autonomy.
In the early statuses, individuals can be completely oblivious to racial prejudice in society and have racist views, but in the later statuses of the model, individuals will have a better understanding and awareness of their Whiteness, acknowledge the existence of racism, and have an interest in learning about cultural differences. Findings revealed that White Millennial students were more consistent in their evaluations of the five study conditions during the senior year and this finding provides support that higher education experience may serve as a catalyst for development and may result in students being in a more mature stage in racial identity development models.

Critical race theory maintains that racism is prevalent and intertwined into the fabric of our society (Delgado & Stefancic, 2001). The trends from this analysis, which looks specifically at White Millennial responses, do not provide evidence that the group at-large favored the same-race study condition over the other study conditions. However, it should be noted that White Millennial students offered the White fictitious candidate the highest CES mean during their freshman year, but that trend changed as seniors evaluated the same-race condition the lowest of any condition.

Another finding from the trend data was that Millennial students offered consistent evaluations for all five candidates during their senior year. In comparison, there was more variation in CES means for freshmen, sophomores, and juniors.

*Research Objective #4 [Statistical Analysis 4A-4C]*

The last set of analyses were exploratory in nature and intended to examine the influence of student geographic region on the CES mean. The researcher did not find theoretical evidence to support why participants of one geographic region would be more critical than others. It was predicted that there would not be a statistically significant
difference in the way members of different geographic regions evaluated the study conditions. Four geographic regions of the United States were represented, including the Southwest region (n=417), Great Lakes region (n=119), New England region (n=531), and Southeast region (n=971). The group sizes were not equivalent and the homogeneity of variance assumption was violated so the Games-Howell was interpreted.

A total of 2,038 records were analyzed, and the findings revealed that students attending an institution in the Southeast geographic region evaluated across all the study conditions statistically higher than their counterparts in the Southwest and New England regions. Millennials in the Southeast geographic region were also much more consistent when evaluating all the diverse candidates. The interaction between the simple condition variable and geographic region variable was not statistically significant. Trends show that participants from all geographical regions evaluated the control group the lowest. The differences in CES means between the same-race and different-race conditions appeared to be minimal for all regions, and participants of the New England geographic region evaluated the same-race and different-race candidates lower than students of any other geographic region.

The last analysis detected the extent to which participant geographic regions influence CES means for each study condition. The White Millennial group was the only racial participant group with a large enough sample size to be analyzed. A simple last planned contrast revealed that White Millennial participants from the Southeast region evaluated across all study conditions statistically higher than their counterparts in the Southwest and New England regions. Additionally, White participants enrolled in the Great Lakes region evaluated the series of e-portfolios significantly higher than
participants in the New England region. Consistent with the finding in Analysis 3C, the main effect of the study condition variable yielded statistical significance. Collectively, White Millennial undergraduates evaluated the Black candidate statistically higher than the Hispanic candidate and control portfolio. The interaction term between geographic region and study condition was not statistically significant.

These analyses were exploratory in nature and the purpose of collecting this data and running these analyses was to compare how participants were evaluating each study condition split by region. Future research should consider recruiting students from all geographic regions of the United States and ensuring an adequate representation for each region. With more observations from every geographic region of the United States, a more thorough analysis could be conducted to detect for differences in groups.

Limitations and Recommendations for Future Research

The data collection schedule may have contributed to a lower response rate because recruitment memos were sent in late April to early May, and for many students this is a time filled with end-of-the-semester final examinations, papers, and project deadlines. Careful consideration should be given to the data collection period because a higher response rate might be achieved by sending the recruitment memos out to students earlier in the semester. There was also a disproportionate number of White participants (70%) who completed the study materials relative to the other racial participant groups. Nationally there are more White students enrolled in post-secondary institutions than any other racial group, but in order to analyze patterns for all participant racial groups, the sample size for these racial groups needs to increase. Future studies need to be intentional
about recruiting diverse students from all geographic regions and generating an optimal sample size for each group.

This study did not analyze gender differences. Future research may want to incorporate a series of photographs for male fictitious candidates and explore whether the results from the male fictitious candidate photographs deviate from the female candidates.

When designing the e-portfolio the researcher took proactive measures, such as asking a small panel of subject-matter experts to review the credentials, to ensure that the fictitious candidate was not over or underqualified for the Resident Assistant position. However, the data revealed that the evaluations from participants were positively skewed and not close to a neutral response of 3.5. Had the candidate been less qualified there may have been more variation in responses from participants. Future research may consider modifying career portfolio artifacts so the data is not positively skewed.

The e-portfolio design allowed participants to navigate freely throughout the different pages of the portfolio at their own pace. All participants did see the photograph of e-portfolio, excluding the participants who evaluated the control group, because the photo appeared beside the evaluation button. Although there are advantages to this setup, such as replicating the feel of a real life portfolio and giving participants the autonomy of clicking through the portfolios as a hiring manager would, a limitation of the design was that the website did not prohibit an individual from skipping certain pages of the portfolio. For instance, a participant who was motivated to complete the study could opt out of opening the resume and evaluate the candidate without reviewing every artifact. The alternative process would be designed in such a way that it would require a
participant to review each page before advancing. Future research will need to weigh in on the potential costs and benefits of each design and determine whether to allow participants to navigate freely throughout the e-portfolio without restriction or design the e-portfolio so content appears in a sequential order.

Special consideration should be made about collecting and analyzing data from students outside the United States. The findings of such a study could analyze how Millennial students in different regions of the world evaluate the series of racially diverse candidates. Future research may want to consider adding a racial identity inventory to the study materials to assess which stage a participant is in. The actual inventory a student takes would be dependent on the race field of the demographic form, and in an effort to prevent participants from discovering the purpose of the study, the inventory would need to be completed after completing the candidate evaluation form.

Application in Higher Education and Business

From an application standpoint, higher education institutions should consider providing training to students who serve on internal interview subcommittees and discuss how to evaluate candidates fairly and objectively. The Millennial generation is the most racially diverse of any preceding generation and findings from this project provide support for Allport’s intergroup contact theory (1954) (Taylor & Keeter, 2010; “Millennials in Adulthood,” 2014). Institutions should continue to foster diversity, recruit a diverse students, faculty and staff and provide rich holistic developmental experiences. Additionally, the study revealed that the control e-portfolio underperformed most other study conditions so if students create a career electronic portfolio or a profile on a professional networking website, encourage students to use of a professional photograph.
Business entities and organizations should consider facilitating training with recruitment and talent management staff that focuses on bringing forth an awareness of unconscious bias and reducing unintentional bias. Strategic online recruitment is integrated into many organizational acquisition plans so these organizations may benefit from reinforcing the importance of making objective evaluations. Organizations can use metrics to assess incoming candidates and the value the employees bring to the organization and then use the data to drive recruitment and selection decisions. Lastly, businesses and organizations should cultivate and sustain a culture of inclusion and acceptance and make a commitment to value diversity as a core priority in the workplace.
APPENDIX A

COLLEGE ADMINISTRATOR RECRUITMENT WEBSITE:

WWW.HIGHEREDUCATION-JOBS.COM

College Administrator Website Screenshot: Administrators received a short welcome message upon navigating to this website.

College Administrator Website Screenshot: The Project Overview webpage contained the research objectives along with a series of questions and answers, which include the methodology for recruiting students, the average time to complete the materials, and the study incentives.
College Administrator Website Screenshot: The Raffled Merchandise webpage contained information about the raffled prize incentives, process for selecting the winners, and the rules.

College Administrator Website Screenshot: The Institutional Sponsor webpage provided instructions for how an institution could sponsor the project and the documentation required for sponsorship. A “Permission to Solicit Research Participants Electronically” agreement form could be downloaded from this page. A contact form field was added to the left side of the page so administrators could e-mail questions to the researcher.
College Administrator Website Screenshot: The last webpage, View What Participants See, allowed administrators to view all the study materials that their students would see in the same sequential order: participant consent form, raffle informational webpage, participant instructions webpage, position summary webpage, career electronic portfolio, candidate evaluation form, short demographics form, follow-up question form, and the raffle form.
APPENDIX B

RECRUITMENT MEMO TO MILLENNIAL STUDENTS

Dear ${m://FirstName},

My name is Adam Swanson and I am a doctoral candidate at The University of Southern Mississippi. I am inviting you to participate in a study that will provide valuable information about hiring decisions of undergraduates. Access to the study will only be available from April 21 to May 16, 2014. To participate you must be between the ages of 18-33 years and be currently enrolled as an undergraduate at one of our sponsoring higher education institutions. By clicking the study link below you will first be asked to review a participant consent form. If you accept the research terms, you will be asked to assume the role of a hiring manager and review the contents of a fictitious candidate’s career electronic portfolio. After reviewing the electronic portfolio you will be asked to complete a candidate evaluation form and short demographic form.

The average time it takes to complete the study is approximately 10 minutes.

**Raffled Prizes**
All participants of this online study will be given an opportunity to submit their name into a raffle for a series of prizes listed below! The winners of the raffle will be selected using computer randomization software and the selected winners will be e-mailed an electronic Amazon gift card to the e-mail address provided in the raffle survey.

- $25.00 Electronic Amazon Gift Card! (20 available)
- $50.00 Electronic Amazon Gift Card! (4 available)
- $150.00 Electronic Amazon Gift Card! (1 available)

Follow this link to the

This project has been reviewed by the Mississippi Association of Community & Junior Colleges and the University of Southern Mississippi Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Manager of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Your participation is greatly appreciated.

Respectfully,

Adam Swanson | Adam.Swanson@usm.edu
Principal Investigator

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}
APPENDIX C

STUDY MATERIALS - INFORMED CONSENT FORM

Informed Consent Form
THE UNIVERSITY OF SOUTHERN MISSISSIPPI
AUTHORIZATION TO PARTICIPATE IN A RESEARCH PROJECT

Today's Date: ${date://CurrentDate/FL}

Project Information
Principal Investigator: Adam Swanson | E-mail: Adam.Swanson@usm.edu
College: The University of Southern Mississippi | Department of Educational Studies & Research

Research Description

1. Purpose:
Thank you for expressing interest in participating in this national online research study. The data collected from this project will provide valuable information about undergraduate hiring decisions. The study materials will only be active during the time period between April 21 - May 16, 2014. All participants must be between the ages of 18-33 years and be currently enrolled as an undergraduate at one of our sponsoring higher education institutions.

2. Description of Study:
Participants who agree to the research terms will be asked to play the role of a hiring manager. More specifically, participants will read a job summary for a position to which a fictitious candidate is applying and then review artifacts contained in the fictitious candidate's career electronic portfolio. After reviewing the e-portfolio, participants will complete a Candidate Evaluation Form, a short Demographic Form, and be given an opportunity to submit their name into a raffle for prizes listed below.

The average time it takes to complete all the study materials is approximately 10 minutes.

3. Benefits:
This study will provide valuable information pertaining to undergraduate hiring decisions. Although participants will be able to remain anonymous, those who wish to participate in the raffle will be asked to provide their name and contact information at the end of the study. The raffle survey data will not be tied to our survey responses to ensure anonymity of responses. Participants will have an opportunity to win an electronic $25.00 Amazon Gift Card (20 available), a $50.00 Amazon Gift Card (4 available), or a $150.00 Amazon Gift Card (1 available). The winners of the raffle will be selected using computer randomization software. The randomly selected winners will be e-mailed an electronic Amazon gift card to the e-mail address provided by the participant.
After the data are analyzed, the principal investigator will create an individual academic report and visual presentation poster. Additionally, the information obtained may also be presented by the researcher at a professional or academic conference and in academic scholarly writing.

4. Risks:
Minimal risks are anticipated for participating in this study. There are no known physical, financial, occupational, or social risks related to this research project. Participation is completely voluntary and you may choose to discontinue participation at any time without penalty, prejudice, or loss of benefits.

5. Confidentiality:
Participants are discouraged from including personal information in open text fields; any personal information incidentally obtained will remain strictly confidential. All data for the research project will be collected through the Qualtrics online survey software which is password protected. Although the collection of IP addresses is needed for matching records, these will be permanently deleted before the data are analyzed.

6. Participant’s Assurance:
This project has been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations.

Any questions or concerns about rights as a research participant should be directed to the Manager of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to the Principal Investigator using the contact information provided in the Project Information Section above.

**Consent to Participate in Research**
Consent is hereby given to participate in this research project. All procedures and/or investigations to be followed and their purpose, including any experimental procedures, were explained. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

The opportunity to ask questions regarding the research and procedures was given. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to the Principal Investigator with the contact information provided above or
the faculty sponsor at Kyna.Shelley@usm.edu. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-5997.

Respectfully,

Adam Swanson
Principal Investigator

☐ I agree to these terms - I verify that I am an undergraduate student between the ages of 18-33 years
☐ I do not agree to these terms and/or I am not an undergraduate between the ages of 18-33 years
Participants who complete the study material will be given an opportunity to submit their name into a raffle and have a chance to win one of the following prizes!

- $25.00 Amazon Gift Card! (20 available)
- $50.00 Amazon Gift Card! (4 available)
- $150.00 Amazon Gift Card! (1 available)

Thank you in-advance for your interest in this study and valuable input!
Participant Instructions:
From this point forward we ask that you play the role of a manager at a mid-sized university to hire one fictitious candidate.

- Read a position summary to which a fictitious candidate is applying.
- Review the fictitious candidate's career electronic portfolio which contains an array of career artifacts, including a cover letter, resume, letter of recommendation, and project works.
- Following a thorough review of one candidate electronic portfolio, you will complete an evaluation form on the candidate, a short demographic form, and be given an opportunity to enter the raffle for a chance to win an Amazon gift card.

Survey Powered By Qualtrics
APPENDIX F

STUDY MATERIALS – RESIDENT ASSISTANT JOB SUMMARY

The electronic career portfolio that you are about to review was customized by a candidate who is interested in applying for a Resident Assistant position at James Richard University. Review this position description to learn more about the responsibilities of this student position.

**Resident Assistant Position Summary**

**James Richard University**

A Resident Assistant at James Richard University is required to live in one of our sixteen residence halls and maintain an active living-learning community on a floor of 30-50 residents. A Resident Assistant is responsible for planning social and educational programs each semester for the residents, enforcing housing and institutional policies, connecting residents to on-campus resources, mediating roommate conflicts, and completing administrative paperwork with accuracy. We expect our Resident Assistant staff to be available to residents in the residence halls, serve as a positive role model, and provide excellent customer service.

A Resident Assistant must be enrolled as a full-time student at James Richard University and reports directly to a professional housing staff supervisor.

*Adapted from The University of Southern Mississippi Department of Residence Life with permission.*
APPENDIX G

STUDY MATERIALS – CAREER ELECTRONIC PORTFOLIO TEMPLATE

Career Electronic Portfolio Screenshot - Cover Page. The red text above the menu reminds participants to review all the contents of the e-portfolio before completing the evaluation, “Review the contents of tabs 1-4 first. Then click on tab 5 to evaluate the candidate.” Participants could access the Resident Assistant position summary at any time by clicking on the orange link, “Click here if you need to review the job summary.”

Career Electronic Portfolio Screenshot - About Me. The About Me page included a short biography of the candidate and the history of past work and volunteer experiences.
Career Electronic Portfolio Screenshot - Career Artifacts. The Career Artifacts page linked to a cover letter pop-up page, a resume pop-up page, and a letter of recommendation pop-up page. The right side of the page highlighted the fictitious candidate’s education, work experiences, and technology skills.

Career Electronic Portfolio Screenshot - Project Works. The project works page included the topics that the fictitious candidate presented on in class and a sample presentation.
Career Electronic Portfolio Screenshot - Evaluate Candidate. The last page of the e-portfolio displayed a button which directed participants to the Candidate Evaluation Form.
APPENDIX H

STUDY MATERIALS – CAREER ELECTRONIC PORTFOLIO ARTIFACTS

**Biography**

Greetings!

My name is Amanda and I'm currently a sophomore secondary education major in Biology at James Richard University. My hometown is in Memphis, Tennessee. I am passionate about volunteering at my church and helping out others. In my free time I enjoy listening to music, playing softball, and watching movies. After graduation I would like to teach Biology to middle school students in Alabama or Mississippi.

Thanks for visiting my e-portfolio!

**Cover Letter**

April 14, 2014

Dear James Richard University Recruitment and Selection Committee:

Please accept this letter and enclosed resume as an application for the Resident Assistant position at James Richard University. My leadership skills and personal experience make me a great fit for this position. I am interested in the Resident Assistant position because I like to work with college students and feel that I am a good fit for the position.

Currently, I am a sophomore working toward earning a Bachelor of Science in Biology Secondary Education and minoring in Art. For the last two summers I have served as a summer camp counselor at St. Paul Christian Summer Camp. In my role as a camp counselor I have learned how to communicate more effectively, plan social events for the youth, and work on a team. In addition, I have also worked at Jimmy’s Super Value Grocery as a retail clerk. Lastly, I spent time tutoring fifth grade students at Pines Elementary School and these experiences have taught me the importance of extending a helping hand to those in need. While juggling multiple commitments I have proven to be an effective time manager as I have maintained a 2.83 cumulative GPA.

I hope to be offered a Resident Assistant position so I can positively impact the lives of students at James Richard University. Enclosed is my resume for your review. Thank you for taking the time to consider my Resident Assistant application. I look forward to meeting with you to discuss my qualifications further. Please feel free to contact me at (555) 421-4876.

Respectfully,

Amanda Cunningham
**Resume**
Objective: To obtain a Resident Assistant position at James Richard University.

**Education**
Bachelor of Science, James Richard University, Anticipated Graduation May 2017
Major: Biology Secondary Education
Minor: Art
Cumulative GPA 2.83 (4.0 scale)

High School Diploma, Millis High School, May 2012
Cumulative GPA 2.94 (4.0 scale)

**Work Experience**
Jimmy’s Super Value Grocery Store
Retail Clerk, August 2010–August 2012
• Managed transactions at a grocery store register and bagged groceries.
• Participated in customer service training and provided quality service to our store customers.
• Cleaned areas of the store and stocked shelves when business was slow.
• Followed store policy and all instructions given by my supervisor.

St. Paul Christian Summer Camp
Camp Counselor, Summer 2012 & Summer 2013
• Worked on a staff of 40 camp counselors and supervised a small group of youth campers ranging in age from 8-11 years old.
• Coordinated social activities and led youth bible study on a daily basis.
• Served as a positive role model and helped campers with tasks.
• Ensured the camp area was kept clean.

**Volunteer Experience**
Pines Elementary School, February - May 2011
After School Pines Tutoring Program
• Tutored at-risk fifth graders in mathematics and reading after school.

**Technology Skills**
Software Programs
• Windows 7 Operating System
• Microsoft Office (Word, PowerPoint, Excel)
Letter of Recommendation
Eddie Freemon, Millis High School Guidance Counselor
Voice: 555.266.6514
Fax: 555.296.4891

April 16, 2014

To Whom It May Concern:

It is with great pleasure that I write this letter of reference for Ms. Amanda Cunningham in support for her Resident Assistant application. I have known Amanda for four years as she attended Millis High School.

Amanda is an involved student leader that takes pride in helping others. She takes initiative on academic projects and serves as a positive role model for her fellow classmates. Amanda can be very energetic and is eager at any opportunity to participate in school events. She does a good job paying attention to details when working on projects and is respectful to the teachers.

I am again very pleased to offer this letter of reference for Ms. Amanda Cunningham. If I can be of further assistance, please do not hesitate to contact me at 555.276.6514.

Respectfully,

Eddie Freemon
## APPENDIX I

### STUDY MATERIALS – CANDIDATE EVALUATION FORM

![Candidate Evaluation Form](image)

**General Information**

<table>
<thead>
<tr>
<th>Name of Applicant</th>
<th>Amanda Cunningham</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position of Vacancy</td>
<td>Resident Assistant</td>
</tr>
<tr>
<td>Department</td>
<td>The Department of Residence Life</td>
</tr>
<tr>
<td>Date of Evaluation</td>
<td>7/1/2023</td>
</tr>
</tbody>
</table>

**Evaluation of the Candidate**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>This applicant would be a great resident advisor</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
</tr>
<tr>
<td>This applicant would serve as a positive role model</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
</tr>
<tr>
<td>This applicant is likely to be promoted in the department within two years</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
</tr>
<tr>
<td>This applicant is likely to connect with students of diverse backgrounds</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
</tr>
<tr>
<td>This applicant is a team player</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
</tr>
<tr>
<td>This applicant is qualified for the position</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
<td>![Rating]</td>
</tr>
</tbody>
</table>
APPENDIX J

STUDY MATERIALS – PARTICIPANT DEMOGRAPHIC FORM

Select your college or university:

Age:
- 18 years
- 22 years
- 26 years
- 30 years
- 19 years
- 23 years
- 27 years
- 31 years
- 20 years
- 24 years
- 28 years
- 32 years
- 21 years
- 25 years
- 29 years
- 33 years

Current Class Standing:
- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student

Race/Ethnicity:
- American Indian or Alaska Native
- Asian, Asian American, Pacific Islander
- Black or African American
- Hispanic, Latino, or Spanish Origin
- White, Non-Hispanic
- Multiracial
- Other:

Current Enrollment Status:
- Part-Time Student
- Full-Time Student
Do you currently live in a residence hall or an apartment complex managed by the college/university?

- Yes
- No

Which alternative best describes where you were raised?

- I grew up in an urban community
- I grew up in a suburban community
- I grew up in a rural community
- No, I lived in more than one city growing up
APPENDIX K

STUDY MATERIALS – STUDY FOLLOW-UP QUESTIONS

You are almost done! We want to know what you remembered from the electronic portfolio. If you cannot remember you can select the last alternative, “I do not remember”.

The electronic portfolio you reviewed included a letter of recommendation. Do you recall the job title of the person who wrote the letter of recommendation for the fictitious candidate?

- College Professor
- Family Member
- High School Guidance Counselor
- High School Math Teacher
- I do not remember

The electronic portfolio you reviewed included a picture of the fictitious candidate. In your personal opinion which race/ethnicity would this applicant most likely identify with?

- American Indian or Alaska Native
- Asian, Asian American, Pacific Islander
- Black or African American
- Hispanic, Latino, or Spanish Origin
- White, Non-Hispanic
- I do not remember

The electronic portfolio you reviewed included a resume. Do you recall where the fictitious candidate previously worked?

- Williams Pizza & Wings
- Jimmy’s Super Value Grocery & St. Paul Christian Summer Camp
- Brandon's Home Furniture
- The candidate did not list any prior work experiences
- I do not remember
APPENDIX L

STUDY MATERIALS – PARTICIPANT RAFFLE FORM

Participant Raffle Form

Thank you for taking the time to complete this study.

To enter yourself into the raffle for our listed prizes, please complete this form and then click submit. To ensure anonymity of responses, the data obtained from this independent raffle survey is not tied to your survey responses. All participants of this study will have an opportunity to submit their names into a raffle for a chance to win an electronic $50.00 Amazon Gift Card (CD available), a $50.00 Amazon Gift Card (DVD available), or a $150.00 Amazon Gift Card (1 available). All participants from our sponsor institutions who complete this raffle form will be listed in one spreadsheet and the winners will be selected using computergenerated randomization software. The randomly selected winners will be e-mailed an electronic Amazon gift card via the e-mail address provided below no later than Friday, June 13th, 2014.

Basic Contact Information:

First Name

Last Name

Primary/Email Address

Submit Form
APPENDIX M

PURCHASE HISTORY – ISTOCKPHOTO.COM

<table>
<thead>
<tr>
<th>File</th>
<th>ID</th>
<th>Date (DD/MM/YYYY)</th>
<th>Cost</th>
<th>License</th>
<th>Size</th>
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</tr>
</thead>
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<td>Download</td>
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<td>Download</td>
</tr>
</tbody>
</table>

Order summary

- 120 Stock Credits: $180.00 USD
- Promo code applied: -$18.00 USD

Sub Total: $162.00 USD

Total: $162.00 USD
APPENDIX N:

INSTITUTIONAL REVIEW BOARD NOTICE OF COMMITTEE ACTION

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional-review-board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26.111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the “Adverse Effect Report Form”.
- If approved, the maximum period of approval is limited to twelve months.

Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 14040405
PROJECT TITLE: The Effects of Race and Ethnicity in the Hiring Process: An Experimental Study of Millennial Undergraduate Attitudes Using Career Electronic Portfolios
PROJECT TYPE: New Project
RESEARCHER(S): Adam Swanson
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Educational Studies and Research
FUNDING AGENCY/SPONSOR: NIA
IRB COMMITTEE ACTION: Exempt Review Approval
PERIOD OF APPROVAL: 04/07/2014 to 04/06/2015

Lawrence A. Hosman, Ph.D.
Institutional Review Board
REFERENCES


eFolioMinnesota. (2013). *eFolioMinnesota*. Received from https://efolio.custhelp.com/app/answers/detail/a_id/4247


