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SOCIAL CLASS AND EMPLOYABILITY: EQUALIZING PERCEIVED COMPETENCE AND WARMTH TO CONTROL BIASED DECISION-MAKING DURING RESUMÉ SCREENING

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SOCIAL CLASS AND EMPLOYABILITY: EQUALIZING PERCEIVED COMPETENCE AND WARMTH TO CONTROL BIASED DECISION-MAKING DURING RESUMÉ SCREENING

by

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ABSTRACT

Implicit bias during the resumé screening process can adversely impact the ability of an organization to achieve a competitive advantage through human capital (Coff & Kryscynski, 2011). The purpose of this study was to determine if teaching resumé screeners how to control biased decision-making during resumé screening results in equal employability ratings for upper-middle and lower-middle-class applicants. The study used a quantitative, causal, quasi-experimental, single-group pretest-post-test design. The target population was people in the United States who screen resumés as part of their current job duties (Thomas, 2018). The researcher used Amazon Mechanical Turk (MTurk) to recruit participants.

Participants received a job description for a management training program and two resumés, one representing an upper-middle-class job applicant and one representing a lower-middle-class applicant (Thomas, 2018). Participants rated each resumé on perceptions of warmth, competence, and employability using the warmth and competence scales (Fiske, 2018) and an Employment Assessment scale (Cole et al., 2009). Participants viewed four short training videos that included two tactics to reduce biased behavior (Carter et al., 2020; Devine et al., 2012). After treatment, the researcher repeated the pretest procedure, and participants received two new resumés to rate.

At the pretest, employability ratings were not significantly different between upper-middle-class and lower-middle-class applicants. At the post-test, participants rated the lower-middle-class applicant higher for employability. Perceived competence mediated the effect of social class on employability at the pretest and again at the post-

test. Perceived warmth mediated the effect of social class on employability only at the post-test.

Keywords: implicit bias, resumé screening, social class

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LIST OF ABBREVIATIONS

SCM	The Stereotype Content Model
UMC	Upper-middle-class
LMC	Lower-middle-class
VPS	Virtual Private Server
VPN	Virtual Private Network

CHAPTER I – INTRODUCTION

Organizations may achieve a competitive advantage through human capital by hiring the right person at the right time (Coff & Kryscynski, 2011). The aggregate human capital that leads to a competitive advantage adds value to the organization's production, is difficult to duplicate, and is not easily replaceable (Radjenović & Krstić, 2017). An organization's managerial performance is a knowledge-based human capital resource that drives positive financial performance (Mabey & Lees, 2007).

Management training programs develop an internal talent pool for future leadership roles (Gabriel et al., 2020; Guarrero, 2004). Rotational management training programs entail lateral moves through multiple functional areas for a fixed time (Gabriel et al., 2020). Selecting the right candidates is crucial when using management training programs to develop the human capital that may lead to a competitive advantage (Gabriel et al., 2020).

The resumé screening stage is typically the first step in the applicant evaluation process (Derous & Ryan, 2019). Resumé screening is the process a resumé evaluator uses to review a resumé for applicant qualifications that align with the qualifications required for a job (Handrick, 2018). Resumé screening narrows the candidate pool by eliminating applicants (Prathibha & Sandhya, 2019).

A resumé screener's personal biases can hinder an organization's ability to obtain a competitive advantage through human capital (Hennigan & Evans, 2018). When a resumé screener's personal biases influence their decisions, they may recommend applicants who are not the best fit (Weinstein, 2012). A source of a resumé screener's personal bias that can influence whether they exclude a qualified applicant from further

consideration is the applicant's social class (Rivera, 2011, 2012; Rivera & Tilcsik, 2016; Thomas, 2018).

According to signaling theory, resumé screeners interpret the information on an applicant's resumé to determine their future worth (Derous & Ryan, 2019; Spence, 1973). Resumé screeners perceive an applicant's social class when interpreting the information on a resumé (Rivera, 2011, 2012; Rivera & Tilcsik, 2016; Thomas, 2018). Attributes such as extracurricular activities on a resumé signal an applicant's social class (Rivera, 2011, 2012; Rivera & Tilcsik, 2016). Thomas (2018) reports that resumé screeners rate applicants whose resumés have higher social class signals as more competent. Stephens et al. (2021) note that social group bias, including social class, is a barrier to diversity. According to Williams et al. (2018) and Ingram and Oh (2022), organizations often lack social class diversity initiatives. This study determined if a training intervention to teach resumé screeners tactics to control biased decision-making during resumé screening resulted in equal employability ratings for upper-middle and lower-middle-class applicants. This chapter includes the background of the study, problem statement, purpose, significance of the study, research question, research objectives, conceptual framework, definitions of terms used, and a discussion about the study's delimitations and assumptions.

Background of the Study

Processes, products, or systems that are not easily duplicated and drive positive financial performance can lead to a competitive advantage (Porter, 2008). Organizations may achieve a competitive advantage through human capital (Morris et al., 2017). Achieving competitive advantage through human capital requires organizational systems

aimed at, among other things, acquiring and developing the right people (Hossain & Roy, 2016).

Human Capital

The aggregate human capital that leads to a competitive advantage adds value to the organization's production, is difficult to duplicate, and is not easily replaceable (Radjenović & Krstić, 2017). According to Hossain and Roy (2016), "human capital is concerned with the skills, knowledge, innovativeness, capabilities and overall competence of employees" (p. 1024). Human capital is an intangible value-added asset that is difficult to duplicate (del Valle & Castillo, 2009).

The knowledge and skills of human capital include the creativity needed for value-added innovations leading to better outputs in the form of products or services (Hossain & Roy, 2016). Menéndez Blanco and Montes-Botella (2017) state that an organization's human capital drives "knowledge creation, innovation, product diversification, resistance to adverse shocks, flexibility, and adaptability to changes" (p. 671). Innovation is more likely to be present when an organization has a diverse workforce (Hewlett et al., 2013).

Organizational investments in human capital development drive future gains (Becker, 1962). According to Becker (1962), an organization’s investment in developing executives results in firm-specific human capital that benefits the organization. Organizations may use management training programs to strategically develop future leaders (Gabriel et al., 2020).

Management Training Programs

Managerial performance in an organization is a knowledge-based resource that drives a competitive advantage (Mabey & Lees, 2007). Reza and Nugroho (2020) posit that the managerial performance of an organization is the primary differentiator from competitors. Management training programs enable organizations to strategically develop an internal talent pool for future leadership roles (Chang & Busser, 2017).

Rotational management training programs develop managerial competencies through experiential learning (Gabriel et al., 2020). Rotational management training programs entail lateral moves into job assignments across several functional areas for a specified time (Gabriel et al., 2020). Recent college graduates with little work experience are often participants in rotational management training programs (Gabriel et al., 2020). The right candidates must be selected before an organization can use management training programs to develop the human capital that leads to a competitive advantage (Gabriel et al., 2020).

Resumé Screening

The resumé screening stage is typically one of the first steps in the applicant evaluation process (Derous & Ryan, 2019). A resumé screener is any person responsible for reviewing resumés and deciding whether to exclude an applicant from further consideration (Cole et al., 2005). Resumé screeners review a resumé for applicant qualifications that align with the qualifications required for a job (Handrick, 2018). Resumé screening eliminates applicants from further consideration and narrows the applicant pool (Higgins, 2019; Prathibha & Sandhya, 2019).

Implicit Bias

During resumé screening, personal biases may influence decision-making (Higgins, 2019). When a resumé screener's personal biases influence their decisions, they may exclude qualified applicants (Higgins, 2019) or recommend applicants who are not the best fit (Weinstein, 2012). Biases that impact decision-making without one's awareness are implicit (National Institute of Health, n.d.).

Implicit bias is a subconscious preference for a group of people that manifests automatically and without conscious awareness (National Institute of Health, n.d.). Implicit bias influences decision-making and behavioral outcomes (National Institute of Health, n.d.). When implicit bias exists, internalized judgments about a particular group can lead to exclusionary actions (Blanck et al., 2020; Brownstein, 2019).

Implicit bias stems from the implicit associations stored in the subconscious memory (Blanck et al., 2020). People quickly form implicit associations during childhood (Gonzalez et al., 2017). For example, six-year-old children rate a rich man more competent than a poor man (Sigelman, 2012). In the fourth grade, children associate affluent students with better academic performance (Woods et al., 2005).

Perceived Social Class and Social Class Signals

The resumé screener's perceived social class of an applicant is a source of bias that can influence whether a resumé screener excludes a qualified applicant from further consideration (Rivera, 2011, 2012; Rivera & Tilcsik, 2016; Thomas, 2018). A resumé does not overtly state an applicant's social class (Henderson, 2018). However, a person's interests and extracurricular activities are social class signals that influence how others perceive their social class (Bourdieu, 1984; Thomas, 2018).

Thomas (2018) found strong associations with upper-middle and lower-middle-class based on the sports a person participates in, music genre preference, and food preferences. For example, people associate golf with the upper-middle class and wrestling with the lower-middle-class (Thomas, 2016). Music genre preferences are another signal of social class (Thomas, 2018). For example, heavy metal and country music are commonly associated with the lower classes, while classical and jazz are associated with the upper classes (Thomas, 2018).

Stereotype Content Model

According to the Stereotype Content Model (SCM), people judge others on the dimensions of warmth and competence (Fiske, 2018; Fiske et al., 2002). The upper classes (wealthy people) are rated high in the dimension of competence and low in the dimension of warmth (Fiske et al., 2002; Thomas, 2018). Resumé screeners rate fictitious job applicants they perceive to be from higher social classes as more competent but less warm (friendly and trustworthy); (Fiske, 2018) than people perceived as from lower social classes (Thomas, 2018).

Researchers have applied the SCM to job roles and occupational stereotypes (Imhoff et al., 2013). Imhoff et al. (2013) found that on a 10-point scale for each dimension, the position of manager is rated high competence ($M = 7.73$; $SD = 1.72$) and low warmth ($M = 3.63$, $SD = 1.65$). This finding is relevant to this study based on what Cuddy et al. (2011) refer to as stereotype matching. Stereotype matching occurs when an employer attempts to match their perceptions of an applicant's warmth and competence to the degree of warmth and competence they think is needed for a job (Cuddy et al., 2011).

For example, Cuddy et al. (2011) discussed the high proportion of women in cashier jobs because people generally perceive women as high in warmth.

Job Role and Social Class Bias

Occupational stereotypes provide context about how perceived social class influences decision-making (Henderson, 2017). Henderson (2017) found that people who make hiring decisions think of lower-class people as employed in service and front-line manufacturing positions. Rivera (2011, 2012) found that resumé screeners favored people from higher-class backgrounds for jobs in law, finance, or consulting firms with a wealthy client base. Job applicants whom resumé screeners perceive as upper-middle as opposed to lower-middle-class are more likely to receive an offer to interview for a customer-facing role at an upscale hotel (Thomas, 2018). Conversely, Henderson (2018) found no preference for upper-class applicants for a Training Specialist role.

Anti-Bias Training Interventions

A common thread in anti-bias literature is that attitudinal change is challenging because evaluative associations form at a young age and continued reinforcement occurs throughout a person's life (FitzGerald et al., 2019; Williams et al., 2020). According to FitzGerald et al. (2019), anti-bias efforts may need to focus on modifying behavioral outcomes instead of attempting to alter attitudes. Carter et al. (2020) recommend a combination of self-awareness and behavioral modification strategies to maximize the effectiveness of anti-bias training interventions. A systematic review by Bezrukova et al. (2016) also indicates that teaching awareness combined with behavioral training is more effective than only self-awareness training.

Devine et al. (2012) found that by teaching participants five tactics to reduce exclusionary behaviors associated with implicit racial bias, positive long-term (eight weeks) effects resulted. The five tactics used were "stereotype replacement, counter-stereotypic imaging, individuation, perspective-taking, and increasing opportunities for contact" (Devine et al., 2012, p. 1270). Devine et al. (2012) taught participants all five tactics and instructed them to utilize any of the tactics in their daily lives.

According to Devine et al. (2012), self-awareness of one's bias is the first step in reducing biased behavior. The premise of the Devine et al. (2012) study is that when people are first aware of their bias, they can apply one of the five bias-reducing tactics and consciously eliminate biased behavior. However, Devine et al. (2012) did not isolate the effects of each tactic individually.

Bezrukova et al. (2016) conducted a systematic review of 236 studies about diversity training. Bezrukova et al. (2016) broadly categorize training interventions as awareness, behavioral, or a combination of the two. The Bezrukova et al. (2016) study indicates that teaching awareness combined with behavioral training is more effective than only self-awareness training. Bezrukova et al. (2016) do not specify the tactics taught to participants in awareness or behavioral training.

Even though literature acknowledges the difficulty of disrupting biased decision-making by altering a person's attitudes toward a stereotyped group (FitzGerald et al., 2019; Williams et al., 2020; Stephens et al., 2021), counterstereotype training may be an effective anti-bias tactic (FitzGerald et al., 2019). Counterstereotype training is one of the five anti-bias tactics in the Devine et al. (2012) study. Counterstereotype training disrupts bias-decision making by reprogramming the brain's stored stereotypes about a group

(Burns et al., 2017). Counterstereotype training involves visualizing a person from a stereotyped group in a way that contradicts the general stereotype (FitzGerald et al., 2019). In the context of this study, an example would be to teach resumé screeners to think of a lower-class person as a successful leader. However, any positive effects of counterstereotype training will likely diminish over time without reinforcement (FitzGerald et al., 2019).

In summary, when a resumé screener's personal biases influence their decisions, they may exclude qualified applicants (Higgins, 2019) or recommend applicants who are not the best fit (Weinstein, 2012). The resumé screener's perceived social class of an applicant is a source of bias that can influence whether a resumé screener excludes an otherwise qualified applicant from further consideration (Rivera, 2011, 2012; Rivera & Tilcsik, 2016; Thomas, 2018). Stephens et al. (2021) note that social group bias, including social class, is a barrier to diversity. Organizations rarely include social class in diversity and inclusion initiatives (Ingram & Oh, 2022). According to Williams et al. (2018), organizational diversity and inclusion initiatives primarily focus on race and gender and should include social class.

Problem Statement

Ideally, resumé screeners would grant applicants consideration based only on their qualifications relevant to the job (Heuschen, 2019). Resumé screeners would have the knowledge, skills, and abilities (KSAs) to identify how biased decision-making occurs and consciously strive to control the adverse effects of these biases (Derous & Ryan, 2019). Organizational efforts to promote diversity would include anti-bias training

for resumé screeners that addresses how to mitigate specific types of bias (ex. social class, obesity, or disability); (Carter et al., 2020).

In reality, biased decision-making is likely to occur during resumé screening (Derous et al., 2015). Resumé screeners consider non-job-related attributes (Derous & Ryan, 2019; Young & Reilly, 2016), such as an applicant's social class, when assessing organizational fit (Rivera, 2011, 2012; Rivera & Tilcsik, 2016). Resumé screeners infer an applicant's social class from signals such as extracurricular activities (Thomas, 2018). As a result, resumé screeners apply social class stereotype traits to the applicant, including "warmth (trustworthiness & friendliness) and competence (capability & assertiveness)" (Fiske, 2018, p. 67).

Management roles require a mixture of warmth and competence (Cuddy et al., 2011). Resumé screeners perceive lower-class people as less competent but warmer (Thomas, 2018). People from the lower classes are less likely to work in management roles despite evidence that they may have better interpersonal skills that manifest as valuable leadership competencies (Ingram & Oh, 2022). However, organizations often omit social class bias from diversity training initiatives (Ingram & Oh, 2022; Williams et al., 2018).

Consequently, bias about an applicant's social class during resumé screening (Rivera, 2011, 2012; Rivera & Tilcsik, 2016; Thomas, 2018) may adversely impact the ability of an organization to hire the right people (Higgins, 2019). Resumé screeners may apply social class stereotypes to individual applicants and exclude fully qualified applicants (Cuddy et al., 2011). In the context of this study, biased decision-making

during resumé screening may result in hiring the wrong person for a future management role.

Successful managers must have competencies beyond hard business skills (Hogan et al., 2011). Ineffective managers lack the self-awareness and interpersonal skills to lead teams, develop others (Hogan et al., 2011), and build collaborative relationships within the organizational social system (Coff & Kryscynski, 2011). Bad hires in management are costly in terms of lost productivity and turnover among subordinates (Allen, 2019). Turnover costs are approximately 150% of each departing employee's salary (Allen, 2019). In sum, hiring the wrong people to develop for management roles is a barrier to achieving competitive advantage through human capital (Coff & Kryscynski, 2011).

Purpose

This study aimed to determine if teaching resumé screeners how to control biased decision-making during resumé screening resulted in equal employability ratings for upper-middle and lower-middle-class applicants. A resumé screener's personal biases may influence whether they exclude a qualified job candidate from further consideration (Higgins, 2019). According to FitzGerald et al. (2019), it is vital to stimulate a conscious decision-making process to reduce exclusionary behaviors resulting from implicit bias.

This study used a quantitative, causal, quasi-experimental, single-group pretest-post-test design. Existing theories inform a quantitative study that answers a research question through the statistical analysis of data gathered using previously validated survey instruments (Laerd Dissertation, 2012a). Quantitative research may extend prior research findings using different research designs, methods, measurements, or analyses (Laerd Dissertation, 2012a). According to Trochim (2012), causal quantitative studies

determine the effect of a treatment on an outcome. In this study, the outcome variable, employability ratings a resumé screener (study participant) assigns applicants, is measured before and after a training intervention.

This quasi-experimental study employed predictor, outcome, and mediator variables to assess resumé screeners' ratings of applicants. The predictor variable was the applicant's social class, and the outcome variable was the resumé screeners' employability rating. There were two mediator variables, the Stereotype Content Model domains of perceived warmth and competence (Fiske, 2018; Fiske et al., 2002). The mediator variables explained how social class influenced employability ratings. The target population was people in the United States who screened resumés for first-level managerial positions and higher. The researcher recruited the sample from people registered as workers on the online Amazon Mechanical Turk platform. The researcher used the previously validated warmth, competence (Fiske, 2018), and Employment Assessment scales (Cole et al., 2009). Participants rated one lower-middle-class resumé and one upper-middle-class resumé for warmth, competence, and employability during the pretest. A training intervention taught participants how to self-regulate biased decision-making during resumé screening. The researcher derived the content of the training intervention from the literature referenced in Chapters 1 and 2 of this manuscript. The post-test repeated the pretest procedure. The differences in post-test employability ratings between upper-middle-class and lower-middle-class applicants determined the effectiveness of the training intervention.

Research Objectives

The researcher developed the following research question and objectives for this study based on prior findings: Does teaching resumé screeners how to control biased decision-making during resumé screening result in equal employability ratings for upper-middle and lower-middle-class applicants?

RO1 – Describe the demographics of the study participants in terms of age, ethnicity, sex, education, the industry of employment, and self-reported socioeconomic strata of origin.

RO2 – Compare resumé screeners' pretest employability ratings between upper-middle-class and lower-middle-class applicants.

RO3 – Compare resumé screeners' post-test employability ratings between upper-middle-class and lower-middle-class applicants.

RO4 – Determine the relationship between the applicant's social class and the employability ratings mediated by perceived competence.

RO5 – Determine the relationship between the applicant's social class and the employability ratings mediated by perceived warmth.

RO6 – Determine the relationship between the applicant's social class and the employability ratings mediated by both perceived warmth and perceived competence.

Conceptual Framework

The theoretical basis for this study included (a) Human Capital Theory (Becker, 1962), (b) Signaling Theory (Spence, 1973), (c) Dual-Process Theory (Kahneman, 2011), and (d) the Stereotype Content Model (Fiske et al., 2002). Human Capital Theory was the

theoretical basis for employee acquisition and resumé screening (Higgins, 2019). Derous et al. (2019) note that signaling (Spence, 1973) and dual process theories (Evans & Stanovich, 2013; Kahneman, 2011) explain how resumé screeners form impressions about job applicants. Signaling theory informs a resumé screener's interpretation of the available information provided in a job applicant's resumé (Spence, 1973). Dual process theory explains the intuitive and deliberate cognitive processes (Evans & Stanovich, 2013; Kahneman, 2011) used by a resumé screener to interpret the signals on a resumé. Finally, the Stereotype Content Model (Fiske, 2018; Fiske et al., 2002) provides the evaluative domains people use to judge others, warmth and competence.

Human Capital Theory

According to Becker (1962), human capital is general or firm-specific. Value-added knowledge proprietary to a single organization is firm-specific human capital (Becker, 1962). General human capital is transferable across organizations (Becker, 1962). The value of human capital is partially dependent on an employee's knowledge acquired through education (Becker, 1962).

Apart from formal educational institutions, employees acquire education through employer investments in human capital development, such as on-the-job training (Becker, 1962). When employers invest in on-the-job training, costs are associated with the resources allocated to conduct the training (Becker, 1962). These costs include labor and tangible assets allocated to conduct the training (Becker, 1962). Employers partially recoup on-the-job training costs through lower wages paid to the employee during training (Becker, 1962).

An employer's investment in human capital development should lead to future gains through increased productivity (Becker, 1962). Lower turnover and associated costs should occur among employees who receive firm-specific training (Becker, 1962). According to Becker (1962), an employer's investment in executive training is considered specific.

This study focused on human capital acquisition at the resumé screening stage of the hiring process. Resumé screening narrows the candidate pool by eliminating applicants (Prathibha & Sandhya, 2019). According to Higgins (2019), human capital theory influences and informs the selection decisions made during the resumé screening stage.

A rotational management training program was the hiring context for this study. Based on Becker's (1962) discussion, a rotational management training program is an employer investment in human capital development. A rotational management training program provides on-the-job training through a hands-on learning environment where trainees rotate through various lateral job roles during a specified time frame (Gabriel et al., 2020). Departmental rotation is a tactic for employers to learn about an employee's abilities and determine optimal placement in the organization (Becker, 1962). Selecting the right candidates is crucial when using management training programs to develop the human capital that may lead to a competitive advantage (Gabriel et al., 2020).

Becker (1962) contends that observable evidence of a person's educational performance, such as grades, personality, and intelligence, contributes to workforce performance. Considering this study's hiring context of a management training program, ineffective managers lack the self-awareness and interpersonal skills to lead teams,

develop others (Hogan et al., 2011), and build collaborative relationships within the organizational social system (Coff & Kryscynski, 2011). The following sections provide insight into theories informing how resumé screeners infer future worth from an applicant's resumé.

Signaling Theory

Signaling theory is rooted in economics and posits that employers must interpret available information to estimate an applicant's future worth (Spence, 1973). When an employer receives an applicant's resumé, the employer only has access to the information contained on that resumé (Spence, 1973). The information on a resumé is incomplete because, without first-hand knowledge of an applicant's actual performance, an employer does not know an applicant's true worth (Spence, 1973). Therefore, the employer interprets information on a resumé to infer the applicant's potential value (Spence, 1973).

According to signaling theory, the sender of information (job applicant) provides information the receiver (resumé screener) must interpret to form an opinion about the potential productivity of an applicant (Spence, 1973). According to Spence (1973), applicant attributes consist of indices and signals. Indices are applicant attributes a person cannot voluntarily change, such as gender (Spence, 1973). Applicant signals are attributes a person can alter (Spence, 1973), such as extracurricular activities one participated in during college (Thomas, 2018).

Signaling theory provides the theoretical basis for what information a resumé screener uses to estimate the applicant's future worth (Spence, 1973). In this study, signaling theory informed what information, or social class signals, the brain uses to form a perceived social class of an applicant. The social class signals on the resumés used in

this study included collegiate extracurriculars (Thomas, 2018) and prior work roles (Csikszentmihalyi & Schneider, 2001). Recent college graduates with little work experience are often participants in rotational management training programs (Gabriel et al., 2020). Students from higher social classes are more likely to work only during the summer in higher-status work roles, such as internships, that create a career foundation (Csikszentmihalyi & Schneider, 2001).

According to Derous and Ryan (2019), signals on a resumé can influence a resumé screener's decision to exclude an applicant from further consideration. When a resumé screener associates signals on a resumé with a stereotyped group (Derous & Ryan, 2019), they apply stereotype traits about the group to the individual (Thomas, 2018). For example, if an applicant was on the wrestling team during college, wrestling is an extracurricular activity that signals a lower-class person (Thomas, 2018). Lower-class people are considered less competent (Fiske et al., 2002), and the resumé screener applies the low competence trait to the applicant as an individual (Kanahara, 2006). Refer to the instrumentation section in Chapter 3 for a detailed discussion about the social class signals used in this study.

In sum, signaling theory informs what information a resumé screener may use to estimate an applicant's future worth (Spence, 1973). The following section discusses the dual-process theory of decision-making (Kahneman, 2011). In this study, dual process theory (Evans & Stanovich, 2013; Kahneman, 2011) informed how a resumé screener's unconscious or conscious cognition results in excluding an applicant from further consideration.

Dual-Process Theory

According to Dual-Process Theory, there are two separate thought processes in decision-making (Evans & Stanovich, 2013; Kahneman, 2011). System 1 thinking operates automatically, quickly, and unconsciously from associations stored in memory (Kahneman, 2011). According to Kahneman (2011), System 1 is the dominant thought processor for most decision-making (Kahneman, 2011). An example of System 1 thinking is asking if someone intelligent and strong would be a good leader (Kahneman, 2011). According to Kahneman (2011), people generally assume this person would be a good leader based solely on the descriptors ‘strong’ and ‘intelligent’ because these traits are automatically associated with leadership. However, System 1 does not seek additional information, such as whether the person has negative traits that contradict good leadership (Kahneman, 2011).

System 2 thinking requires logic and analysis to arrive at a decision (Evans & Stanovich, 2013). Self-control is a function of System 2 (Kahneman, 2011). According to De Neys (2017), an inability to activate System 2 thinking results in biased decision-making during the hiring process. However, System 2 cannot prevent biased behavior if the bias is unknown (Kahneman, 2011). System 2 activation requires an awareness of the bias and what situation results in biased decision-making (Kahneman, 2011).

In this study, the dual-process theory of decision-making informed how resumé screeners processed applicant information. Dual process theory (Kahneman, 2011) explains how unconscious human cognition influences a resumé screener's impression of an applicant (Derous & Ryan, 2019). According to Derous & Ryan (2019), biased decision-making occurs when a resumé screener uses System 1 thinking. When System 1

thinking is in use, resumé screeners form an automatic impression of the applicant based on the resumé screener's existing associations with a stereotyped group (Derous & Ryan, 2019).

This study used a training intervention to teach participants (resumé screeners) to recognize and control implicit social class bias. As noted earlier, System 2 activation requires an awareness of the bias and awareness of the situation that results in biased decision-making (Kahneman, 2011). The training intervention should have activated System 2 during resumé screening, with an anticipated result of equal employability ratings for upper-middle-class and lower-middle-class applicants.

Stereotype Content Model

According to the Stereotype Content Model (SCM), people judge others on the dimensions of warmth and competence (Fiske et al., 2002). Warmth denotes how much of a perceived threat the group is, and competence is the ability to execute the threat (Fiske et al., 2002). A person's status predicts how competent others rate them (Fiske, 2018). People perceive the wealthy as more competent but less warm than people from the lower classes (Fiske et al., 2002). Research shows that resumé screeners rate applicants whose resumés contain upper-middle-class signals as more competent than lower-middle-class applicants (Thomas, 2018).

The job role provided context about whether a resumé screener's bias leads to excluding fully qualified applicants (Derous & Ryan, 2019). Cuddy et al. (2011) state that leadership roles require both warmth and competence. Resumé screeners may select applicants based on whether their perceived warmth and competence match the job role stereotype, which is called stereotype matching (Cuddy et al., 2011).

Researchers have applied the Stereotype Content Model dimensions of warmth and competence to job roles (Imhoff et al., 2013). For example, Imhoff et al. (2013) found that the position of manager is rated high competence ($M = 7.73$; $SD = 1.72$) and low warmth ($M = 3.63$, $SD = 1.65$). Using stereotype matching logic (Cuddy et al., 2011), resumé screeners would match people they perceive as high competence and low warmth to a management job.

In this study, the warmth and competence dimensions of the SCM explained how an applicant's social class influences a resumé screener's perceived employability of the applicant. According to the Stereotype Content Model (Fiske et al., 2002), people generally consider upper-class people more competent. Based on Cuddy et al.'s (2011) discussion about stereotype matching, resumé screeners would prefer upper-class applicants when a work role requires higher levels of competence than warmth. The job role in this study was a rotational management program. Using this rationale, resumé screeners in this study should have assigned higher competence and employability ratings to upper-middle-class applicants during the pretest.

Theoretical Framework and Research Objectives

Prior research has established a relationship between applicant social class and hiring outcomes (Rivera, 2011, 2012; Thomas, 2018). Resumé screeners favor upper-class applicants for high-status positions in elite law, finance, and consulting firms (Rivera, 2012). Resumé screeners preferred upper-middle-class applicants for a customer-facing job in an upscale hotel (Thomas, 2018). In contrast, Henderson (2018) found that resumé screeners do not favor upper-class applicants for an entry-level Training and Development Specialist job.

Previous research has demonstrated that perceptions of competence and warmth mediate the effect of perceived social class signals on the likelihood of an interview (Thomas, 2018). This study determined the impact of social class on employability ratings mediated by perceived competence and perceived warmth. A training intervention taught resumé screeners tactics to control biased decision-making during resumé screening. The researcher compared pretest and post-test employability ratings to determine treatment effects.

This study's first research objective described the participants' demographics regarding age, ethnicity, sex, education, employment industry, and socioeconomic origins. The second research objective compared the pretest employability ratings that resumé screeners (the study participants) assign to upper-middle-class and lower-middle-class applicants. The third research objective compared the differences in post-test employability ratings for upper-middle-class and lower-middle-class applicants to determine the training intervention's effect. The fourth, fifth, and sixth research objectives determined the effect of social class signals on employability mediated by perceived competence and perceived warmth.

Signaling theory (Spence, 1973) and dual-process theory (Evans & Stanovich, 2013; Kahneman, 2011) informed research objectives two through six. Signaling theory is rooted in economics and informs what information a resumé screener interprets to estimate an applicant's potential worth (Spence, 1973). Dual process theory (Kahneman, 2011) explains how unconscious human cognition influences a resumé screener's impression of an applicant (Derous & Ryan, 2019). According to Derous and Ryan (2019), biased decision-making occurs when a resumé screener uses System 1 thinking.

When System 1 thinking is in use, resumé screeners form an automatic impression of the applicant based on the resumé screener's existing associations with a stereotyped group (Derous & Ryan, 2019).

The second research objective compared the pretest employability ratings that resumé screeners (the study participants) assign to upper-middle-class and lower-middle-class applicants. The third research objective compared the differences in post-test employability ratings for upper-middle-class and lower-middle-class applicants to determine the training intervention's effect. According to Derous and Ryan (2019), training resumé screeners to be aware of one's bias is one tactic to reduce biased behavior during the resumé screening process. Based on Derous and Ryan's (2019) stance, the intervention should have triggered System 2 thinking, leading to a resumé screener's conscious effort to control biased decision-making (Derous & Ryan, 2019).

This study's fourth, fifth, and sixth research objectives determined the effects of social class on employability ratings mediated by perceived competence and perceived warmth. Implicit attitudes are latent constructs (Krosnick et al., 2005) that are implicit evaluative associations (Toribio, 2018); automatic and unconscious "associations between objects (e.g., members of a group) and corresponding evaluations" (Bonefeld & Dickhäuser, 2018, p. 3). According to the Stereotype Content Model (Fiske et al., 2002), people evaluate others on the stereotype dimensions of warmth and competence. Status predicts evaluations of competence (Fiske, 2018). In this study, warmth and competence were attitudinal evaluations that explained how social class influenced employability. Refer to Figure 1 for a visual depiction of the theoretical underpinnings of the study relative to the research objectives and constructs under investigation.

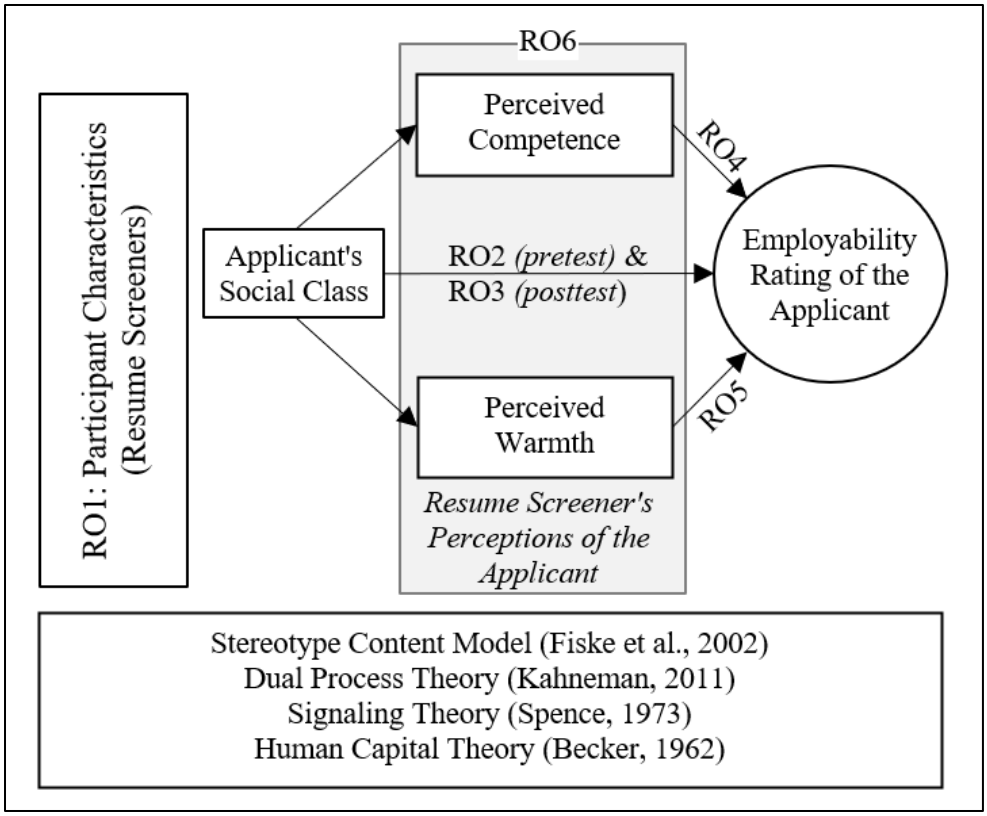

Figure 1. Conceptual Framework

Significance of the Study

Derous and Ryan (2019) note a lack of research about reducing biased behavior during resumé screening. Prior studies covered in this manuscript investigated social class bias during resumé screening (Rivera, 2011, 2012; Rivera & Tilcsik, 2016; Thomas, 2018) but did not investigate potential interventions to control biased decision-making during resumé screening. This study contributed to the existing body of knowledge by determining if teaching resumé screeners how to control biased decision-making during resumé screening resulted in equal employability ratings for upper-middle and lower-middle-class applicants.

This study's findings provide a basis for organizations to develop training interventions that mitigate the effects of biased decision-making during resumé

screening. Organizations rarely include social class in diversity and inclusion initiatives (Ingram & Oh, 2022). According to Williams et al. (2018), organizational diversity and inclusion initiatives primarily focus on race and gender and should include social class. In addition, according to Tyran and Garcia (2017), organizations should conduct training to address job applicants' exclusion based on social class.

Delimitations

The researcher imposed restrictions known as delimitations that define the study's scope (Simon & Goes, 2013). Common delimitations include "theoretical background, objectives, research questions, variables under study, and study sample" (Theofanidis & Fountouki, 2018, p. 157). The researcher set the following delimitations for this study: (a) study participant inclusion criteria, (b) the variable of social class bias, (c) a contextual focus on a management training program instead of a specific job role, (d) a focus on applicants who are traditional college graduates with limited work experience, (e) an emphasis on reducing biased behavior at the individual level (resumé screeners), (f) non-probability sampling, and (g) no longitudinal data collection.

The first delimitation was the inclusion criteria for study participants. The researcher was interested in study participants who were resumé screeners in the United States. The findings of the study may not generalize to other countries.

The second delimitation was the researcher's focus on social class bias during resumé screening. Stephens et al. (2021) note that social group bias, including social class, is a barrier to organizational diversity. Organizations rarely include social class in diversity and inclusion initiatives (Ingram & Oh, 2022). According to Williams et al.

(2018), organizational diversity and inclusion initiatives primarily focus on race and gender and should include social class.

The third delimitation was the researcher's contextual focus on a management training program instead of a specific job role. Rotational management training programs are human resource development initiatives that develop a talent pool for future leadership roles (Gabriel et al., 2020). Due to this delimitation, the study will not generalize to other job roles.

The fourth delimitation that defined the study's scope was the researcher's use of fictional applicants who are traditional college students with limited work experience. Recent college graduates are often participants in rotational management training programs (Gabriel et al., 2020). This study did not consider how social class bias may impact hiring outcomes for recent graduates who may be older, non-traditional graduates.

The fifth delimitation was the researcher's focus on mitigating the effects of social class bias at the individual (resumé screener) level instead of the systemic (organizational) level. Reducing biased behavior in an organization requires a systemic approach embedded in the organizational strategy (Stephens et al., 2021). Unfortunately, the systemic reduction of biased behavior was beyond this study's scope due to time and resource constraints.

The sixth delimitation was the researcher's use of nonprobability sampling. The researcher sourced the sample using the Amazon Mechanical Turk platform due to time and accessibility constraints. Participants voluntarily opted-in to the study. Resumé screeners not enrolled as Amazon Mechanical Turk users did not have an opportunity to participate in the study.

The final delimitation was that time and budgetary constraints prevent the implementation of a longitudinal study. Therefore, the researcher did not collect data about any long-term effects of the intervention. The researcher collected post-test data immediately after administration of the intervention.

Assumptions

The assumptions of a study are the conditions the researcher believes will exist (Simon & Goes, 2013). The researcher identified four literature-based assumptions for this study: (a) participants would respond truthfully (Young & Young, 2019), (b) participants would pay attention to all instructions and materials (Cheung et al., 2017; Wessling et al., 2017; Young & Young, 2019), (c) all instruments used in the study were easily understood by participants (Phillips et al., 2013; Ruel et al., 2015), and (d) the study sample represented the target population (Wessling et al., 2017; Young & Young, 2019).

The first assumption was that respondents would respond truthfully. Social desirability bias threatens truthful responses (Young & Young, 2019). In this study, the researcher recruited participants using the online crowdsourcing platform Amazon Mechanical Turk. Amazon Mechanical Turk provides participants a high level of anonymity, promoting truthful responses (Young & Young, 2019). Young and Young (2019) note that the Amazon Mechanical Turk terms prohibit researchers from collecting personally identifiable information. According to Young & Young (2019), the only personal information a researcher should request is a participant's worker ID that Amazon Mechanical Turk assigns. The informed consent statement notified participants of the personally identifiable information collected to encourage truthful responses (Young &

Young, 2019). Refer to the Selection of Participants section in Chapter 3 for a detailed discussion about Amazon Mechanical Turk.

The researcher assumed that participants paid attention to all study materials. Data quality is compromised if participants do not thoroughly read instructions and survey items or ignore the training video (Young & Young, 2019). The researcher placed attention checks throughout the questionnaire to mitigate inattentiveness (Cheung et al., 2017). Wessling et al. (2017) recommend allowing participants two opportunities to answer attention check questions correctly. Based on this recommendation, participants were disqualified from further participation if they provided a second incorrect response for any single attention check question.

The third assumption was that participants would easily understand all instruments and study materials. The researcher used concise and straightforward wording (Phillips et al., 2013). The researcher pilot-tested the survey and materials for readability (Ruel et al., 2015).

The researcher assumed the sample was representative of the target population. The target population was people in the United States who screen resumés as part of their current job duties. The researcher filtered participant location on Amazon Mechanical Turk and restricted data collection to participants in the United States (Young & Young, 2019). The researcher administered a pre-screening questionnaire separate from the study (Wessling et al., 2017). The pre-screening questions included a multiple-choice list of current job duties, including "resumé screening/make hiring decisions." Participants who self-reported they "screen resumés/make hiring decisions" as part of their current job duties answered a second question about the hierarchal categories for which they

screened resumés. The researcher assigned a qualification filter in the MTurk system for those who self-reported that they “screen resumés/make hiring decisions” for first-level managerial positions and higher.

Definition of Terms

Terms used in this study included:

1. *Bias* is a preference for members of a social group that derives from stereotypes, a person's prejudices about social groups, or both (Stephens et al., 2021).
2. *Employability* is "a graduate's ability to gain and retain satisfying/decent work, conditioned by employers' beliefs and interaction of individual (e.g., skills, socio-cultural background), institutional (educational background) and contextual factors (e.g., labor market situation)" (Shumilova & Cai, 2015, p. 26).
3. *Implicit association* is a subconscious "association of the members of certain groups with certain characteristics." (Bonefeld & Dickhäuser, 2018, p. 3). Implicit associations may be evaluative or non-evaluative (Gonzalez et al., 2017). In this study, an *implicit association* is non-evaluative.
4. *Implicit attitudes* are latent constructs (Krosnick et al., 2005) that are implicit evaluative associations (Toribio, 2018); automatic and unconscious "associations between objects (e.g., members of a group) and corresponding evaluations" (Bonefeld & Dickhäuser, 2018, p. 3).
5. *Implicit bias* is a subconscious preference for a group of people that manifests automatically, without conscious awareness, and influences decision-making and behavioral outcomes (National Institute of Health, n.d.).

6. *Management training program* is a formal training program provided by an organization to develop required managerial competencies (Becker & Bish, 2017).
7. *A resumé screener* is any person, regardless of job title, responsible for reviewing resumés and deciding whether to exclude an applicant from further consideration (Cole et al., 2005).
8. *Resumé screening* is the first step of the applicant evaluation process (Derous & Ryan, 2019). Resumé screening eliminates candidates from further consideration (Higgins, 2019).
9. *Social class signals* are the signals or attributes a person can alter (Spence, 1973); social class signals include the extracurricular activities one participates in during college (Thomas, 2018).
10. *Stereotypes* are "broadly shared assumptions in society about certain characteristics of members of certain groups" (Bonefeld & Dickhäuser, 2018, p. 3).
11. *Stereotype activation* occurs after the brain has categorized a person (Moskowitz et al., 2012). During stereotype activation, the brain recalls the "most dominant associations to the group" (Moskowitz et al., 2012, p. 997) and stores the stereotype "in working memory outside of conscious awareness" (Moskowitz et al., 2012, p. 997).
12. *Stereotype application* means applying a group stereotype to an individual member of that group (Kanahara, 2006).

Summary

Human capital can lead to a competitive advantage, beginning with acquiring and developing the right people (Hossain & Roy, 2016). When resumé screeners' personal

biases impact their decision-making, they may exclude qualified applicants from further consideration (Higgins, 2019). Derous and Ryan (2019) note a lack of research about reducing biased behavior during resumé screening. Researchers have investigated social class bias during the hiring process (Rivera, 2011, 2012; Thomas, 2018; Young & Reilly, 2016), but these studies did not address interventions to control biased decision-making during resumé screening. Also, Ingram and Oh (2022) note that most organizational diversity and inclusion initiatives do not include social class. This study determined if teaching resumé screeners how to control biased decision-making during resumé screening resulted in equal employability ratings for upper-middle and lower-middle-class applicants. Chapter two includes a literature review, chapter three covers this study's research design and methodology, chapter four discusses the study's findings, and chapter five discusses the findings.

CHAPTER II – LITERATURE REVIEW

Research shows that social class bias impacts hiring decisions (Rivera, 2011, 2012; Thomas, 2018; Young & Reilly, 2016). Stephens et al. (2021) note that social group bias, including social class, is a barrier to organizational diversity. However, organizations rarely include social class in diversity and inclusion initiatives (Ingram & Oh, 2022). According to Williams et al. (2018), organizational diversity and inclusion initiatives primarily focus on race and gender and should include social class. Therefore, this study introduced a training intervention that taught resumé screeners how to control biased decision-making during resumé screening.

The first section of this literature review discusses human capital theory (Becker, 1962), the importance of human capital in achieving a competitive advantage, and the management training programs organizations use to develop human capital. The second section discusses how signaling theory (Spence, 1973), dual process theory (Evans & Stanovich, 2013; Kahneman, 2011), and the Stereotype Content Model (Fiske et al., 2002) underpin the resumé screening process. The next sections cover the cognitive mechanisms that inform the resumé screener's categorization and attitudinal evaluation of an applicant, an overview of occupational stereotypes and social class, and the existing literature about social class bias during resumé screening for various job roles. The final sections review existing literature about anti-bias training and types of anti-bias tactics (Devine et al., 2012).

Human Capital

Human capital theory (Becker, 1962) provides a theoretical basis for acquiring human capital. Human capital is a person's knowledge, skills, and abilities (KSAs);

(Becker, 1962). According to Becker (1962), human capital is firm-specific or general. Firm-specific human capital adds value for only one organization (Becker, 1962). On the other hand, general human capital KSAs are transferable across industries or organizations and increase worker mobility (Becker, 1962). Knowledge-based human capital includes a person's knowledge, intellectual capability, and learning ability (DeNisi et al., 2003).

Human Capital and Competitive Advantage

Products and processes other organizations cannot easily duplicate may lead to a sustainable competitive advantage (DeNisi et al., 2003). Human capital contributes to a sustainable competitive advantage because it is the most difficult organizational asset to duplicate (DeNisi et al., 2003). Menéndez Blanco and Montes-Botella (2017) state that an organization's human capital drives "knowledge creation, innovation, product diversification, resistance to adverse shocks, flexibility, and adaptability to changes" (p. 671).

In the 21st century, knowledge-based human capital contributes the most to an organization's ability to achieve a competitive advantage (DeNisi et al., 2003). An organization's aggregate managerial capability is an example of knowledge-based human capital that may lead to a competitive advantage (Ahmed, 2017). Reza and Nugroho (2020) posit that the managerial performance of an organization is the primary differentiator from competitors.

First-level managers have the most influence over daily operations and their subordinates' output (Hossain & Roy, 2016). A first-level manager directly influences employee retention through their ability to provide a motivating work environment and

ensure their employees have the tools to succeed in their jobs (Hossain & Roy, 2016). Successful managers must have competencies beyond hard business skills (Hogan et al., 2011). Ineffective managers lack the self-awareness and interpersonal skills to lead teams, develop others (Hogan et al., 2011), and build collaborative relationships within the organizational social system (Coff & Kryscynski, 2011). Bad hires in management are costly in terms of lost productivity and turnover among subordinates (Allen, 2019). Turnover costs are approximately 150% of each departing employee's salary (Allen, 2019).

Management Training Programs

A management training program is a component of succession planning (Gabriel et al., 2020) that enables organizations to strategically develop an internal talent pool for future leadership roles (Chang & Busser, 2017). Rotational management training programs involve hands-on training in various departments during a specified time frame (Gabriel et al., 2020). Organizations often select recent college graduates for rotational management training programs (Gabriel et al., 2020). However, the right candidates must be selected before an organization can use management training programs to develop the human capital that leads to a competitive advantage (Gabriel et al., 2020).

Resumé Screening

According to Coff and Kryscynski (2011), hiring the right employees is the first step toward a human capital-based competitive advantage. The first stage in the applicant evaluation process is resumé screening (Higgins, 2019; Rivera, 2011). Resumé screening is the process a resumé evaluator uses to review a resumé for applicant qualifications that align with the qualifications required for a job (Handrick, 2018). The purpose of resumé

screening is to exclude applicants who do not meet minimum job qualifications (Higgins, 2019; Rivera, 2011, 2012).

When human capital development occurs after hiring, such as with a rotational management training program, resumé screeners must identify applicants with the most learning potential (Coff & Kryscynski, 2011). However, resumé screeners may exclude qualified applicants from further consideration due to personal bias (Higgins, 2019). Implicit bias is a subconscious preference for a group of people that manifests automatically, without conscious awareness, and influences decision-making and behavioral outcomes (National Institute of Health, n.d.).

Theoretical Basis

During resumé screening, the brain categorizes the applicant, forms an impression of the person, and decides whether to exclude the applicant from further consideration (Derous & Ryan, 2019). An eye-tracking study shows that the resumé screening process lasts approximately 7.4 seconds (Ladders, 2018). The following sections provide an overview of the theories that inform the resumé screening process.

Signaling theory (Spence, 1973) underpins what information a resumé screener uses to estimate the future worth of an applicant. Dual process theory provides the theoretical basis for the resumé screener's conscious or unconscious cognition during decision-making (Evans & Stanovich, 2013; Kahneman, 2011). Finally, the Stereotype Content Model (Fiske et al., 2002) provides the stereotype dimensions people use to evaluate others.

Signaling Theory

Signaling theory (Spence, 1973), rooted in economics, provides the theoretical basis for what information a resumé screener uses to estimate the future worth of the applicant. Signals and indices comprise the information on a resumé (Spence, 1973). Signals are attributes a person can change (ex. College attended and leisure activities), and indices are those a person cannot voluntarily change (ex. Gender and ethnicity); (Spence, 1973).

Dual Process Theory

The dual-process theory of decision-making (Evans & Stanovich, 2013; Kahneman, 2011) informs how the brain processes applicant information (Derous & Ryan, 2019). According to dual-process theory, there are two separate thought processes in decision-making, System 1 and System 2 (Evans & Stanovich, 2013; Kahneman, 2011). System 1 thinking operates automatically, quickly, and unconsciously from associations stored in memory (Kahneman, 2011). According to Kahneman (2011), System 1 is the dominant thought processor for most decision-making (Kahneman, 2011). An example of System 1 thinking provided by Kahneman (2011) is asking if someone intelligent and strong would be a good leader. According to Kahneman (2011), people generally assume this person would be a good leader based solely on the descriptors ‘strong’ and ‘intelligent’ because these traits are automatically associated with leadership. However, System 1 does not seek additional information, such as whether the person has negative traits that contradict good leadership (Kahneman, 2011).

System 2 thinking requires logic and analysis to arrive at a decision (Evans & Stanovich, 2013). Self-control is a function of System 2 (Kahneman, 2011). According to

De Neys (2017), an inability to activate System 2 thinking results in biased decision-making during the hiring process. However, the deliberate and conscious thought processes associated with System 2 cannot prevent biased behavior if the bias is unknown (Kahneman, 2011). System 2 activation requires an awareness of the bias and the situation that results in biased decision-making (Kahneman, 2011).

Stereotype Content Model

The Stereotype Content Model (Fiske et al., 2002) informs what stereotype traits resumé screeners use to form an impression of an applicant. According to the Stereotype Content Model (SCM), first introduced by Fiske et al. (2002), people judge others on the dimensions of "perceived warmth (trustworthiness & friendliness) and competence (capability & assertiveness)" (Fiske, 2018, p. 67). From a cognition perspective, warmth conveys threat level, and competence is the ability to execute the threat (Fiske et al., 2002). A person's status predicts how competent others will rate them (Fiske, 2018). Resumé screeners rate upper-class people as more competent but less warm than lower-class people (Thomas, 2018).

Cognition During Resumé Screening

According to Moskowitz et al. (2012), the brain categorizes a person into a group, activates dominant stereotypes about the group, makes an attitudinal evaluation based on the stereotype, and applies the evaluations to the individual. During resumé screening, the brain uses social class signals to categorize an applicant into a perceived social class (Rivera & Tilcsik, 2016; Thomas, 2018). Social class signals are non-evaluative associations, such as associating golf with upper-class people (Gonzalez et al., 2017).

Following categorization, the brain almost instantaneously activates dominant stereotypes about the group into working memory (Moskowitz et al., 2012). According to the Stereotype Content Model, the two stereotype dimensions people use to judge others are warmth and competence (Fiske, 2018; Fiske et al., 2002). For example, a social class stereotype is that upper-class people are more competent than lower-class people (Fiske et al., 2002).

Once the dominant stereotype traits are in working memory, they are accessible for the brain when evaluating the applicant (Moskowitz et al., 2012). Following Moskowitz et al.'s (2012) explanation of the cognitive process, a resumé screener unconsciously assigns warmth and competence evaluations to the applicant after stereotype activation. Subsequently, using Moskowitz et al.'s (2012) explanation of the cognitive process, the resumé screener's warmth and competence evaluations should influence a resumé screener's decision to exclude the applicant from further consideration.

Refer to Figure 2 for a mapping of the cognitive mechanisms discussed thus far in this section. Figure 2 is the researcher's interpretation of Moskowitz et al.'s (2012) cognitive process relative to prior research about categorization using social class signals (Rivera & Tilcsik, 2016; Thomas, 2018) and the Stereotype Content Model (Fiske, 2018; Fiske et al., 2002) warmth and competence domains as attitudinal evaluations. The following sections provide an overview of social class signals that inform the brain's categorization of a person into a perceived social class, activation of warmth and competence stereotypes (Fiske, 2018; Fiske et al., 2002), attitudinal evaluations, and stereotype application.

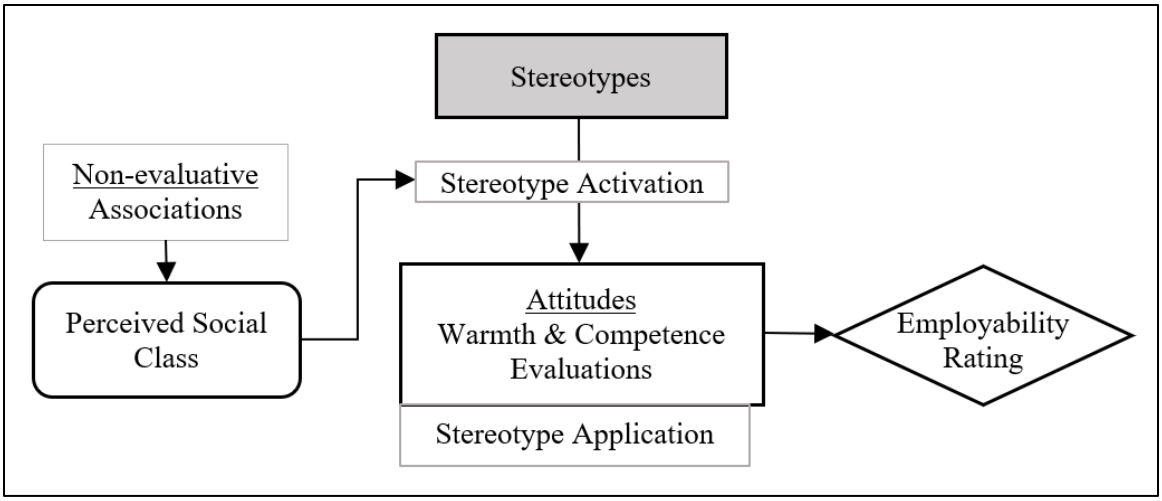

Figure 2. Cognition During Resumé Screening.

Perceived Social Class

A resumé does not overtly state an applicant's social class (Henderson, 2018). During resumé screening, the brain uses social class signals to categorize a person into a perceived social class (Rivera & Tilcsik, 2016; Thomas, 2018). Social class signals are non-evaluative associations, such as associating golf with upper-class people (Gonzalez et al., 2017).

The social class signals discussed in this section are a person's tastes (Bourdieu, 1984; Thomas, 2017, 2018) and type of prior employment (Csikszentmihalyi & Schneider, 2001). Extracurricular activities (Thomas, 2018) or hobbies (Henderson, 2017) are examples of a person's tastes that signal social class. According to Thomas (2018), items on a resumé, such as the type of music or sports club a person participates in during college, are signals about a person's social class.

Sports. People from the upper classes are more likely to participate in sports requiring a private club membership, expensive equipment, and time to participate

(Bourdieu, 1991). People associate sports such as sailing, polo, and golf with a higher-class affiliation (Bourdieu, 1991). According to Woods and Butler (2020), social class also correlates with actual consumption patterns in sports event attendance. Upper-middle-class people prefer to attend golf, tennis, and sailing events, whereas lower-class people like bowling, pool, and wrestling (Woods & Butler, 2020).

Music. Heavy metal, country music, and bluegrass are associated with lower classes, while classical and jazz are associated with higher social classes (Thomas, 2018). Class associations with music genres correlate with actual consumption patterns, with lower-class people preferring country and heavy metal (Bates, 2017). According to Veenstra (2015), apart from jazz, lower-class people dislike the music preferred by upper-class people and vice-versa.

Work History. According to IResearchNet (n.d.), the prestige or status of a job is associated with a person's social class. Low-status jobs associated with lower social classes include those in the service industry (Kraus & Stephens, 2012). Students from higher social classes are more likely to work only during the summer in higher-status work roles, such as internships, that create a career foundation (Csikszentmihalyi & Schneider, 2001). Kessler et al. (2019) found that resumé screeners do not consider low-status jobs in service roles relevant work experience for recent graduates.

In summary, during resumé screening, the brain categorizes the applicant into a perceived social class using social class signals (Rivera & Tilcsik, 2016; Thomas, 2018). As discussed in this section, a person's taste in sports and music (Thomas, 2018) and the type of prior job roles (IResearchNet, n.d.; Kraus & Stephens, 2012) are social class signals. However, as Rivera and Tilcsik (2016) noted, the perceived social class is not

necessarily an applicant's actual social class. While people from any social class may enjoy the activities reviewed in this section, taste-based social class signals are widely associated with particular social class groups (Rivera & Tilcsik, 2016).

The following sections discuss stereotype activation, attitudinal evaluation, and stereotype application. After categorization, the brain uses the perceived social class and activates the social class stereotypes stored in memory (Moskowitz et al., 2012). The perceived social class becomes the "attitude object" as the brain begins the evaluative process (Krosnick et al., 2005).

Stereotype Activation

After the brain categorizes a person, it calls forth general stereotypes from memory, increasing the brain's accessibility to the stereotype information (Moskowitz et al., 2012). During stereotype activation, the brain recalls the "most dominant associations to the group" (Moskowitz et al., 2012, p. 997) and stores the stereotype "in working memory outside of conscious awareness" (Moskowitz et al., 2012, p. 997). In other words, a social group stereotype is cognitively dormant until the brain triggers its activation by presenting the social group category that requires evaluation. Williams et al. (2020) state that, in a workplace setting, stereotype activation is not controllable.

An analogous example of stereotype activation is locating a file folder to find and open a document that contains the information one needs to complete a task. Once the document is open, the information contained therein is now accessible. One can then extract the relevant information from the document needed for the task.

Attitudinal Evaluation

The brain uses the activated stereotype information to evaluate the attitude object (Krosnick et al., 2005), which is the applicant. Attitudes are evaluative associations that are latent constructs (Krosnick et al., 2005). Implicit attitudinal evaluations are automatic and unconscious "associations between objects (e.g., members of a group) and corresponding evaluations" (Bonefeld & Dickhäuser, 2018, p. 3). When System 1 thinking is in use, attitudinal evaluations occur unconsciously when the stereotype is activated (Krosnick et al., 2005). According to the Stereotype Content Model, people evaluate others on the dimensions of warmth and competence (Fiske et al., 2002). Therefore, a resumé screener's warmth and competence ratings (Fiske, 2018; Fiske et al., 2002) of an applicant are attitudinal evaluations.

People begin forming evaluative associations at a young age (Cvencek et al., 2011; Gonzalez et al., 2017). Young children assign wealthier people higher levels of competence (Shutts et al., 2016; Sigelman, 2012; Woods et al., 2005). Sigelman (2012) found that six-year-olds consider a wealthy man more competent but not more likable than a poor man. Children in the fourth and middle grades perceive wealthy students as more academically competent (Woods et al., 2005).

Stereotype Application

Stereotype application means applying a group stereotype to an individual member of that group (Kanahara, 2006). Stereotype application is a latent process (Reichardt et al., 2020) that can only occur following the prior activation of a stereotype (Krieglmeyer & Sherman, 2012). According to some researchers, stereotype application is controllable (Blair & Banaji, 1996; Burns et al., 2017; Williams et al., 2020).

An example of the stereotype path using System 1 thinking during resumé screening is, a job applicant plays golf; golf is a non-evaluative association (Gonzalez et al., 2017) that signals an upper-class person (Thomas, 2018). A stereotype is that upper-class people are more competent than lower-class people (Fiske et al., 2002). The brain then applies the group's stereotype to this individual (Kanahara, 2006) and tells us this person is competent. According to Cuddy et al.'s (2011) discussion about stereotype matching, if a job role requires high levels of competence, this example of stereotype application may lead the resumé screener to select the person for further consideration.

Social Class and Occupational Stereotypes

The job role provides a situational context for whether resumé screeners favor upper-class applicants over those from lower classes (Cuddy et al., 2011). Based on Cuddy et al.'s (2011) discussion about stereotype matching, resumé screeners attempt to match an applicant with a job role where warmth and competence perceptions for the job and the applicant align. For example, Cuddy et al. (2011) discuss the high proportion of women in cashier jobs. People generally consider women as high in warmth and the role of a cashier as one that requires people with high warmth (Cuddy et al., 2011).

Stereotype Content Model and Job Roles

Researchers have applied the Stereotype Content Model dimensions of warmth and competence to job roles (Imhoff et al., 2013). For example, Imhoff et al. (2013) found that the position of manager is rated high competence ($M = 7.73$; $SD = 1.72$) and low warmth ($M = 3.63$, $SD = 1.65$). Using stereotype matching logic (Cuddy et al., 2011) and Imhoff et al.'s (2013) findings, resumé screeners would match people they perceive as high competence and low warmth to a management job.

Social Class and Leadership Roles

People from higher social classes are more likely than those from lower classes to be in leadership positions as adults (Martin et al., 2017). According to Ingram and Oh (2022), upper-class people are 68% more likely to work in management roles. Even when people from lower classes achieve the professional success that leads to upward mobility, their social class of origin may be a stigma in the workplace (Kallschmidt & Eaton, 2019). People do not want others to know their lower social class of origin due to fear of judgment (Kallschmidt & Eaton, 2019). According to Kallschmidt and Eaton (2019), people from lower social classes do not want to be viewed as incompetent if others learn of their social class of origin.

Resumé Studies and Social Class

Bertrand and Mullainathan (2004) conducted a study in the Boston and Chicago labor markets to determine differences in resumé selection based on ethnicity. Resumés with Caucasian names experienced a 50 percent higher callback ratio than those with African American names (Bertrand & Mullainathan, 2004). Darolia et al. (2016) conducted a similar study across seven major job markets in the United States. Darolia et al. (2016) found no statistical significance in callback numbers relative to ethnicity or gender. These studies address bias during the resumé screening process, but not the applicant's social class as a source of bias. According to Durante et al. (2017), there is little research on social class stereotypes compared to gender, ethnicity, and age.

Rivera (2011) conducted 120 interviews with recruiters from elite law, consulting, and finance firms. Rivera interviewed 40 participants from each industry. Rivera (2011) also conducted an additional 90 interviews from the same sample that entailed

participants' real-time verbal evaluation of fictional resumés. Rivera's (2011) study revealed that resumé screeners typically had no formal training for resumé screening. Rivera (2011) found that resumé screeners preferred applicants whose resumés contained upper-class social class signals.

In Rivera's (2011) study, elite firms recruited applicants from prestigious universities. Among these universities, some are considered more prestigious than others (Rivera, 2011). The school's prestige and extracurricular activities were the top two applicant signals resumé screeners used to exclude applicants from further consideration (Rivera, 2011).

Resumé screeners considered people who attended more prestigious schools and participated in high-status extracurricular activities to have more "polish" (better social skills and appearance); (Rivera, 2011). Rivera (2011) found that recruiters associated school prestige with the character and intelligence of an applicant. A common theme in Rivera's (2011) findings is that resumé screeners believe a prestigious school's admission policies weed out people who are not the most intelligent. Even when applicants had a lower GPA but attended a top-four school, recruiters preferred them (Rivera, 2011).

An applicant's extracurricular activities are a signal of likeability and ambition (Rivera, 2011). Resumé screeners preferred the applicants who participated in high-status extracurricular activities during college (Rivera, 2011). The high-status extracurricular activities typically signal a higher social class because they require time and monetary resources lower-class people may not have (Rivera, 2011). Resumé screeners also preferred applicants with lower GPAs but high levels of extracurricular pursuits (Rivera, 2011). Based on these findings, people from lower-class backgrounds who attend

prestigious universities may face a barrier to employment in elite firms if they lack the resources to participate in high-status extracurricular activities (Rivera, 2011).

Rivera (2012) conducted a qualitative study to explore affinity bias in resumé screening. Rivera (2012) interviewed 120 recruiters in law, finance, and consulting (40 from each industry). According to Rivera (2012), recruiters preferred applicants'' resumés with similar backgrounds and interests to themselves, including social class. In addition, participants had a "hire a friend" mentality due to people working together for extended periods (Rivera, 2012).

Young and Reilly (2016) found that hiring managers from upper-class origins perceived people from a lower social class of origin as having a poor person-organization fit during the application stage of the hiring process. Young and Reill''s (2016) study focused on numerous stages of the hiring process beyond initial resumé screening. Young and Reilly (2016) recommended that future research focus on one phase of the hiring process.

Rivera and Tilcsik (2016) used an audit study, a survey experiment, and interviews to investigate social class and gender effects on callbacks and the likelihood of interviews for an entry-level position in elite law firms. In the audit study, Rivera and Tilcsik (2016) e-mailed 316 resumés to 316 offices of 147 law firms in 14 cities across the United States in August 2014. In the audit study, 16.25% of upper-class men received callbacks compared to 3.80% of upper-class women, 1.28% of lower-class men, and 6.33% of lower-class women (Rivera & Tilcsik, 2016).

The quantitative online survey experiment included a sample of 210 practicing attorneys from 38 states in the United States (Rivera & Tilcsik, 2016). Rivera and Tilcsik

(2016) provided participants with a hypothetical hiring situation, a summer associate position at a large firm in Washington, DC. Each participant reviewed one resumé (Rivera & Tilcsik, 2016).

The survey experiment variables included the resumé screener's perceptions of the applicant's warmth, competence, masculinity, commitment, and fit in a large law firm (Rivera & Tilcsik, 2016). According to the Stereotype Content Model, upper-class people are considered more competent than lower-class people. Rivera and Tilcsik (2016) found that even though upper-class men had the highest mean ratings for competence (m = 5.70) and the lowest ratings for warmth (m = 4.78), their competence ratings were not significantly different from upper-class women or lower-class women and men. The mean competence ratings for upper-class women (m = 5.52, SD = .91) were the same as those for lower-class women (m = 5.52, SD = 1.18) and lower than lower-class men (m = 5.58, SD = 1.00). According to Rivera and Tilcsik (2016), this finding indicates that an employer's perceptions of the applicant's warmth and competence do not predicate their likelihood of interviewing a candidate.

The interviews revealed that resumé screeners considered upper-class men and women a better fit with a large law firm than lower-class men and women (Rivera & Tilcsik, 2016). However, upper-class women are viewed as an attrition risk when discussing job commitment (Rivera & Tilcsik, 2016). Resumé screeners questioned the long-term commitment of upper-class women (Rivera & Tilcsik, 2016). Resumé screeners assumed that women from higher social classes would eventually marry and leave the workforce (Rivera & Tilcsik, 2016). Participants expressed concern about the communication skills of lower-class applicants and their ability to interact with clients

and firm partners (Rivera & Tilcsik, 2016). Applicants perceived as lower-class were considered better for public sector employment or less prestigious law careers (Rivera & Tilcsik, 2016).

In sum, Rivera and Tilcsik's (2016) findings indicate that resumé screeners prefer upper-class men for entry-level job roles in large law firms. Resumé screeners question the long-term job commitment of upper-class women (Rivera & Tilcsik, 2016). Resumé screeners do not question the commitment of lower-class men and women but do not consider them a good fit (Rivera & Tilcsik, 2016). Rivera and Tilcsik (2016) note that gender and social class intersectionality influences hiring decisions, but not necessarily either in isolation. According to Rivera and Tilcsik (2016), the effects of social class discrimination may vary based on the employment context.

Thomas (2018) built on the findings of Rivera and Tilcsik (2016) and investigated social class bias in the context of middle-income jobs in the hotel industry. Thomas (2018) conducted a quantitative study using a resumé audit experiment and an online survey experiment to investigate middle-income jobs and social class signals of taste. Thomas (2018) also investigated the intersectionality of gender and social class.

Thomas's (2018) resumé audit study tested the effects of social class and gender on whether the applicant received a call back from an employer. Thomas (2018) sent 2,096 resumés to 1,048 actual job openings in either customer-facing or non-customer-facing jobs from May 2014 to September 2014. Thomas (2018) did not use job listings for retail cashiers. Thomas (2018) submitted 381 resumés for customer-facing job roles and 667 for non-customer-facing jobs. The job openings were in Boston, Chicago, Los Angeles, and New York (Thomas, 2018). Thomas (2018) submitted two resumés for each

job opening, one upper-class resumé and one lower-class resumé. The two resumés submitted to any employer were of the same gender (Thomas, 2018). Thomas (2018) submitted the resumés one day apart.

The resumé audit revealed that upper-class women received a higher percentage of callbacks for customer-facing roles than lower-class women (Thomas, 2018). Upper-class men received a lower percentage of callbacks for customer-facing jobs (Thomas, 2018). Neither upper-class men nor women received a higher percentage of callbacks for non-customer-facing jobs (Thomas, 2018).

Thomas's (2018) online survey experiment sample included 1,428 hiring managers from numerous industries in both public and private organizations. Thomas (2018) used a combination of eight hiring conditions in the hotel industry for the online experiment. The entry-level job roles in the online experiment were accounting clerk (low customer contact) and customer service representative (high customer contact); (Thomas, 2018). Thomas (2018) used well-known hotel chain names to signal whether the hotel is known as high or low status. Participants rated the applicants on the Stereotype Content Model (Fiske et al., 2002) dimensions of warmth and competence, and a third variable, polish (Thomas, 2018)

Thomas (2018) found that the resumé screeners considered applicants whose resumés signaled a higher social class as more competent and polished. Overall, resumé screeners preferred upper-class applicants (Thomas, 2018). Thomas (2018) used mediation analysis to explain how social class influences the likelihood of a resumé screener recommending an applicant for an interview mediated by warmth, competence, and polish. Thomas (2018) found that the perceived competence of an applicant mediated

82% of the total effect of upper-class social class signals on the likelihood of an interview.

Women who were perceived to be from a higher social class were evaluated more favorably for positions that required extensive customer interaction (Thomas, 2018). Thomas (2018) also notes that when resumé screeners favored applicants from lower-class backgrounds, the resumé screener had a similar social class of origin as the applicant. Thomas (2018) recommends further research using different conditions for the experiment.

Henderson (2018) analyzed quantitative data from 370 participants to test the effect of social class on the likelihood that a resumé screener would consider the applicant for an interview. Henderson (2018) also investigated if resumé screeners preferred applicants from a social class like their own. Henderson's (2018) study used a Training and Development Specialist position as the job role context for the study. Contradictory to prior studies, Henderson (2018) found that resumé screeners showed no bias toward applicants from a lower class. Lower-class applicants were considered more likable (Henderson, 2018). Henderson (2018) found that resumé screeners did not favor applicants from a social class similar to their own.

Controlling Biased Behavior

Stephens et al. (2021) note that social group bias, including social class, is a barrier to organizational diversity. Organizations rarely include social class in diversity and inclusion initiatives (Ingram & Oh, 2022). According to Williams et al. (2018), organizational diversity and inclusion initiatives primarily focus on race and gender and

should include social class. Most research about discriminatory behavior during applicant selection focuses on ethnicity and gender (Henderson, 2018).

Rivera (2011) found that resumé screeners typically have no training in screening resumés. Similarly, in Higgins's (2019) study about screening experienced managerial applicants, 72% of resumé screeners did not have formal training. A lack of training opens the resumé screening process to personal biases (Higgins, 2019).

According to Carter et al. (2020), anti-bias training should teach people how to recognize their biases and educate them about tactics to reduce biased behavior. FitzGerald et al. (2019) note that interventions designed to reduce biased behavior may be better than attempting to create an attitudinal change. In other words, the bias may still exist within the individual, but they consciously try to prevent it from interfering in the decision-making process.

While stereotype activation is deemed unavoidable in the workplace, people can control stereotype application with cognitive effort (Williams et al., 2020). Rivers et al. (2020) state that interventions focused on preventing stereotype application might effectively reduce bias. Williams et al. (2020) posit that self-regulation is sufficient to prevent discriminatory behavior in the real-world workplace. Williams et al. (2020) succinctly state that a simple "double-take" of one's gut instinct prevents discriminatory behavior in the workplace. Williams et al. (2020) state,

> Changing implicit associations is very difficult, because stereotypes are learned early and reinforced often, and any intervention to try to change stereotypes is likely to be swamped by a past life governed by them, and by a day-to-day experience that reinforces them. (p. 346)

Training Interventions in Literature

Devine et al. (2012) conducted an experiment to reduce racial bias in participants' day-to-day lives. People can learn to consciously correct exclusionary behavior that results from implicit bias (Devine et al., 2012). Creating self-awareness is the first step in minimizing exclusionary behavior associated with implicit bias (Devine et al., 2012). In alignment with Dual-Process Theory (Kahneman, 2011), once self-awareness exists, people consciously try to reduce biased behavior (Devine et al., 2012).

Devine et al. (2012) taught study participants five strategies for reducing implicit bias. The five strategies used were "stereotype replacement, counter-stereotypic imaging, individuation, perspective-taking, and increasing opportunities for contact" (Devine et al., 2012). Devine et al. (2012) taught study participants how to apply any of the five strategies depending on their situation. Devine et al. (2012) found that bias reduction training was effective for eight weeks following treatment. However, the Devine et al. (2012) study does not specify if one strategy is more effective than the others. Devine et al. (2012) note that a person's level of desire to reduce their biases may influence the training's effectiveness. Refer to Table 1 for a tabular depiction of the anti-bias tactics Devine et al. (2012) used in their study.

Table 1

Five Anti-Bias Training Tactics

Tactic	Description	Outcome
Stereotype Replacement	Individuals recognize that their behavior is a result of bias Analyze why the behavior occurred Determine how to eliminate the biased behavior Make a conscious effort to correct the biased behavior	Behavioral change
Counterstereotype Imaging	Imagine a positive example of a person from the stereotyped group	Modify a person's stored stereotypes about a group
Individuation	Focus on one person from the stereotyped group Find positive attributes about the person that contradict the negative stereotype	Modify a person's stored stereotypes about a group
Perspective-taking	Visualize oneself as a member of the stereotyped group	Empathetic association with the stereotyped group
Interaction	Increase interaction with people from the stereotyped group	Modify beliefs about the stereotyped group

Note. From "Long-term reduction in implicit race bias: A prejudice habit-breaking intervention," by P. G. Devine, P. S. Forscher, A. J. Austin, and T. W. Cox, 2012, *Journal of Experimental Social Psychology*, *48*(6), pp. 1267-1278 (https://doi.org/10.1016/j.jesp.2012.06.003). Copyright 2012 by Elsevier Inc.

Burns et al. (2017) conducted a study using three separate experiments to determine if counterstereotype training or self-regulation reduced stereotype application. The Burns et al. (2017) study focused on racial stereotypes. Burns et al. (2017) found that counterstereotype training did not reduce stereotype application in two of the three experiments. However, participants who were explicitly opposed to discriminatory

behavior but became aware that they possess implicit biases were motivated to self-regulate and avoid stereotype application (Burns et al., 2017).

FitzGerald et al. (2019) conducted a systematic review of 30 peer-reviewed studies about implicit bias reduction published between May 2005 and April 2015. FitzGerald et al. (2019) conducted the systematic review to determine the most effective anti-bias interventions. FitzGerald et al. (2019) selected prior studies with interventions administered in a timeframe and manner similar to common interventions, such as sexual harassment training. FitzGerald et al. (2019) did not include long-term longitudinal studies, studies that forced people to interact with others, or studies that entailed physically invasive neurological techniques. Another criterion for inclusion was that at least one post-test measure must have taken place within a month after the administration of the intervention (FitzGerald et al., 2019). FitzGerald et al. (2019) note that most of the studies used in the systematic review focused on racial bias.

FitzGerald et al.'s (2019) review points toward counterstereotype training as an effective anti-bias tactic. FitzGerald et al. (2019) note that interventions designed to reduce biased behavior may be better than attempting to create an attitudinal change. In other words, the bias may still exist within the individual, but they consciously try to prevent it from interfering in the decision-making process. FitzGerald et al. (2019) acknowledge that the implicit associations that underly biases are formed and reinforced throughout a person's life, making them difficult to alter.

Stephens et al. (2021) note that social group bias, including social class, is a barrier to organizational diversity. Stephens et al. (2021) argue that diversity initiatives must occur at the organizational and individual levels. Stephens et al. (2021) used prior

literature to develop recommendations for organizational and individual diversity initiatives.

The individual-level goals of diversity training include attitudinal and behavioral change (Stephens et al., 2021). Stephens et al. (2021) recommend counterstereotype, perspective-taking, and intergroup contact as three individual-level tactics for reducing bias. According to Stephens et al. (2021), counterstereotype training provides information that overwrites the group stereotype stored in a person's memory. However, Stephens et al. (2021) acknowledge that literature provides evidence of the difficulty in altering a person's implicit attitudes.

Stephens et al. (2021) argue that organizational diversity efforts should directly influence personal-level change. Stephens et al. (2021) provide examples of organizational events where a diverse group of employees interacts. These planned gatherings allow employees to implement counterstereotype, perspective-taking, and intergroup contact tactics (Stephens et al., 2021).

Hiring, promotion, and mentoring practices are three organizational-level areas where diversity initiatives may occur (Stephens et al., 2021). When organizations undertake diversity initiatives, employees must understand why the change is essential (Stephens et al., 2021). Employees must also desire to drive the change effort (Stephens et al., 2021).

Derous et al. (2021) conducted an experiment to reduce ethnic bias during resumé screening using two cross-cultural training methods focused on attitudinal and behavioral change. Derous et al. (2021) conducted the two training interventions once and measured the effectiveness over three months. Derous et al. (2021) found an initial reduction in

discriminatory behavior, but the effects diminished over the three-month post-test period (Derous et al., 2021).

In summary, there are contrasting findings regarding what type of anti-bias intervention is most effective. A common thread in anti-bias literature is that attitudinal change is challenging because evaluative associations form at a young age and continued reinforcement occurs throughout a person's life (FitzGerald et al., 2019; Williams et al., 2020). According to FitzGerald et al. (2019), anti-bias efforts may need to focus on modifying behavioral outcomes instead of attempting to alter attitudes. Williams et al. (2020) echo this notion with the stance that a simple "double-take" of one's intuitive decision-making will combat biased behaviors. Carter et al. (2020) recommend a combination of self-awareness and behavioral modification strategies to maximize the effectiveness of anti-bias training interventions.

Counterstereotype Imaging

Even though literature acknowledges the difficulty of disrupting biased decision-making by altering a person's attitudes toward a stereotyped group (FitzGerald et al., 2019; Stephens et al., 2021; Williams et al., 2020), counterstereotype imaging may be a noteworthy anti-bias tactic (FitzGerald et al., 2019). Counterstereotype imaging disrupts bias-decision making by reprogramming the brain's stored stereotypes about a group (Burns et al., 2017). However, any positive effects of counterstereotype training will likely diminish over time without reinforcement (FitzGerald et al., 2019).

Devine et al. (2012) used counterstereotype imaging combined with four other bias-reducing tactics and found long-term effectiveness at eight weeks post-administration. Devine et al. (2012) did not isolate the effects of individual tactics.

However, Burns et al. (2017) found that counterstereotype training was ineffective in controlling stereotype application. In contrast, FitzGerald et al.'s (2019) systematic review indicates that counterstereotype training may be an effective intervention. Stephens et al. (2021) also include counterstereotype training as an anti-bias tactic when implementing diversity initiatives for personal change.

Summary

Human capital drives an organization's ability to achieve a competitive advantage and is the most difficult organizational asset to duplicate (DeNisi et al., 2003). The managerial performance of an organization is the primary differentiator from competitors (Reza & Nugroho, 2020). Management training programs enable organizations to strategically develop an internal talent pool for future leadership roles (Chang & Busser, 2017). Before leadership development can occur, the right candidates must be selected (Gabriel et al., 2020). Applicant evaluation typically begins with resumé screening (Higgins, 2019; Rivera, 2011). A resumé screener's personal bias may lead to excluding qualified applicants (Higgins, 2019). Social class is a source of bias during resumé screening (Rivera, 2011, 2012; Thomas, 2018; Young & Reilly, 2016). The literature points toward self-awareness combined with behavioral skills training as an effective anti-bias training method (Bezrukova et al., 2016, Carter et al., 2020). More specifically, FitzGerald et al. (2019) note that counterstereotype imaging may be an effective anti-bias tactic in training interventions.

CHAPTER III – METHODOLOGY

During resumé screening, implicit bias can impact whether a resumé screener excludes an applicant from further consideration (Derous & Ryan, 2019). An applicant's social class is a source of biased decision-making during resumé screening (Rivera, 2011, 2012; Rivera & Tilcsik, 2016; Thomas, 2018). However, organizations often omit social class from diversity and inclusion initiatives (Ingram & Oh, 2022).

In this study, biased decision-making during resumé screening may result in hiring the wrong person for a rotational management training program that leads to a future management role. According to Ingram and Oh (2022), upper-class people are 68% more likely to work in management roles. Bad hires in management are costly in terms of lost productivity and turnover among subordinates (Allen, 2019). Turnover costs are approximately 150% of each departing employee's salary (Allen, 2019). In sum, hiring the wrong people to develop for management roles is a barrier to achieving competitive advantage through human capital (Coff & Kryscynski, 2011).

This study determined if a training intervention to teach resumé screeners how to control biased decision-making resulted in equal employability ratings for lower-middle-class and upper-middle-class applicants. The following section states the research question and objectives. The remainder of this chapter discusses the research methodology, the literature that informs the design of this study, the population and sample, the selection of participants, the online administration platform, instruments used, data confidentiality, the data collection process, and the data analysis plan.

Research Questions & Objectives

There was one research question and six research objectives for this study: Does teaching resumé screeners how to control biased decision-making during resumé screening result in equal employability ratings for upper-middle and lower-middle-class applicants?

RO1 – Describe the demographics of the study participants in terms of age, ethnicity, sex, education, the industry of employment, and self-reported socioeconomic strata of origin.

RO2 – Compare resumé screeners' pretest employability ratings between upper-middle-class and lower-middle-class applicants.

RO3 – Compare resumé screeners' post-test employability ratings between upper-middle-class and lower-middle-class applicants.

RO4 – Determine the relationship between the applicant's social class and the employability ratings mediated by perceived competence.

RO5 – Determine the relationship between the applicant's social class and the employability ratings mediated by perceived warmth.

RO6 – Determine the relationship between the applicant's social class and the employability ratings mediated by both perceived warmth and perceived competence.

Research Design

This study used a quantitative, causal, quasi-experimental, single-group pretest-post-test design. This quantitative study, informed by existing theories, answered a research question through the statistical analysis of data gathered using previously

validated survey instruments (Laerd Dissertation, 2012a). Quantitative research may extend prior research findings using different research designs, methods, measurements, or analyses (Laerd Dissertation, 2012a). A resumé study by Thomas (2018) and an anti-bias study by Devine et al. (2012) informed this study's design. However, this study's design, methods, measurements, and analysis differed from these studies. Refer to the literature basis section later in this chapter for the differences between this study and Thomas (2018) and Devine et al. (2012).

According to Trochim (2012), causal quantitative studies determine the effect of a treatment on an outcome. This causal quantitative study determines the effect of a training intervention on a resumé screener's employability ratings of upper-middle-class and lower-middle-class applicants. In this study, the dependent variable, employability ratings a resumé screener (study participant) assigns applicants, was measured once before and once after a training intervention.

Philosophical Basis

Positivism was the philosophical basis of this study. A positivist approach to research utilizes the scientific method, and the researcher measures cause-and-effect outcomes (Majeed, 2019).

According to the positivist paradigm, a quantitative research study describes an outcome using only measurable data (Trochim, 2012). Thus, the positivist view supports the analysis and measurement of quantifiable data (Dudovskiy, n.d.). Positivism requires limited interaction between the researcher and the study participants, minimizing researcher bias during analysis (Dudovskiy, n.d.). This study's administration took place online, which limited the researcher's interaction with participants.

Literature Basis of the Study's Design

Thomas' (2018) study on social class bias during resumé screening and existing pretest-post-test anti-bias literature (Devine et al., 2012) informed this study's research design and methodology. However, although Thomas's (2018) and Devine et al.'s (2012) studies informed this study's design and methodology, there are distinct differences. This section explains the differences between the purpose, design, and variables used in Thomas's (2018) study and this one. This section also discusses the anti-bias tactics Devine et al. (2012) taught participants and this study's anti-bias tactics.

Thomas's (2018) study aimed to determine how highbrow and lowbrow signals of taste influenced a resumé screener's likelihood of interviewing an applicant. This study's primary purpose was to determine if teaching resumé screeners how to control biased decision-making during resumé screening resulted in equal employability ratings for upper-middle-class and lower-middle-class applicants. This study employed a training intervention that taught resumé screeners how to control biased decision-making and a post-test to determine the effectiveness of the intervention. The strength of this study was that it investigated the existence of social class bias and used a training intervention designed to control social class bias during resumé screening specifically.

Thomas's (2018) study used two experiments, a resumé audit and an online survey experiment. Thomas's (2018) resumé audit experiment entailed submitting resumés to actual job postings and analyzing the results. Thomas (2018) gathered data for the online survey experiment via an online panel of participants. The online survey experiment entailed presenting participants with fictional resumés (Thomas, 2018). The fictional resumés included social class signals of taste categorized as "highbrow" and

"lowbrow" (Thomas, 2018). Participants answered one question about their interest in interviewing the fictional applicant (Thomas, 2018). Participants also rated the fictional applicants in warmth, competence, and polish (Thomas, 2018). The online survey experiment (Thomas, 2018) informed the design of this study. This study did not use a resumé audit experiment as Thomas (2018) did.

Thomas's (2018) independent variable was social class signals of taste, including highbrow and lowbrow social class signals used in resumé templates. Like Thomas's (2018) study, this study used social class signals in resumé templates to facilitate the resumé screener's (study participant) subconscious categorization of an applicant into a social class. The social class signals of taste Thomas (2018) used were food preferences and the type of music and sports clubs the applicant participated in during college. This study used music and sports (Thomas, 2018) as social class signals and also included the applicant's prior employment history (IResearchNet, n.d.; Kraus & Stephens, 2012) as a social class signal. Refer to the instrumentation section later in this chapter for more information about the social class signals the researcher used in this study's resumé templates.

Thomas's (2018) study used three mediator variables, warmth, polish, and competence. This study used only the warmth and competence dimensions included in Fiske et al.'s (2002) Stereotype Content Model as mediator variables. This study only included the warmth and competence dimensions because literature documents the Stereotype Content Model across almost two decades (Fiske, 2018).

Thomas (2018) used the moderator variables of hiring condition and gender. This study did not investigate the intersectionality of gender and social class. Thomas (2018)

used eight hiring conditions, whereas this study used one hiring condition, a rotational management training program. Therefore, this study did not use moderator variables.

The Devine et al. (2012) study informed this study's anti-bias tactics presented during the training intervention. Devine et al.'s (2012) longitudinal study taught participants five tactics to control implicit racial bias. The five anti-bias tactics used were "stereotype replacement, counter-stereotypic imaging, individuation, perspective-taking, and increasing opportunities for contact" (Devine et al., 2012, p. 1270). Devine et al. (2012) instructed participants to apply any of the five tactics in their daily lives (Devine et al., 2012). Devine et al. (2012) found evidence of reduced bias after eight weeks. However, Devine et al. (2012) did not isolate the effects of a particular anti-bias tactic. This study taught resumé screeners how to recognize social class bias, the situations (type of job role) that activate the bias, and how to control biased decision-making (Kahneman, 2011). In addition, this study taught counterstereotype imaging, which was used in the Devine et al. (2012) study because FitzGerald et al. (2019) stated that it might be most effective.

The ADDIE instructional design model, the ADKAR®[1] personal change model, and microlearning concepts (Zhang & West, 2020) informed the instructional design of the training intervention. In addition, the researcher used literature sources from Chapters 1 and 2 of this manuscript as the content for the training intervention.

[1] ADKAR® is a registered and unregistered trademark of Prosci®, Inc., used with permission. Refer to Appendix A.

Variables

This study determined if a training intervention to teach resumé screeners how to control biased behavior during resumé screening resulted in equal employability ratings for lower-middle-class applicants and upper-middle-class applicants. This study's variables included one independent variable, one dependent variable, and two mediator variables. As discussed in the previous section, the variables used in Thomas's (2018) study informed what variables the researcher used in this study.

The applicant's social class was the independent variable, a two-level nominal categorical variable (upper-middle-class or lower-middle-class). The researcher used upper-middle-class and lower-middle-class as the two social class categories based on Thomas's (2018) references to these categories. The researcher influenced how resumé screeners (the study's participants) perceived an applicant's social class through the type of extracurricular activities (Thomas, 2018) and previous job titles (IResearchNet, n.d.; Kraus & Stephens, 2012) on the resumé templates used in this study. Refer to the study materials discussed in the instrumentation section later in this chapter for information about this study's resumé templates.

The dependent variable was the resumé screener's perceived employability of the applicant. The dependent variable was a continuous interval variable because it is the average of the Employment Assessment scale items (Cole et al., 2009). The researcher measured employability with the four-item Employment Assessment scale (Cole et al., 2009).

According to Hayes (2013), mediator variables strengthen a quantitative study by explaining how an independent variable influences a dependent variable (Montoya &

Hayes, 2017). The independent variable influences the mediator variables, which subsequently influence the dependent variable (Montoya & Hayes, 2017). As noted in the previous section, the researcher, informed by Thomas's (2018) study, used mediator variables in this study. There were two mediator variables, the resumé screener's perceptions of the applicant's warmth and competence (Fiske, 2018). The six-item warmth and competence scales (Fiske, 2018) measured the resumé screener's perceived warmth and competence of the applicant. The mediator variables were continuous interval variables and were the average of the scale items for each participant. Refer to the data analysis section of this chapter for more information about mediator variables.

Population and Sample

The research question for this study was, "does teaching resumé screeners how to control biased decision-making during resumé screening result in equal employability ratings for upper-middle and lower-middle-class applicants?". The study's research question informed the targeted theoretical population (Trochim, 2012). Trochim (2012) defines a theoretical population as the group of people to which the study should generalize. This study's theoretical population consisted of people in the United States of America who "screen resumés/make hiring decisions" for first-level managerial positions and higher.

The study population is the population from which the researcher can access and recruit the sample (Arias-Gómez et al., 2016; Hu, 2014). When it is not practical to sample the entire theoretical population, the researcher delimits a study population, which Trochim (2012) calls the accessible population. The study population consisted of resumé

screeners registered as workers on Amazon Mechanical Turk. The researcher recruited the sample from the online Amazon Mechanical Turk platform.

The sampling frame is a list of people from which the researcher recruits participants for the study (Trochim, 2012). Sampling frames may be an existing list or a researcher's procedural method to create a list (Harvard University Program on Survey Research, n.d.). The researcher used a pre-screening questionnaire administered on Amazon Mechanical Turk to create the sampling frame in this study. The purpose of the pre-screening questionnaire was to create a list of Amazon Mechanical Turk workers who self-reported that they screen resumés or make hiring decisions for first-level manager positions or higher. Anyone registered as a worker on Amazon Mechanical Turk could have completed the pre-screening questionnaire. The researcher administered the pre-screening questionnaire before and separately from the study (Wessling et al., 2017). The list of people registered as Amazon Mechanical Turk workers who self-reported screening resumés for first-level manager positions and higher comprised the sampling frame. Refer to the Selection of Participants, Data Confidentiality, and Data Collection sections in this chapter for details about the pre-screening questionnaire.

The study sample comprises the people the researcher selects for participation (Trochim, 2012). Trochim (2012) notes that people in the sample may not participate in the study or may fail to complete the study. In this study, the study sample was the sampling frame list. All members of the sampling frame had access to the study on the Amazon Mechanical Turk platform. Table 2 provides details about the target population, study population, sampling frame, and sample.

The theoretical population size was unknown. However, the Bureau of Labor Statistics (2020) website states that as of 2018, there were approximately 625,700 people employed in the United States as Human Resource Specialists who screen resumés as part of their job duties. The researcher used the Bureau of Labor Statistics (2020) figure to estimate the population size. The Raosoft platform calculated a sample size of 384 with a 95% confidence level, 5% margin of error, and 50% response distribution using an estimated population size of 625,700.

Table 2

Population and Sample

Term	Description	Delimited
Target Population ↓	Population to which results should generalize (Trochim, 2012).	People in the United States who screen resumés/make hiring decisions for first-level managerial positions and higher.
Study Population ↓	The population the researcher can access and recruit from (Arias-Gómez et al., 2016; Hu, 2014).	Resumé screeners in the United States registered as workers on Amazon Mechanical Turk.
Sampling Frame ↓	A list of people from which the researcher recruits participants for the study (Trochim, 2012).	Amazon Mechanical Turk workers who voluntarily opted-in and self-reported in a pre-screening questionnaire that they screen resumés for first-level managers or higher.
Sample	The people the researcher selects for participation in the study (Trochim, 2012).	MTurk workers in the sampling frame opted-in to participate in the study.

Sampling Method

The study population, sampling frame, and sample delimitations informed the sampling method used in this study. The researcher used non-probability self-selection purposive homogenous sampling. The sampling method also employed convenience

sampling due to sample accessibility (Laerd Dissertation, 2012b). Refer to Table 3 for a tabular depiction of the sampling method rationale.

Table 3

Sampling Method

Sampling stage	Delimited scope	Characteristics of potential participants	Sampling method component
Study Population ↓	Resumé screeners in the United States registered as workers on Amazon Mechanical Turk.	Amazon Mechanical Turk Resumé screeners United States	Non-probability convenience Chandler and Shapiro (2016) Purposive (Laerd Dissertation, 2012c)
Sampling Frame ↓	Amazon Mechanical Turk workers who voluntarily opted-in and self-reported in a pre-screening questionnaire that they screen resumés for first-level managers or higher.	Screen resumés for first-level managers or higher Voluntarily opted-in	Purposive Homogenous (Laerd Dissertation, 2012c) Self-selection
Sample	MTurk workers in the sampling frame who opted-in to participate in the study.	Voluntarily opted-in	Purposive homogenous self-selection

The researcher does not randomly select study participants from the entire theoretical population in non-probability sampling (Trochim, 2012). Non-probability sampling is appropriate when it is not practical to sample the entire theoretical population (Laerd Dissertation, 2012b). Convenience sampling means recruiting a sample that is easily accessible (Laerd Dissertation, 2012b). When using convenience sampling, the researcher subjectively decides where recruitment occurs (Laerd Dissertation, 2012b).

Collecting data directly from people employed in organizations may require organizational approval and may be challenging to obtain (Bills et al., 2017). The

researcher used Amazon Mechanical Turk as the recruitment platform to easily access the study's sample (Laerd Dissertation, 2012b). Prior social and behavioral science researchers have used MTurk (Woo et al., 2015). According to Chandler and Shapiro (2016), the researcher's use of Amazon Mechanical Turk to recruit participants constitutes a non-probability convenience sampling of the MTurk worker population. Refer to the Selection of Participants section for details about Amazon Mechanical Turk.

Purposive sampling is a non-probability method targeting people who meet predefined attributes (Trochim, 2012). Purposive homogenous sampling is appropriate when the research question addresses a specific group and the researcher recruits participants who share a common trait, such as occupation (Laerd Dissertation, 2012c). In this study, the predefined attributes were resumé screeners in the United States who screen resumés or make hiring decisions for first-level managerial positions or higher.

Self-selection is a non-probability sampling method that means people voluntarily opt-in to participate (Laerd Dissertation, 2012b). As discussed in the previous section, the researcher used a pre-screening questionnaire to create the sampling frame. Participation in both the pre-screening questionnaire and the study was voluntary.

Selection of Participants

The researcher recruited study participants using Amazon Mechanical Turk (MTurk). Collecting data directly from people employed in organizations may require organizational approval and may be challenging to obtain (Bills et al., 2017). According to Woo et al. (2015), Amazon Mechanical Turk provides a diverse sample across industries and geographic locations.

Prior social and behavioral science researchers have used MTurk (Woo et al., 2015). Thomas's (2016) dissertation used MTurk to study social class and resumé screening in the United States. Rivera and Tilcsik (2016) used MTurk in an unpublished resumé screening experiment.

MTurk Human Intelligence Tasks (HITs)

The tasks on MTurk are called Human Intelligence Tasks or HITs (Cheung et al., 2017). HITs may include a wide range of short tasks, including academic studies (Young & Young, 2019). Requesters determine their compensation rates for HITs (Amazon Mechanical Turk, n.d.). MTurk charges the requester a percentage of the worker's compensation (Amazon Mechanical Turk, n.d.).

MTurk Workers

There are requesters and workers on MTurk (Young & Young, 2019). Requesters are those who post tasks on the platform, including academic researchers (Young & Young, 2019). Workers in the United States must submit tax forms and a government-issued ID (Amazon Mechanical Turk, 2020). MTurk assigns workers several performance metrics, including the total and cumulative percentage of completed HITs (Amazon Mechanical Turk, 2019).

Worker Qualifications

Worker qualifications are filters that requesters may use to determine what MTurk workers will have access to a HIT (Amazon Mechanical Turk, 2019; Cheung et al., 2017). Worker qualifications include (a) system-assigned qualifications, (b) premium qualifications, (c) a Master worker qualification, and (d) custom qualifications (Amazon

Mechanical Turk, 2019). Requesters select the worker qualifications they will use as filters when setting up the HIT in MTurk (Amazon Mechanical Turk, 2019).

System-assigned qualifications. Worker qualifications automatically assigned by MTurk include the total number and cumulative percentage of HITs a worker has completed without rejection of the work, the total number of HITs completed, and geographic location (Amazon Mechanical Turk, 2019). When workers have completed less than 100 HITs, their approval rating is 100% by default (Amazon Mechanical Turk, 2017). The geographic location is assigned based on the country MTurk workers use to register (Amazon Mechanical Turk, 2017).

Premium qualifications. Requesters may also select "premium qualifications" (Amazon Mechanical Turk, 2019). The premium qualifications include demographic, professional, and consumer use attributes (Amazon Mechanical Turk, n.d.). Each time a requester administers a HIT, the premium qualification costs an additional flat rate (Amazon Mechanical Turk, n.d.). The premium MTurk worker qualifications offer employment attributes but do not include resumé screeners as a selection option (Amazon Mechanical Turk, n.d.). The researcher did not use premium qualifications.

Master's Qualification. Requesters may also select workers classified as Master workers (Amazon Mechanical Turk, 2019). MTurk assigns the Master's qualification to workers with a history of high-quality submissions (Amazon Mechanical Turk, 2019). MTurk assigns the Master's qualification based on a proprietary algorithm that is not disclosed publicly (Amazon Mechanical Turk, 2019). The Master’s qualification costs an additional 5% of the compensation the requester sets for a HIT (Amazon Mechanical Turk, n.d.). This study did not use the Master's qualification.

Custom Qualifications. Requesters may also create custom qualifications (Wessling et al., 2017). Custom qualifications may be assigned based on worker responses to a short pre-screening questionnaire (Wessling et al., 2017). When a researcher uses custom qualifications, the study is made available only to workers with the custom qualification assigned by the researcher (Wessling et al., 2017). As discussed in the next section, this study used a separate pre-screening questionnaire, and the researcher assigned a custom qualification based on responses (Wessling et al., 2017). MTurk workers to whom the researcher assigned a custom qualification filter were the sampling frame. Everyone in the sampling frame had access to the study.

Pre-screening Questionnaire

When studies offer an incentive for participation, MTurk workers may not provide truthful responses to screening questions in the study, or they may share the screening questions in online forums (Wessling et al., 2017). Workers may also clear the cookies from their browser and attempt to retake the study (Wessling et al., 2017). Wessling et al. (2017) recommend using a separate pre-screening questionnaire to create a list of MTurk workers who qualify for participation in a study based on self-reported information. Pre-screening questionnaires consist of a few self-report items designed to identify people who represent the target population (Wessling et al., 2017). In this study, the pre-screening questionnaire identified people who screen resumés or make hiring decisions for first-level management positions or higher.

The researcher used MTurk to recruit participants for the pre-screening questionnaire (Wessling et al., 2017). The researcher administered a pre-screening questionnaire on Qualtrics before and separately from the study (Wessling et al., 2017).

The researcher administered the pre-screening questionnaire to MTurk workers registered in the United States who had fewer than 10,000 approved HITS (Young & Young, 2019) but over 100 approved HITS with at least a 95% approval rating (Ahler et al., 2020).

Pre-screening questionnaire items. The pre-screening questions included a multiple-choice list of current job duties, including “resumé screening/make hiring decisions.” Participants who selected "resumé screening/make hiring decisions" answered a second screening question about the hierarchal levels they screen resumés for, including managers and directors. The pre-screening questionnaire also included decoy questions about budget preparation (Wessling et al., 2017). The researcher included a decoy budget preparation question to prevent MTurk workers from deciphering the combination of answers the researcher required (Wessling et al., 2017). If a participant selected that they prepared budgets as part of their current job duties, Qualtrics administered a separate question asking participants to indicate the number of departments in their organization for which they prepare budgets. Refer to Appendix B for the pre-screening questionnaire items.

Pre-screening questionnaire compensation. This study used a pre-screening questionnaire. Wessling et al. (2017) recommend paying an incentive of $.10 to MTurk workers participating in the pre-screening questionnaire. Following Wessling et al.’s (2017) recommendation, the researcher paid an incentive of $.10 for each unique pre-screener submission.

Geographic location oversight. People outside the United States may attempt to participate in the pre-screening questionnaire using a Virtual Private Server (VPS); (Kennedy et al., 2020; Winter et al., 2019). The researcher used IP Hub to mitigate this

risk (Winter et al., 2019). IP Hub is compatible with Qualtrics (Winter et al., 2019). The researcher used the IP Hub setup protocol that Winter et al. (2019) authored for the pre-screening questionnaire. As part of the Winter et al. (2019) IP Hub protocol, participants received instructions to disable any VPN or VPS on a page immediately before the informed consent statement in Qualtrics.

Study Setup

General study setup. MTurk offers a template requesters may use for surveys hosted on Qualtrics or other external platforms (Amazon Mechanical Turk, 2017). The researcher fills in the number of unique MTurk workers needed for the study (Amazon Mechanical Turk, 2017). The researcher also enters how much compensation each participant receives for an approved submission (Amazon Mechanical Turk, 2017). Participants in this study receive the equivalent of the federal minimum wage in the United States ($7.25/hr.); (Cobanoglu et al., 2021; Young & Young, 2019). The researcher determined the compensation rate using the following formula:

1. Minimum wage / 60 = Price per minute
2. Price per minute x Average number of minutes to complete the study* = participant compensation

The average number of minutes to complete the study was determined using a pilot study. A pilot test determined that the average completion time for the study was approximately thirty-five (35) minutes. Therefore, study participants received four dollars and twenty-five cents ($4.25) USD for an approved submission.

MTurk offers the option to manually review and approve a participant's submission (Amazon Mechanical Turk, 2017). When researchers use the manual review

option, they select the number of days they want to leave submissions available for manual review (Amazon Mechanical Turk, 2017). If the researcher does not approve or reject the submission within the set time frame, MTurk will automatically approve the submission and pay the participant (Amazon Mechanical Turk, 2017). Amazon Mechanical Turk (2017) recommends a three-day review window, which the researcher used.

Functionality testing. MTurk provides a beta test (sandbox) environment where requesters can test the HIT's functionality before going live (Amazon Mechanical Turk, 2019). The researcher tested the functionality of the pre-screening questionnaire and the study using this option (Cobanoglu et al., 2021). The researcher performed the functionality test because it was part of setting up the study's administration.

Administration

Qualtrics hosted the study, which was accessible via a link on MTurk (Amazon Mechanical Turk, 2014). The study was only available to MTurk workers who qualified for participation based on self-reported responses in the pre-screening questionnaire (Wessling et al., 2017). Refer to the Data Collection section in this chapter for additional details about the study's administration.

Instrumentation

The scales used in this study included the Cole et al. (2009) Employment Assessment scale, perceived warmth and competence scales (Fiske, 2018), and a demographic questionnaire adapted from Thomas' (2018) study. The researcher's additional materials for the study included a job description for a rotational management training program, fictional resumés adapted from a prior resumé study (Thomas, 2018),

and four short training videos totaling under seven minutes of viewing time. The literature referenced in this manuscript provided the content for the video content. The researcher administered all instruments and treatment materials using Qualtrics via a link from Amazon Mechanical Turk.

Constructs

The construct measured in this study was employability. According to (Shumilova & Cai, 2015), employability is "a graduate's ability to gain and retain satisfying/decent work, conditioned by employers' beliefs and interaction of individual (e.g., skills, socio-cultural background), institutional (educational background) and contextual factors (e.g., labor market situation)" (p. 26). The fictional applicants in this study were recent college graduates applying for a rotational management training program, which represented Shumilova and Cai's (2015) contextual labor market factor. The researcher delimited the socio-cultural background (Shumilova & Cai, 2015) of applicants to upper-middle-class and lower-middle-class based on the research design of Thomas's (2018) study. This study's participants acted in a resumé screener (employer) role and rated their perceptions of an applicant's employability.

The researcher drew on human capital theory (Becker, 1962), signaling theory (Spence, 1973), the Stereotype Content Model (Fiske et al., 2002), and Shumilova and Cai's (2015) definition and conceptualized employability. In this study, the researcher conceptualized employability as a resumé screener's perceived value of human capital influenced by the resumé screener's attitudinal evaluations (warmth and competence) of the applicant (Fiske, 2018; Fiske et al., 2002) in the context of a specific job role.

The researcher operationalized employability using the four-item Cole et al. (2009) Employment Assessment Scale. The researcher operationalized the warmth and competence dimensions of the Stereotype Content Model (Fiske et al., 2002) using the Fiske (2018) scales for each. The following section discusses the scales used in this study.

Study Scales

The researcher used previously validated scales for employability (Cole et al., 2009), warmth, and competence (Fiske, 2018). The researcher adapted the demographic questionnaire from the one used in Thomas's (2018) study. This section discusses each scale and the data transformation protocols.

Employability Assessment scale. The researcher measured the construct of employability using the Cole et al. (2009) Employment Assessment scale. The researcher used the Cole et al. (2009) scale verbatim. The Employment Assessment scale is a four-item scale validated to load on one factor, employability (Cole et al., 2009). The Employment Assessment items used a six-point Likert scale, and the composite rating for each participant was the mean of the responses for the four scale items (Cole et al., 2009). Refer to Appendix C for the full Employment Assessment scale. Permission to use the Employment Assessment scale (Cole et a., 2009) is in Appendix D.

Warmth and competence scales. The warmth and competence scales (Fiske, 2018) measured the resumé screener's perceived warmth and competence of the applicants (Thomas, 2018). The warmth and competence scales consisted of six items each (Fiske, 2018). Each scale item used a five-point Likert scale, and the mean of the scale items for each participant was the composite rating for each (Fiske, 2018; Thomas, 2018). Refer to

Appendix E for the warmth and competence scales. Permission to use the Fiske (2018) warmth and competence scales is in Appendix F.

Demographic questionnaire. The demographic questionnaire used descriptive statistics to describe the study's participants (Kaliyadan & Kulkarni, 2019). The researcher adapted the demographic questionnaire from the demographic variables used in Thomas's (2018) study. Refer to Appendix G for the complete demographic questionnaire. Thomas's (2018) study is published under a Creative Commons Attribution License (CC BY). The link to the Creative Commons Attribution License is https://creativecommons.org/licenses/by/4.0/.

Study Materials

Job description. The researcher wrote a rotational management training program job description using information compiled from various company websites. Refer to Appendix H for the job description.

Resumé templates. Given the pretest-post-test design of this study, the researcher developed four resumés (two upper-middle-class and two lower-middle-class). The resumé templates used social class signals to trigger the resumé screener's (study participants) unconscious social class categorization of applicants (Rivera & Tilcsik, 2016). Thomas's (2018) study and literature about job titles that signal social class (Csikszentmihalyi & Schneider, 2001; Cuddy et al., 2011; He et al., 2019; Kessler et al., 2019) informed the social class signals used in the resumés. It is important to note that during resumé screening, the resumé screener's perceived social class of an applicant is not necessarily the applicant's actual social class (Rivera & Tilcsik, 2016).

The researcher used undergraduate music and sports clubs (Thomas, 2018) as social class signals. This study used classical and opera music to signal upper-middle-class applicants in addition to golf and sailing (Thomas, 2018). The researcher used bluegrass and country and western music combined with bowling and boxing to signal lower-middle-class applicants (Thomas, 2018).

This study also used the work history of the fictional applicants to signal social class (Csikszentmihalyi & Schneider, 2001). Students from higher social classes are more likely to work only during the summer in higher-status work roles, such as internships, that create a career foundation (Csikszentmihalyi & Schneider, 2001). According to Kessler et al. (2019), employers do not value low-status service jobs and prefer applicants with internship experience. Kessler et al. (2019) note that this preference may negatively impact employment opportunities for recent graduates who cannot afford to take an unpaid summer internship. Informed by existing literature (Csikszentmihalyi & Schneider, 2001; Cuddy et al., 2011; He et al., 2019; Kessler et al., 2019), the work history social class signal for lower-middle-class applicants was two years of continual work experience as a server or front desk clerk. The social class signal for upper-middle-class applicants was a work history that included an internship the Spring semester before graduation (Csikszentmihalyi & Schneider, 2001). Table 4 includes the social class signals used in the resumés created for this study.

Table 4

Social Class Signals Used in the Fictional Resumés

Signal	Upper-middle-class	Lower-middle-class
Music	Classical and Opera	Bluegrass and Country & Western
Sports	Golf and Sailing	Bowling and Boxing
Work History	Internship and Social Media Specialist	Server and Front Desk Clerk

The researcher took steps to avoid issues associated with confounding social class with other sources of bias on the resumés (Adamovic, 2020). The researcher did not consider gender or race in this study. Therefore, all resumés had common names representing a White man to avoid confounding social class with race or gender (Adamovic, 2020). The researcher used a list of the most common surnames in the 2010 Unites States census (America Counts Staff, 2017) and the top four first names for boys born in the United States in 2000 (Social Security Administration, n.d.).

Other applicant variables were fundamentally equal to avoid confounding effects (Adamovic, 2020). Degrees earned were in the same field of study, GPAs were fundamentally equal, and the colleges attended were public universities (Thomas, 2018). Refer to Appendix I for the resumé templates used in this study.

Training Intervention

According to Stephens et al. (2021), effective diversity initiatives simultaneously occur at the organizational and individual levels. This study focused on behavioral change at the individual level (FitzGerald et al., 2019). The ADDIE instructional design model guided the training intervention's design, development, implementation, and evaluation. The researcher composed the learning objectives using Bloom’s taxonomy (Preville, n.d.) and the ABCD (audience, behavior, condition, and degree) learning

objectives model (Mager, 1962). The researcher composed the learning objectives for each video based on the literature in Chapter 2 of this manuscript. The ADKAR® personal change model (Prosci®[2], n.d.) informed the content of the training videos. The researcher used literature cited in Chapters 1 and 2 of this manuscript as the content of the training videos. Microlearning concepts (Zhang & West, 2020) informed the length and delivery method of the training videos. Refer to table 5 for a tabular depiction of the ADDIE model's use in this study.

[2] Prosci® is a registered and unregistered trademark of Prosci®, Inc., used with permission. Refer to Appendix A

Table 5

ADDIE Model

Stage	Description
Analyze	Analyze audience • Informed by target population and demographics of prior literature (Thomas, 2018)
Design	Compose learning objectives The study's research question informs the intervention's learning objective. Literature and the ADKAR® model of personal change inform the learning outcomes for each video. • Bloom's taxonomy • ABCD Model of learning objectives Compose content of training Informed by the learning objective and learning outcomes for each video. Also informed by ADKAR ® and microlearning concepts (Zhang & West, 2020). • Video topics • Video scripts Compose tests for learning transfer • Multiple-choice questions • Written summary about key points of the training videos • Post-test performance
Develop	Develop learning materials Informed by literature and feedback from subject matter experts. • Training videos • Voiceover narration Validation & feedback of materials Subject matter experts provide feedback about the clarity of content delivery.
Implement	Training intervention delivered during study administration.
Evaluate learning	Post-test data analysis for the study.

The audience for the training videos (the study's participants) was people in the United States who screen resumés or make hiring decisions for first-level managerial

positions or higher. The researcher administered the study on the Qualtrics platform via a link on Amazon Mechanical Turk. The fact that study participants used Amazon Mechanical Turk indicated they could complete an online study without issue.

Learning objective methodology. The researcher composed the learning objective for the training intervention and the individual learning outcomes using the 2001 version of the cognitive domain of Bloom's taxonomy (Preville, n.d.). Bloom's taxonomy is a six-level hierarchal, linear framework that categorizes learning objectives based on building blocks of cognition (Preville, n.d.). The first three levels of Bloom's taxonomy used in this study are learners' ability to remember, understand, and apply information (Preville, n.d.).

The learning objectives, composed using the cognitive domain of Bloom's taxonomy, articulated expectations of the learner using action verbs (Preville, n.d.). The 2001 version of Bloom's taxonomy provides specific action verbs for each level (Preville, n.d.). Therefore, the researcher used the appropriate action verbs for this study's learning objective and outcomes.

The researcher refined the learning objectives by overlaying the ABCD (audience, behavior, condition, and degree) learning objectives model (Mager, 1962). The study's participants were the audience for all learning objectives and lesson outcomes. The behavior defines the output expected of the learner (Mager, 1962), which is the action verb of Bloom's taxonomy. The condition of each learning objective denotes when the learner will perform the desired behavior (Mager, 1962). Finally, the degree of the learning objective defines the expected level of performance (Mager, 1962). Refer to Table 6 for the learning outcomes associated with the training intervention.

Learning objectives. This study determined if teaching resumé screeners how to control biased-decision making during resumé screening resulted in equal employability ratings for upper-middle-class and lower-middle-class job applicants. By the end of the training intervention, participants would demonstrate the ability to assign equal employability ratings to upper-middle and lower-middle-class applicants. The post-test differences in participants' employability ratings of upper-middle and lower-middle-class applicants determined the effectiveness of the training. The study's research question informed the training intervention's learning objective. The literature review in Chapter 2 of this manuscript informed the learning outcomes for each video lesson used in the training intervention. The following was the learning objective for the training intervention:

> After watching the training videos, participants will demonstrate the ability to assign equal employability ratings to upper-middle and lower-middle-class applicants.

There were four videos in the training intervention. Table 6 depicts the learning outcomes for each training video.

Table 6

Learning Outcomes

Condition	Behavior (the learner will)	Degree	Bloom's Taxonomy level
After watching Video 1	1. Identify that human capital leads to a competitive advantage. 2. Recall that organizations use management training programs to develop future leaders.	Correctly answer multiple-choice questions	Level 1 Remember
After watching Video 2	1. Identify that biased decision-making during resumé screening is a barrier to competitive advantage. 2. Recognize that perceived social class is a source of biased decision-making during resumé screening.	Correctly answer multiple-choice questions	Level 1 Remember
After watching Video 3	1. Identify that the type of sports and music club an applicant participated in during college and prior work roles are social class signals.	Correctly answer multiple-choice questions	Level 1 Remember
After watching Video 4	1. Identify that awareness of the bias, consciously correcting it, and positively thinking of the stereotyped group are anti-bias strategies.	Correctly answer multiple-choice questions	Level 1 Remember
After watching all the training videos	1. Demonstrate an understanding of the importance of reducing social class bias during resumé screening and how to do so. 2. Participants will discuss the importance of reducing social class bias during resumé screening and tactics to control biased decision-making in two to three sentences.	Write a 2-3 sentence summary	Level 2 Understand

Video content. The intervention's learning objective and the learning outcomes discussed above informed the content of each training video. Literature sources in Chapters 1 and 2 of this manuscript provided the content of the training videos. The ADKAR® (Prosci®, n.d.) model of personal change also informed the content of the training videos. The five components of the ADKAR® model are awareness, desire, knowledge, ability, and reinforcement®[3] (Prosci®, n.d.). Due to the study's design and online administration, the ADKAR® model was not fully implemented but informed the training content. This section discusses the content in each training video as it relates to the ADKAR® personal change model. Refer to Table 7 for details about the main topics in each video. Refer to Appendix J for the complete scripts of each video.

The first step in driving personal change is creating awareness about the problem and why it is essential to correct it (Prosci®, n.d.). Therefore, the first and second training videos introduced the problem, educating the learner about the importance of resolving the problem of biased behavior during resumé screening (Zhang & West, 2020). The problem introduced in the videos was that social class bias might impede an organization's ability to obtain a competitive advantage through human capital (Coff & Kryscynski, 2011). The researcher framed the problem in the hiring context of a rotational management training program. Refer to Table 7 and the training video script in Appendix J.

The second step for change at the individual level is a desire to support the change (Prosci®, n.d.). According to Zhang and West (2020), when the learner understands the

[3] Awareness Desire Knowledge Ability Reinforcement® is a registered and unregistered trademark of Prosci®, Inc., used with permission. Refer to Appendix A

importance of the problem, they become motivated to acquire the knowledge needed to correct it. Therefore, according to Zhang and West's (2020) rationale, the first two videos' information should have created the desire to support the change (Prosci®, n.d.). Refer to Table 7 and the training video script in Appendix J.

The third step for personal change is that the learner must know how to change and apply the skill in the future (Prosci®, n.d.). To utilize System 2 thinking and consciously correct biased decision-making, a person must be aware of their bias and recognize how it occurs (Kahneman, 2011). The information delivered throughout the four videos taught resumé screeners to recognize how social class bias occurs and ways to control biased decision-making during resumé screening. Refer to Table 7 and the training video script in Appendix J.

The fourth step in the personal change process is that learners should demonstrate the ability to apply the knowledge acquired during training (Prosci®, n.d.). In this study, the post-test measured the learner's ability to apply the knowledge learned during training. In an organizational setting, the learner's ability to apply the knowledge is observable (Prosci®, n.d.) In addition, organizational resources, such as coaching, can support the learner's application of the knowledge (Prosci®, n.d.). This study did not take place in an organizational setting.

The study's design prohibited the researcher from using the reinforcement stage of the ADKAR® change model. Instead, the researcher recommended that participants continue to practice the self-regulatory skills taught in the training intervention. The researcher did not collect additional data after the administration of this study.

Table 7

Video Content Topics

Video	Video content topics
Video 1	• Human capital may lead to a competitive advantage (DeNisi et al., 2003). • Organizations use management training programs to develop future leaders (Chang & Busser, 2017). • Social class is a source of biased decision-making during resumé screening (Rivera and Tilcsik, 2016).
Video 2	• Hiring the wrong person impedes competitive advantage (Coff & Kryscynski, 2011). • Social class bias forms during childhood (Shutts et al., 2016; Sigelman, 2012; Woods et al., 2005). • The brain uses signals (Spence, 1973) to form a perceived social class (Thomas, 2018) and applies stereotypes to an individual member of a stereotyped group (Kanahara, 2006).
Video 3	• Sports, music (Thomas, 2018), and prior job roles are social class signals.

Video 4	• Explains two tactics participants can use to reduce biased behaviors (Carter et al., 2020).
	  ○ Self-regulation through awareness (Devine et al., 2012; Kahneman, 2011).
	  ○ Counter-stereotype imaging (Devine et al., 2012; FitzGerald et al., 2019).
	• Encourages the participant to practice the strategies in their daily lives.

Learning transfer. Following the delivery of each training video, participants demonstrated the ability to remember information associated with the learning outcomes for each video lesson. The researcher evaluated learning transfer using multiple-choice questions after each video. After viewing the training videos, the learners would demonstrate a cumulative understanding of the four lessons depicted in Table 7. The post-test portion of the study demonstrated the learner's ability to apply the information taught during the training intervention.

Following the delivery of each training video, participants answered one or two multiple-choice questions about the video's subject matter (Zhang & West, 2020). The questions demonstrated learning transfer and provided immediate feedback relative to each learning outcome associated with the video module (Zhang & West, 2020). The questions also gauged whether participants paid attention to the video content (Wessling et al., 2017).

Attention check questions that require participants to answer questions about subject matter related to the study are called manipulation checks (Abbey & Meloy, 2017). According to Abbey and Meloy (2017), researchers commonly use manipulation checks in experimental studies. Participants should exhibit the ability to answer each question correctly. Wessling et al. (2017) recommend allowing participants two opportunities to answer attention check questions correctly. Based on Wessling et al.'s (2017) recommendation, if a participant provided a second incorrect response on any single question, they were disqualified from further participation. The researcher disclosed the presence of attention checks and disqualification criteria in the informed consent statement (Iowa State University, 2020).

The Qualtrics platform automatically notified participants if an answer was incorrect. Participants who provided an incorrect response could watch the video again. If a participant failed to answer the question correctly the second time, Qualtrics notified the participant that they were disqualified from further participation in the study (Wessling et al., 2017). The researcher included this protocol in the instructions participants viewed before watching the videos.

Video Design. Microlearning concepts (Zhang & West, 2020) informed the overall run-time of the training intervention and each video. Organizations can quickly administer microlearning training modules without extensive disruption to an employee's daily workflow (Zhang & West, 2020). Microlearning training is short and focuses on one problem or objective (Zhang & West, 2020). This study's single learning objective was that participants would demonstrate the ability to assign equal employability ratings to upper-middle and lower-middle-class applicants after watching the training videos.

Best practices for voice-over scripts in eLearning (Jaisingh, 2021) informed the researcher's use of semi-formal language in the script. According to Jaisingh (2021), a conversational format with short sentences engages learners. Passive voice is acceptable in voice-over eLearning scripts (Jaisingh, 2021). Jaisingh (2021) recommends a 7th-grade comprehension level for an eLearning voice-over script. The comprehension level may vary depending on the target audience (Jaisingh, 2021).

Video delivery. The researcher delivered the training videos with whiteboard animation software. Whiteboard animation software depicts a hand that is drawing two-dimensional figures while a voice narrates (Turkay & Moulton, 2016). The researcher used Doodly whiteboard animation software to create the videos. The researcher's voice narrated the videos. Refer to Appendix J for a script of the training video used in this study.

Turkay and Moulton's (2016) study informed the researcher's use of whiteboard animation software. Turkay and Moulton (2106) delivered social science lectures to adults using whiteboard animation and four other delivery methods, including a recorded live lecture and voice-over slides. Turkay and Moulton (2016) found statistical

significance in subject-matter comprehension using whiteboard animation compared to the four other delivery methods. People who viewed the whiteboard animation lecture also self-reported significantly higher levels of engagement (Turkay & Moulton, 2016).

Pilot Test

The purpose of the pilot test was to test the readability and functionality of the survey instrument and materials (Ruel et al., 2015) on the Qualtrics platform. If surveys are difficult to understand, nonresponse may occur, or the reliability of responses may threaten data quality (Calderón et al., 2006). Pilot test participants should provide feedback about clarity, ease of understanding, and recommendations for additional verbiage (Johnson & Morgan, 2016). Participants should also evaluate the functionality of the Qualtrics platform relative to any issues they encounter (Johnson & Morgan, 2016). The survey evaluation questions were the following:

1. Are instructions clear and easy to understand? If not, please provide recommendations.
2. Is the layout of the survey clear and uncluttered? If not, please provide recommendations for layout revisions.
3. Are the training videos easy to understand? If not, please provide recommendations.
4. Is there any additional information that should be added to the instructions or training videos?
5. Are there any issues with the Qualtrics platform?

The pilot test also established the average time to complete the study (Johnson & Morgan, 2016; Ruel et al., 2015), which was 35 minutes. The study description should

include the estimated time to complete the study (Chambers et al., 2016). As noted earlier in this chapter, the average completion time established during the pilot test determined the compensation for participants.

The pilot test did not test the efficacy of the treatment (National Center for Complementary and Integrative Health, n.d.). Additionally, all scales used in this study are previously validated (Cole et al., 2009; Fiske, 2018). Therefore, the researcher did not use pilot test data for factor analysis.

Pilot Test Sample and Sample Size

The researcher recruited pilot test participants from graduate students enrolled at The University of Southern Mississippi in the Human Capital Development doctoral program. The researcher anticipated that the pilot test sample represented the study's target population (Biffignandi & Bethlehem, 2021). There is a wide range of recommendations for the number of people needed for a pilot test (Whitehead et al., 2016). For example, when a pilot test aims to assess readability and administration, "10 or even fewer" (Hertzog, 2008, p. 182) participants will suffice. Fink (2015) recommends using a pilot sample size of five and adding more until there is no new feedback. Based on Fink's (2015) recommendation, the sample size for this study's pilot test was five.

Pilot Test Administration

The researcher invited five colleagues (Fink, 2015) in the Human Capital Development doctoral program to participate in the pilot test via email. The email included a link to the Qualtrics pilot test survey. The researcher did not offer compensation for participation in the pilot test.

The pilot test survey was a duplicate of the actual study and was hosted separately on Qualtrics. The pilot test evaluation questions were open-ended and were at the end of the pilot test in Qualtrics. The researcher administered the pilot test before IRB approval. The researcher did not use any data collected during the pilot test during analysis or in the report of the study's findings.

Institutional Review Board

The Institutional Review Board (IRB) at the University of Southern Mississippi reviews proposed academic studies for compliance with federal and institutional research standards (The University of Southern Mississippi, n.d.). The University of Southern Mississippi prohibits researchers from using any data collected before IRB approval (The University of Southern Mississippi, n.d.). In this study, the researcher conducted the pilot test before IRB approval. The researcher did not use any data collected during the pilot test during analysis or in the report of the study's findings. In addition, the researcher did not collect data for the pre-screening questionnaire or the actual study before IRB approval. Refer to Appendix K for the IRB approval letter.

Data Confidentiality

This study used a pre-screening questionnaire to create a list of eligible people to participate in the study (Wessling et al., 2017). The actual study was made available only to people who self-reported during the pre-screening questionnaire that they screen resumés or make hiring decisions for first-level managerial positions or higher (Wessling et al., 2017). The researcher separately administered the pre-screening questionnaire and study on Qualtrics via a link on Amazon Mechanical Turk (Amazon Mechanical Turk, 2014).

General Data Confidentiality

The Amazon Mechanical Turk platform does not have access to any data collected on Qualtrics (Iowa State University, 2020). The researcher used MTurk to recruit participants for the study and a pre-screening questionnaire (Iowa State University, 2020). The data collected during the pre-screening questionnaire and study were confidential but not anonymous because IP addresses and worker IDs were collected (Iowa State University, 2020). Only the research team has access to MTurk worker IDs and IP addresses.

Pre-screening Questionnaire Data Confidentiality

The researcher administered the pre-screening questionnaire on Qualtrics via a link on Amazon Mechanical Turk. The researcher collected IP addresses and MTurk worker IDs during the pre-screening questionnaire through Qualtrics. The IP Hub service used the IP addresses collected through Qualtrics to detect virtual private servers, which could indicate that people outside the target geographic location were attempting to take the survey (Winter et al., 2019).

The researcher collected and stored worker IDs for payment purposes (Iowa State University, 2020). After data analysis, the researcher deleted worker IDs from all data files (Iowa State University, 2020). However, worker IDs remain associated with the custom qualification filter in the MTurk portal. The researcher included this information in the informed consent statement for the pre-screening questionnaire.

Study Administration Data Confidentiality

The researcher hosted the study on Qualtrics, and it was accessible to participants via a link on Amazon Mechanical Turk. MTurk did not have access to any data collected

on Qualtrics (Iowa State University, 2020). The researcher did not use IP Hub to detect possible usage of virtual private servers during the administration of the study because only participants with an approved custom qualification filter had access to the study (Wessling et al., 2017).

Worker IDs were associated with a custom qualification filter in MTurk to provide eligible MTurk workers access to the study (Wessling et al., 2017). The researcher collected worker IDs from study participants for payment purposes (Iowa State University, 2020). Worker IDs remain associated with the custom qualification filter in the MTurk portal. The researcher included this information in the informed consent statement for the study.

Data Collection

This section discusses the data collection that took place after IRB approval. Participants opted-in to the pre-screening questionnaire and the study via the Amazon Mechanical Turk platform. The researcher administered a stand-alone pre-screening questionnaire. The study was accessible to MTurk workers who qualified to participate based on their responses to the pre-screener. The administration of the study included the informed consent statement, pretest, treatment, post-test, demographic questionnaire, and debriefing statement. Following data analysis, the researcher composed the comprehensive report of the findings in Chapters 4 and 5 of this manuscript. Refer to Table 8 for a visual depiction of the data collection timeline. The following narratives discuss the data collection timeline, the pre-screening questionnaire administration, and the study's administration.

Table 8

Data Collection Timeline

Stage	Period	Actions
Approval before administration	Week 0	Received IRB approval
	Week 1	Launched Qualtrics administration portal
	Week 1	Launched MTurk portal
Administration	Weeks 1-5	Administered pre-screening questionnaire via hyperlink to Qualtrics from the MTurk platform
	Weeks 4-6	Administered the study via hyperlink to Qualtrics from the MTurk platform
Post-Administration	Week 6	Survey closed
	Weeks 7-16	Analyzed data
	Weeks 17-26	Composed a report of findings

Pre-Screening Administration

Following Wessling et al.'s (2017) recommendation, the researcher administered a pre-screening questionnaire to recruit MTurk workers for participation in the study. Pre-screening questionnaires enable researchers to identify people who qualify for participation in a study based on self-reported criteria (Wessling et al., 2017). The researcher administered the stand-alone pre-screening questionnaire via Qualtrics (Wessling et al., 2017). The researcher made the pre-screening questionnaire available to MTurk workers registered in the United States with fewer than 10,000 approved HITS (Young & Young, 2019), over 100 approved HITS, and at least a 95% approval rating (Ahler et al., 2021). MTurk workers who opted-in to the pre-screening questionnaire completed a CAPTCHA before the informed consent statement and before beginning the questionnaire (Aguinis et al., 2021). A CAPTCHA reduces the risk of automated bots completing a questionnaire (Aguinis et al., 2021).

The pre-screening questions included a multiple-choice list of current job duties, including resumé screening/make hiring decisions. Participants who indicated they "screen resumés/make hiring decisions" as part of their current job duties received a second screening question about the types of job roles they screen resumés for, including first-level managers and directors. The screening questionnaire also included a decoy question about budget preparation (Wessling et al., 2017). A decoy question prevents people from deciphering the combination of answers required for qualification and sharing it with others (Wessling et al., 2017). The researcher assigned a custom qualification filter to MTurk workers who provided the desired responses for the pre-screening questionnaire per Wessling et al.'s (2017) recommendation. The researcher assigned a custom qualification to workers who self-reported they screen resumés/make hiring decisions for first-level managerial and higher positions.

Pre-screener timeline. Pre-screener data collection took place from January 20 to February 18, 2022. Due to a slow data collection rate for the pre-screener, it ran concurrently with the study from February 8 to February 18, 2022.

The researcher initially launched the pre-screener in batches designed to collect initial 400 unique pre-screener responses per batch run. Sprouse (2011) recommends a sample at least 15% larger than required. Because the study needed a sample size of 384, the researcher originally planned to collect 400 pre-screener submissions at a time until acquiring 115% of the sample size. The researcher observed a higher volume of submissions on the first day, then a steady decline. The researcher attributed this phenomenon to possible MTurk worker behavior of sorting available HITS by newest. The researcher determined that periodically canceling and relaunching the pre-screener

resulted in faster data collection. Based on this observation, pre-screener batch sizes were reduced and launched back-to-back.

When running a pre-screener batch in MTurk, the researcher enabled a feature that only allowed one submission per MTurk worker ID. However, when launching a new batch, there was no built-in feature to prevent a participant with a submitted pre-screener in a previous batch from participating in the new batch. To prevent duplicate submissions across pre-screener batches, the researcher assigned a custom qualification tag to people who had already submitted a pre-screener immediately after closing and before launching a new batch. The researcher made each new pre-screener batch visible only to MTurk workers who did not have the custom qualification tag that indicated a prior submission.

Pre-screener issues encountered. In the early stages of pre-screener administration, the researcher received several emails from MTurk workers about potential technical issues with the pre-screener. For example, one participant expressed concern about the format of the completion code that Qualtrics generated because it was not a standard format used by other researchers. Another person had a problem entering their completion code because they did not open the pre-screener link in a new window.

There were instances where participants submitted a pre-screener in MTurk with a valid completion code, but there was no recorded data for the submission in Qualtrics. The researcher initially rejected any MTurk submissions with no data recorded in Qualtrics. A rejection in MTurk meant a participant did not receive compensation for participating. The rejection also became part of the person's MTurk worker performance metrics. After reading various MTurk community forums and finding reports of Qualtrics

not recording data for legitimate attempts, the researcher reversed these rejections. The researcher reversed all rejections to prevent harm to participants due to a lower completion rate in the MTurk system, which could impact their ability to qualify for other HITs. Note that reversing a rejection only means the participant received payment, and their MTurk performance metrics did not reflect it.

Pre-screener results. In total, 3,226 people submitted responses to the pre-screener. Exclusion criteria beyond not screening resumés for managerial applicants or higher included self-reporting that they screened resumés or made hiring decisions, but also selected "None of these" as a response to the job duties question or "I made a mistake, I do not screen resumés or make hiring decisions." A total of 340 pre-screener participants qualified to participate in the study. The researcher manually assigned a custom qualification tag in MTurk to those 340 people, which indicated they were eligible for participation in the study.

Study Administration

Data collection for the study occurred from February 8 to February 26, 2022. The study was visible and accessible on MTurk only to qualifying pre-screener participants assigned a custom qualification tag. As with the pre-screener, when participation volume decreased during administration, the researcher relaunched the study in MTurk to increase the participation rate. When the researcher relaunched the study as a new batch, it was not visible or available to MTurk workers with a previous submission. Of the 340 people who qualified to participate in the study, 189 had completed records in Qualtrics. Data cleaning resulted in the removal of 37 participants for gibberish responses, 10 where people made multiple attempts to circumvent qualifying questions, and a further 14 due

to straight-lined responses. The data the researcher used for analysis included 128 records. Refer to the data quality and data cleaning sections later in this chapter for details about exclusion criteria.

Survey Instrument and Flow

This section provides an overview of the flow of the survey instrument used for the study. The following narratives discuss the informed consent procedures, the pretest, the training videos, the post-test and demographic questionnaire, the debriefing, and the data format and transformation. Refer to Appendix L for the public-facing descriptions of the pre-screener and study the researcher posted on MTurk. Refer to Appendix M for a more detailed version of the survey instrument flow.

Informed Consent Procedures

The pre-screening questionnaire and the study required that participants agree to an informed consent form. The researcher administered a pre-screening questionnaire before the administration of the main study. The researcher composed the content of the informed consent statements using the standard online informed consent template provided by the University of Southern Mississippi's Institutional Review Board. Potential participants received the informed consent agreement in Qualtrics. The informed consent statement instructed potential participants who declined participation to close the Qualtrics tab in their browser and return the HIT in the Amazon Mechanical Turk portal.

The Qualtrics platform automatically presented the Informed Consent Statement to study participants who opted-in to the study. The informed consent statement did not state the purpose of the study to avoid reactivity during the pretest (Cheung et al., 2017;

Shadish et al., 2002). Instead, a debriefing statement at the end of the study provided the purpose of the study (Lavrakas, 2008).

The informed consent statement notified participants that they could withdraw from the study at any time. The researcher also included a statement in the survey's header that participants could withdraw at any time by closing the survey tab or window. The informed consent statement indicated that attention checks existed throughout the study (Iowa State University, 2020). Refer to Appendix N and Appendix O for the informed consent statements used in this study.

Pretest

Literature and the study's research objectives informed the order the researcher administers the study's scales and other materials. The research objectives of this study first determined the differences in employability ratings between upper-middle-class and lower-middle-class applicants. The research objectives then determined the relationship between the applicant's social class and the employability ratings mediated by perceived competence and warmth.

In a real-world setting, a resumé screener reviews a resumé in approximately 7.4 seconds (Ladders, 2018) and either includes or excludes the applicant for further consideration. The resumé screener's cognitive processes, including their attitudinal evaluations, are unobservable in a real-world setting because attitudinal evaluations are latent constructs (Krosnick et al., 2005). The attitudinal evaluations in this study were the Stereotype Content Model dimensions of warmth and competence (Fiske, 2018; Fiske et al., 2002). Therefore, participants first provided employability ratings for each applicant to mimic the real-world process as closely as possible. Participants then separately rated

each applicant on the attitudinal evaluations that are typically unobservable (warmth and competence). The following paragraph discusses the pretest and post-test administration, which are identical. Refer to Table 9 for a tabular depiction of the pretest and post-test administration processes.

Table 9

Pretest and Post-test Administration Procedures

Pretest and post-test administration	Description	Participant action
Instructions	Participant receives instructions.	Read-only
Job Description	Participant receives the job description.	Read-only
Attention check question	Participant answered a question about the job description content as an attention check.	Answer a multiple-choice question
Review resumés	One UMC and one LMC resumé were presented simultaneously for participant review.	Read-only
Attention check question	Participants answered a question about the content of each resumé as an attention check.	Answer two multiple-choice questions
Employment Assessment Scale	1. Participants received one resumé and rated the applicant for employability. 2. Participants received a second resumé and rated the applicant for employability.	Rate applicants' employability (2x)
Warmth and Competence Scales	1. Participants received one resumé and rated the applicant for warmth and competence. 2. Participants received a second resumé and rated the applicant for warmth and competence.	Rate applicants' warmth and competence (2x)

Participants received instructions to review a job description carefully and rate two fictional applicants on various attributes. Participants first received the job description. Participants then simultaneously received one upper-middle-class and one lower-middle-class resumé and read the resumés. Participants next received the identical two resumés and rated the employability of both applicants. Finally, participants received each resumé again to rate warmth and competence. This procedure was identical during both the pretest and post-test.

Training Videos

After the pretest, a participant viewed the four training videos discussed in the instrumentation section above. The total viewing time for all videos combined was under seven minutes. Young and Young (2019) state that researchers should provide clear instructions about paying attention. Based on Young and Young's (2019) recommendation, before viewing the videos, the participant received instructions to pay attention and was notified there were attention check questions after each video. After each video, the researcher presented one or two attention-check questions (Wessling et al., 2017), which were multiple-choice questions about the content of the video the participant had just viewed.

Post-test and Demographic Questionnaire

The post-test was the same procedure as the pretest. Refer to Appendix I for the resumé templates used in the post-test. After completing the post-test, participants completed a demographic questionnaire adapted from the demographic scale used by Thomas (2018). The demographic profile instrument for participants was a self-administered questionnaire.

Debriefing

The researcher omitted the purpose of the study from the informed consent statement to avoid reactivity during the pretest and included it in a debriefing statement at the end of the study (Lavrakas, 2008). The debriefing statement notified participants that the study was about reducing social class bias during resumé screening.

Young and Young (2019) recommend using a randomly generated completion code for each participant. At the end of the study, a participant received a completion code generated by Qualtrics (Young & Young, 2019). The participant received instructions to paste the completion code into the appropriate text field in the MTurk portal (Young & Young, 2019). According to Young and Young (2019), researchers should ensure the completion code in the Qualtrics output matches the completion code the worker entered in MTurk. If completion codes do not match, this could indicate that a participant accidentally completed another researcher's study but is attempting to receive compensation for this study (Young & Young, 2019).

Reliability

A reliable scale consistently measures the same construct (Trochim 2012). The respective authors validated the employability assessment scale (Cole et al., 2009) and the warmth and competence scales (Fiske, 2018) used in this study. The researcher did not conduct further analysis for scale reliability.

Threats to Validity

According to Trochim (2012), external validity exists when other researchers can replicate the study's outcome when applied to other people, in different places, and at various times. External validity issues can arise when a researcher cannot generalize the

sample to a larger target population (Trochim, 2012). Study participants were MTurk workers registered in the United States who self-reported that they screened resumés as part of their current job duties. The study will not generalize to other countries.

External Validity

The sampling method enabled the researcher to obtain data from resumé screeners in various industries and locations in the United States (Woo et al., 2015). However, a threat to external validity remains because this study focused only on screening applicants for a rotational management training program. Therefore, the study's findings will not generalize to other job roles. The researcher acknowledges this as a limitation of the study and a threat to external validity.

Internal Validity

According to Trochim (2012), internal validity exists when only the treatment influences a study's outcome. The researcher has considered threats to internal validity. Social contamination poses a threat to internal validity (Trochim, 2012). In this study, "crosstalk" could have threatened internal validity (Edlund et al., 2017). According to Edlund et al. (2017), crosstalk occurs when MTurk participants share information about active studies via online forums. To prevent crosstalk, the researcher asked participants to agree to a non-disclosure agreement at the time of informed consent (Young & Young, 2019).

MTurk participants may state that they have attributes that qualify them to participate in the study when they do not (Wessling et al., 2017). In this study, potential participants could represent themselves as having current experience screening resumés when they did not. This threat could have resulted in a sample not representative of the

target population. The researcher took steps to minimize this threat. First, the researcher required potential participants to answer a pre-screening questionnaire to ensure they screened resumés as part of their current job duties (Wessling et al., 2017). Participants who qualified via the pre-screening questionnaire could opt-in to the study (Wessling et al., 2017).

Wessling et al. (2017) recommend including pre-screening questions in the study as a two-step verification that study participants did not misrepresent themselves. The researcher repeated the qualifying screening questions in the study, and Qualtrics automatically detected if study respondents correctly self-reported that they screen resumés as part of their current job duties. If a study participant did not self-report screening resumés as part of their current job duties, Qualtrics automatically displayed a disqualification message and instructions to close the window and return the HIT in MTurk.

History Threats. The researcher considered history threats. According to Trochim (2012), history threats occur when external events that occur concurrently with the treatment influence the outcome. In this study, participants may have acquired external knowledge about bias reduction strategies. For example, an unknown history threat exists if a participant's employer concurrently administers anti-bias training. Same-session pretest and post-test administration mitigated history threats (Trochim, 2012).

Mortality. Mortality threats occur when participants do not complete the study (Trochim, 2012). If participants fail to complete the study, there is a threat to internal validity (Trochim, 2012). According to Litman (2015), the compensation for a HIT on MTurk influences mortality. This study offered study participants the equivalent of the

$7.25 per hour federal minimum wage in the United States. Litman (2015) also notes that mortality increases if the time to complete a study is longer than the stated estimated completion time. This study's estimated completion time should have mirrored the actual completion time due to pilot testing.

Data quality. Another threat to internal validity is data quality (Woo et al., 2015). Participants may ignore questions and randomly select responses (Abbey & Meloy, 2017). The researcher used "attention checks" throughout the study (Abbey & Meloy, 2017; Woo et al., 2015). Participants were disqualified from further participation if they failed to correctly answer any attention check question after a second attempt (Cheung et al., 2017). The researcher notified potential participants that quality control measures existed to check for inattentiveness in the informed consent statement (Cheung et al., 2017).

Nondifferentiation or straight-lining means a participant provided the same response for a block (Jin & Loosveldt, 2021) or all items in a matrix (Fortunato et al., 2021). Fortunato et al. (2021) state that straight-lining constitutes non-response. Kim et al. (2019) note that straight-lining is a common problem when questions are in a grid format. In this study, items for the Employability Assessment Scale (Cole et al., 2009) and the warmth and competence scales (Fiske, 2018) appear in a grid format in the survey administration platform as Likert scale items.

According to Yan (2008), straight-lining results in measurement error. Yan (2008) warns that straight-lining can impact the detection of actual differences between variables. In this study, straight-lining threatened the detection of differences in perceived warmth and competence ratings.

Brosnan et al. (2021) state that researchers can easily detect straight-lining and remove participant data where straight-lining is present. When a participant straight-lines responses, the standard deviation of the items is zero (Magdolen et al., 2020). In this study, the researcher checks data for straight-lined responses in blocks of data where participants complete the warmth and competence scales on the same page in Qualtrics. The researcher checked for straight-lined responses using the standard deviation of the combined twelve scale items for warmth and competence. Before analysis, the researcher removed 14 submissions from the data where straight-lining was detected.

Construct Validity

Construct validity exists when the inferences from the study measure the construct as defined by the researcher (Trochim, 2012). The researcher took careful consideration to operationalize the construct, which is employability. The researcher designed the treatment to directly influence the employability ratings of fully qualified applicants according to Trochim's (2012) instruction. The researcher acknowledges that mono-operation bias could have threatened construct validity due to the single version of the training videos (Trochim, 2012).

Shadish et al. (2002) discussed that reactivity to the experimental situation occurs when participants respond based on what they think the researcher wants. This study used a pretest to measure employability ratings during resumé screening. Pretest responses could have been biased if participants were aware of the purpose of the study. According to Shadish et al. (2002), this threat to construct validity can be mitigated (when ethical) by not disclosing the hypotheses to participants. Therefore, the researcher omitted the study's purpose in the informed consent disclosure. However, given the specific anti-bias

material covered in the training videos, there is a possibility that participants attempted to respond in a socially acceptable manner during the post-test. Additionally, there was no back button available during the administration of the pre-screening questionnaire and the study to prevent participants from changing responses based on information obtained from subsequent items (Sucala et al., 2017).

Data Format, Cleaning, and Transformation for Analysis

This section discusses the study's original data format, post-administration data cleaning protocol, and data transformation for analysis. Data was collected using the Qualtrics platform. The researcher exported the Qualtrics data in an SPSS-compatible spreadsheet (Qualtrics, n.d.). The researcher used SPSS to transform scale responses into composite ratings for the warmth, competence, and employability scales. The researcher conducted data analysis in SPSS (Version 28).

Data Cleaning

After exporting data from Qualtrics, the researcher observed several anomalies. First, there were numerous instances where one MTurk worker made more than one attempt to complete the study but had only one submission. Second, there were cases where the response to the open-ended comprehension question was gibberish (ex. good class, nice). Third, irrelevant responses to the open-ended comprehension question that were about a topic other than social class bias (Ex. racial bias, anonymizing resumés). Fourth, the researcher observed cases where different MTurk worker IDs had the same response to the open-ended comprehension question. Due to these observations, the researcher established ex-post exclusion criteria and protocols discussed in the remainder of this section.

Ex-post exclusion should be reported transparently and performed objectively (Thomas & Clifford, 2017). According to Thomas and Clifford (2017), when the ex-post exclusion criteria are not defined before data collection, they should be justified and reported to ensure research integrity. The following narrative discusses this study's exclusion criteria the researcher established ex-post.

In this study, the exclusion criteria established post hoc were:

1. Multiple attempts by a single participant were reviewed on a case-by-case basis. If a participant attempted the study more than once with clear evidence of guessing the job duty criteria, the participant's completed submission was excluded from the analysis. The criteria for attempting to guess the job duties was that the participant made more than two attempts to participate in the study and passed the job duties screener only once.
2. Gibberish or irrelevant responses to the open-ended comprehension check. Gibberish responses indicate fraudulent responses (Ryan, 2020). In this study, gibberish responses do not include grammatically incorrect answers, which could have resulted from poor communication skills or a possible language barrier.
3. When multiple participants had identical or slightly varied responses to the open-ended comprehension check, the completed submissions for those participants were excluded from the analysis. According to Ryan (2020), when multiple respondents provide identical or slight variations of the same response, this indicates fraudulent responses.

Table 10

Post hoc Exclusion Criteria

Post hoc evaluation scenario	Post hoc exclusion criteria	Review procedure
Multiple attempts by one participant with clear misrepresentation	The participant made more than two attempts to participate in the study and passed the job duties screener only once.	Manual review of all submissions where any participant made multiple attempts to take the study
Gibberish responses	The participant's response to the open-ended comprehension question was gibberish (ex. good class, nice).	Manual review of open-ended responses.
Irrelevant responses	The participant's response to the open-ended comprehension question was about a topic other than social class bias (Ex. racial bias, anonymizing resumés).	Manual review of open-ended responses.
Duplicate responses to the open-ended comprehension check	Multiple participants had identical or slightly varied responses to the comprehension question.	Manual review of open-ended responses.

Data Transformation Protocol

The researcher conducted data transformation for the scale items following protocols by Cole et al. (2009) and Fiske (2018). The Employability Assessment Scale (Cole et al., 2009) composite score was the mean of the four scale items for each participant. The composite score for the warmth and competence scales was the mean of the six scale items for each participant (Fiske, 2018). Refer to Table 11 for the composite

score data labels for the upper- and lower-middle-class applicants used in the analysis and the remainder of this document.

Table 11

Data Transformation and Labels

	Scale	Data transformation	Pretest label	Post-test label
Warmth				
Upper-middle-class	Interval	Mean of scale items	PreUW	PostUW
Lower-middle-class	Interval	Mean of scale items	PreLW	PostLW
Competence				
Upper-middle-class	Interval	Mean of scale items	PreUC	PostUC
Lower-middle-class	Interval	Mean of scale items	PreLC	PostLC
Employability				
Upper-middle-class	Interval	Mean of scale items	PreEU	PostUE
Lower-middle-class	Interval	Mean of scale items	PreEL	PostLE

Data Analysis

This section provides the data analysis plan and a discussion of the data analysis for the research objectives. The researcher accomplished the first research objective using descriptive statistics. The second and third objectives were accomplished using the non-parametric sign test. Research objectives four, five, and six were accomplished using parallel mediation. Refer to Table 12 for the tabular depiction of the data analysis plan. The remainder of the section provides a narrative discussion of the data analysis plan.

Table 12

Data Analysis Plan

RO	Variable	Scale	Test
1	Age	Ordinal	Frequency Distribution
	Ethnicity	Nominal	Frequency Distribution
	Gender	Nominal	Frequency Distribution
	Education	Ordinal	Frequency Distribution
	Years' experience screening resumés	Ratio	Mean, Std. Dev., n/Frequency
	Industry of Employment	Nominal	Frequency Distribution
	Organization Status (non-profit, public, private)	Nominal	Frequency Distribution
	Number of Employees in Participant's Current Organization	Ordinal	Frequency Distribution
	Participant Social Class	Ordinal	Frequency Distribution
2	Pretest UMC Employability	Interval	Non-parametric sign test
	Pretest LMC Employability	Interval	
3	Post-test UMC Employability	Interval	Non-parametric sign test
	Post-test LMC Employability	Interval	
4	Pretest UMC Employability	Interval	Parallel mediation analysis (Montoya & Hayes, 2017)
	Pretest UMC Competence	Interval	Mediator variables are Competence and Warmth. The outcome variable is Employability.
	Pretest UMC Warmth	Interval	
	Pretest LMC Employability	Interval	
	Pretest LMC Competence	Interval	

RO	Variable	Scale	Test
	Pretest LMC Warmth	Interval	
	Post-test UMC Employability	Interval	
	Post-test UMC Competence	Interval	
	Post-test UMC Warmth	Interval	
	Post-test LMC Employability	Interval	
	Post-test LMC Competence	Interval	
	Post-test LMC Warmth	Interval	
5	Pretest UMC Employability	Interval	Parallel mediation analysis (Montoya & Hayes, 2017)
	Pretest UMC Competence	Interval	
	Pretest UMC Warmth	Interval	Mediator variables are Competence and Warmth. The outcome variable is Employability.
	Pretest LMC Employability	Interval	
	Pretest LMC Competence	Interval	
	Pretest LMC Warmth	Interval	
	Post-test UMC Employability	Interval	
	Post-test UMC Competence	Interval	
	Post-test UMC Warmth	Interval	
	Post-test LMC Employability	Interval	
	Post-test LMC Competence	Interval	
	Post-test LMC Warmth	Interval	
6	Pretest UMC Employability	Interval	Parallel mediation analysis (Montoya & Hayes, 2017)
	Pretest UMC Competence	Interval	
	Pretest UMC Warmth	Interval	Mediator variables are Competence and Warmth.

RO	Variable	Scale	Test
	Pretest LMC Employability	Interval	The outcome variable is Employability.
	Pretest LMC Competence	Interval	
	Pretest LMC Warmth	Interval	
	_____		
	Post-test UMC Employability	Interval	
	Post-test UMC Competence	Interval	
	Post-test UMC Warmth	Interval	
	Post-test LMC Employability	Interval	
	Post-test LMC Competence	Interval	
	Post-test LMC Warmth	Interval	

RO1

The researcher collected demographic data to describe the study participants in terms of age, ethnicity, sex, education, career, industry of employment, and self-reported socioeconomic strata of origin. Participants self-reported descriptive demographic items. The researcher included the demographic characteristics of the study's participants in Chapter 4 of this manuscript.

RO2 and RO3

The second research objective determined the pretest differences in employability ratings between UMC and LMC applicants. The third research objective determined the post-test differences in employability ratings between UMC and LMC applicants. The researcher used the Employment Assessment Scale (Cole et al., 2009) to collect RO2 and RO3 data.

The two categories of the independent variable were upper-middle-class and lower-middle-class. The two categorical groups were related because the same resumé screener (study participant) rated the employability of one UMC and one LMC applicant during the pretest and again at post-test. The dependent variable was the composite employability rating, the average of the four-item Employment Assessment scale (Cole et al., 2009) for each participant. The composite employability rating was an interval variable.

The researcher used the non-parametric sign test to achieve RO2 and RO3 because the data was neither normally distributed nor symmetrical. The non-parametric sign test is appropriate for two related categorical groups in the independent variable and one continuous dependent variable when data is not suitable for a paired t-test or the Wilcoxon signed rank test (Laerd Statistics, 2018). The null hypothesis was that the average employability ratings resumé screeners assigned for LMC applicants were equal to those of the UMC applicants.

RO4

The fourth research objective determined the relationship between the applicant's social class and the employability ratings mediated by perceived competence. As previously discussed, Thomas's (2018) study about social class bias during resumé screening informed this study's design. Thomas (2018) used mediation analysis to determine how three mediator variables (warmth, competence, and polish) influenced the likelihood of an interview for applicants whose resumés contained highbrow or lowbrow social class signals. Informed by Thomas's (2018) analysis method, the researcher conducted a parallel mediation analysis to achieve RO4.

Unlike Thomas's (2018) study, this study used a pretest-post-test design. Therefore, mediation analysis was conducted once using pretest data and once using post-test data. Also, Thomas's (2018) mediator variables were warmth, competence, and polish, whereas this study only used warmth and competence.

Mediation Analysis. According to Montoya and Hayes (2017), mediation analysis is common in social science and business research. Mediator variables (M) explain how an independent variable (X) affects a dependent variable (Y); (Montoya & Hayes, 2017). A mediator variable is on the causal path between a predictor variable (X) and an outcome variable (Y); (Montoya & Hayes, 2017). In mediation analysis, the independent variable influences the mediator variable, influencing the dependent variable ($X \rightarrow M \rightarrow Y$); (Montoya & Hayes, 2017). The path from X to Y through M is an indirect effect of X on Y (Montoya & Hayes, 2017). The statistical diagram for the parallel mediation analysis used in this study is in Figure 3. Path a_1b_1 represents RO4.

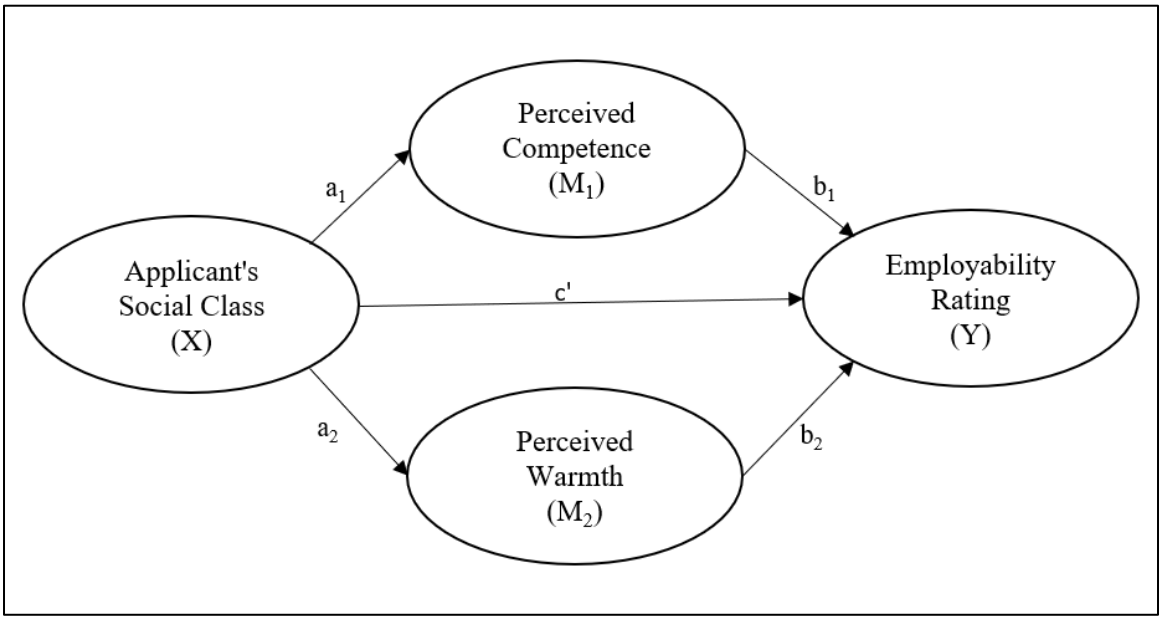

Figure 3. Statistical Diagram RO4

Two-condition within-subjects. A two-condition within-subjects parallel mediation analysis is appropriate when a study exposes a single participant to a two-condition independent variable (Montoya & Hayes, 2017). In the within-subjects parallel mediation analysis, participants rate the outcome variable (Y) and each mediator variable (M) once for each condition of the predictor variable (X); (Montoya & Hayes, 2017). In this study, participants rated their perceptions of competence (M_1), warmth (M_2), and employability (Y) for one lower-middle-class applicant (condition one of the predictor) and one upper-middle-class applicant (condition two of the predictor). Refer to Figure 4 for a graphic depiction of the two-condition within-subject variables in this study.

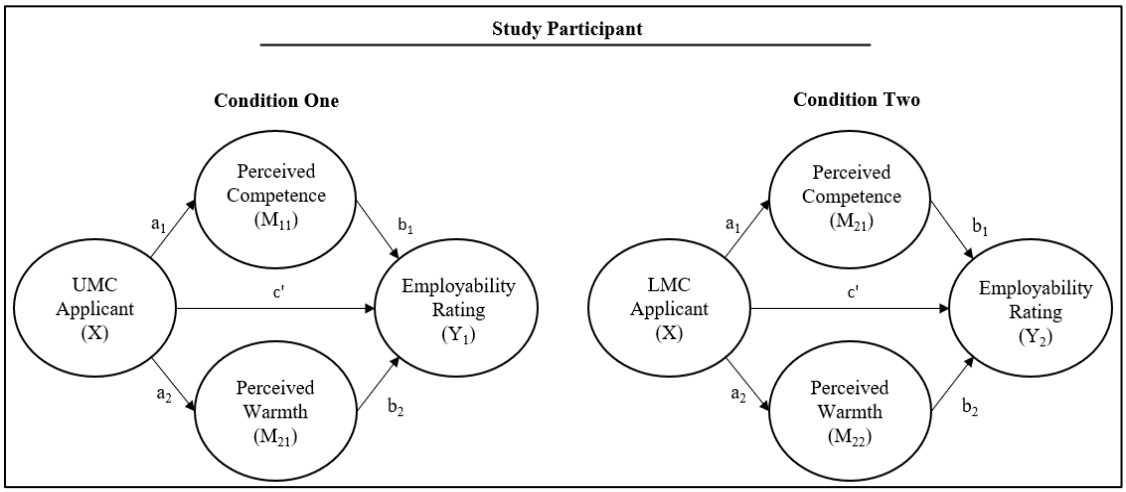

Figure note: The mediator variable subscript notations represent the mediator number and the condition number, respectively.

Figure 4. Two-condition Within-subject Variables Diagram RO4

Test Assumptions. Test assumptions for the two-condition within-subjects parallel mediation analysis are:

1. A linear relationship between the predictor and outcome variables in all paths from X to Y (Hayes, 2013). Regression is run for each path in the mediation model, and the residuals are plotted for each regression (Kane & Ashbaugh, 2017).

2. Relatively equal estimation errors across all predicted values of Y (homoscedasticity); (Laerd Statistics, 2018). The plot generated for the linearity assumption is visually reviewed for vertical consistency across the x-axis range (Kane & Ashbaugh, 2017).
3. Approximate normal distribution of the estimation errors or residuals (Laerd Statistics, 2018). Test this assumption using a Q-Q plot using the residuals saved from the regressions performed for testing assumption one (Kane & Ashbaugh, 2017). Minor violations are acceptable except for a small sample size (Kane & Ashbaugh, 2017).
4. Independence of observations. According to the Laerd Statistics (2018) test assumptions for linear regression, the Durbin-Watson statistic tests for independence of observations.

Of note, there is a likelihood of violating one or more test assumptions, but this is not of great importance overall (Hayes, 2013).

MEMORE Macro for SPSS. This study used the MEMORE version 2.1 (mediation and moderation in repeated measures design) macro developed by Montoya and Hayes (2017). The MEMORE macro conducted the parallel mediation in a two-condition within-subjects design using OLS regression in path analytic form (Montoya & Hayes, 2017). Because the MEMORE macro is designed specifically for within-subjects design, it provided comprehensive analysis capabilities not otherwise available for this study.

The MEMORE macro prevented the mediator variables from confounding each other because it calculated each indirect effect of the predictor (X) on the outcome (Y) through each mediator (M) while controlling for the other mediator (Montoya & Hayes, 2017).

The MEMORE macro included a non-parametric bootstrapping feature that estimated the confidence intervals for both mediator variables' specific indirect effects (Montoya & Hayes, 2017). Hayes (2013) recommends using bootstrapped confidence intervals in mediation analysis because there is no normality assumption, and bootstrapping typically has stronger statistical power.

Bootstrapping results in a normalized sampling distribution from otherwise non-normal data (Frost, 2018). Bootstrapping is a computational technique used in statistics to create inferential measures, including confidence intervals and standard errors (Frost, 2018). Bootstrapping entails creating random samples using an existing data set as the population (Frost, 2018). There are typically thousands of resampling cycles during bootstrapping (Frost, 2018). The resampling process results in a normalized sampling distribution (Frost, 2018). Inferential measures, including confidence intervals and standard errors, are drawn from the bootstrapped sampling distribution (Frost, 2018).

During bootstrapping, the MEMORE macro used the study's sample data to create the bootstrapped samples used to calculate the 'ab' paths (Montoya & Hayes, 2017). In other words, the macro treated the study's sample data as the population and randomly extracted data records to create randomized samples. The macro built a sampling distribution of the 'ab' path using the output from the resampling process (Montoya & Hayes, 2017). The specific indirect effect was significantly different from zero when the distribution did not include zero (Montoya & Hayes, 2017). The researcher specified the number of times the macro performed the resampling process, which was 10,000, based on an example provided by Montoya and Hayes (2017). The bootstrapping feature in the

MEMORE macro included 95% confidence intervals and indicated a significant indirect effect if the confidence interval range did not include zero (Montoya & Hayes, 2017).

Output. In this study, the parallel mediation analysis simultaneously provided the output for research objectives four, five, and six. Given the pretest-post-test design of this study, the parallel mediation analysis was conducted once using pretest data and once using post-test data. The researcher followed the Montoya and Hayes (2017) procedure for running the parallel mediation analysis in SPSS. Refer to Chapter 4 for the MEMORE macro's output for the parallel mediation analysis. The annotated statistical framework in Figure 5 reflects the relevant components of the MEMORE macro's output.

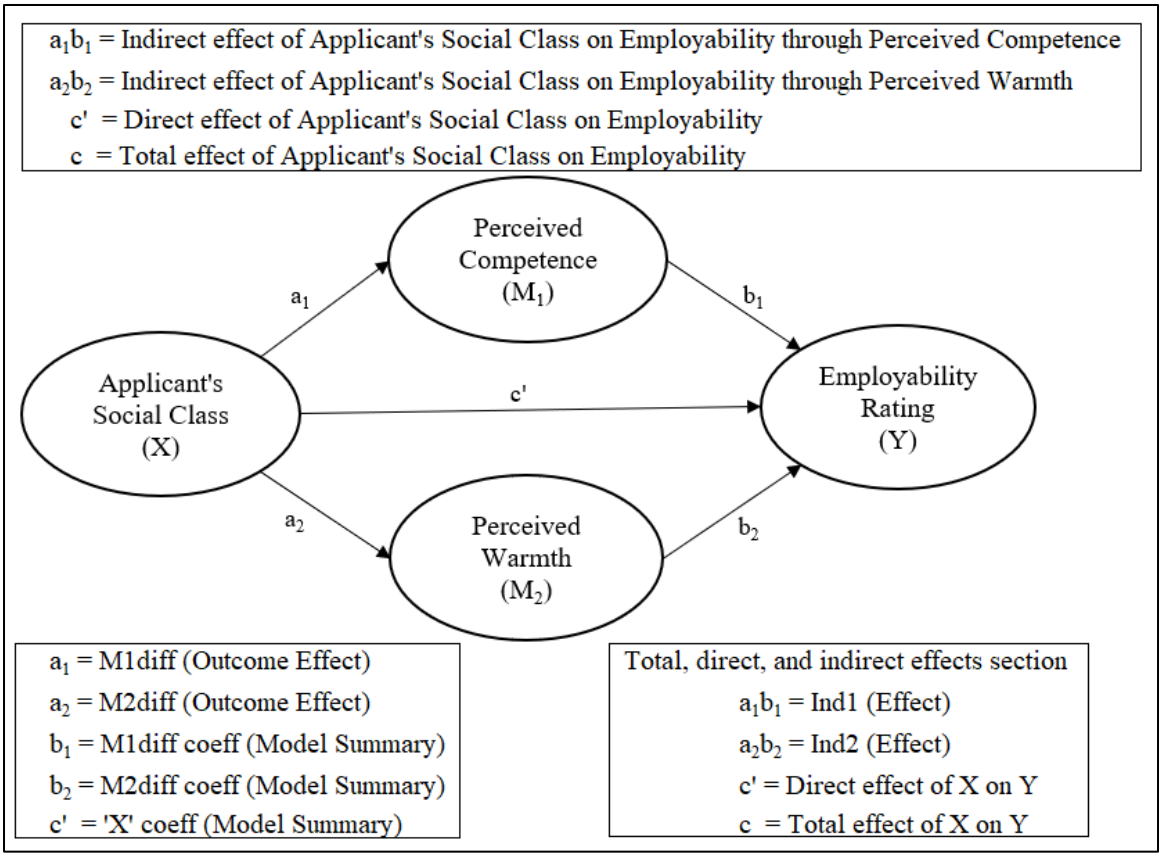

Figure 5. Annotated Statistical Framework RO4

Significance. The output of the two condition within-subjects parallel mediation analysis included findings of significance for the specific indirect effects of each mediator, the total indirect effect, the direct effect of X on Y, and the total effect of X on Y. The output also denoted whether there was a statistically significant difference in participants' perceptions of competence and warmth between upper-middle and lower-middle-class applicants. Table 15 summarizes the significance criteria and the location in the macro's output for each.

Table 13

Parallel Mediation Significance Criteria

Output	Significance	Location in the output tables
Specific indirect effects (a_1b_1) (a_2b_2)	Zero does not fall between the lower and upper bounds of the bootstrapped estimated confidence interval (Montoya & Hayes, 2017).	Total, direct, and indirect effects section
Total indirect effect	Zero does not fall between the lower and upper bounds of the bootstrapped estimated confidence interval (Montoya & Hayes, 2017).	Total, direct, and indirect effects section
Direct effect of X on Y (c')	$p \leq .05$	Total, direct, and indirect effects section
Total effect of X on Y	$p \leq .05$	Total, direct, and indirect effects section
The difference in perceptions of competence between UMC and LMC applicants	$p \leq .05$	Outcome: M1 diff section

A specific indirect effect of a mediator variable must be significantly different from zero to act as a mechanism through which the predictor variable affects the outcome variable (Montoya & Hayes, 2017). A specific indirect effect is significant when zero does not fall between the lower and upper bounds of the bootstrapped estimated confidence interval (Montoya & Hayes, 2017). The bootstrapped confidence intervals for the specific indirect effects are in the "Total, direct, and indirect effects" section of the output in the "Indirect Effect of X on Y through M" sub-section.

The total indirect effect is the sum of the specific indirect effects (Montoya & Hayes, 2017). The total indirect effect is significant when zero does not fall between the upper and lower bounds of the bootstrapped estimated confidence interval (Montoya & Hayes, 2017). The total indirect effect is in the "Total, direct, and indirect effects" section of the output in the "Indirect Effect of X on Y through M" sub-section, line item "Total."

The direct effect of X on Y is significantly different from zero when $p \leq .05$ (Montoya & Hayes, 2017). The output data for the direct effect is in the "Total, direct, and indirect effects" section of the output in the "Direct Effect of X on Y" sub-section.

The total effect of X on Y is the sum of the direct and indirect effects (Hayes, 2013). The total effect of X on Y is significantly different from zero when $p \leq .05$ (Montoya & Hayes, 2017). The output data for the total effect is in the "Total, direct, and indirect effects" section of the output in the "Total Effect of X on Y" sub-section.

The report of findings discusses whether there is a significant difference for a single mediator between the two conditions (Montoya & Hayes, 2017). For example, whether participants perceive upper-middle or lower-middle-class applicants as more competent. The mediator is significantly different between the two conditions at $p \leq .05$ (Montoya & Hayes, 2017).

Effect figures. When interpreting significant findings in the MEMORE macro's output, the values in the 'Effect' columns are positive or negative (Montoya & Hayes, 2017). The direction of an effect denotes how the effect of a mediator variable influences the outcome variable (Montoya & Hayes, 2017). The direction of an effect depended on the order in which the researcher entered the variables into the MEMORE macro (Montoya & Hayes, 2017). In this study, the researcher entered all variables to subtract

lower-middle-class ratings from upper-middle-class ratings (UMC – LMC). Therefore, based on discussion by Montoya and Hayes (2017), if a specific indirect effect in this study was significant and the effect value was negative, the specific indirect effect for that particular mediator variable was related to lower employability scores for the upper-middle-class applicant.

Drilling down further, the MEMORE macro provides the differences in a mediator variable between the two social classes. The difference in perceived competence between the upper-middle-class and lower-middle-class applicants is in the 'Effect' column of the 'M_1diff' section toward the beginning of the MEMORE macro's output. If the difference was significant at $p \leq .05$ with a negative effect, participants perceived upper-middle-class applicants as less competent. Note, the difference sections in the output reflect the 'a' path of the mediation model (Montoya & Hayes, 2017). Refer to the RO4 analysis results for additional discussion.

RO5

Determine the relationship between the applicant's social class and the employability ratings mediated by perceived warmth.

The fifth research objective determined the relationship between the applicant's social class and the resumé screener's employability rating of the applicant mediated by the resumé screener's perception of the applicant's warmth. This study used parallel mediation analysis for RO5. Refer to the discussion about RO4 for an overview of parallel mediation analysis and the macro used to analyze RO4, RO5, and RO6. The parallel mediation output produced RO4, RO5, and RO6 results simultaneously. Refer to

Figure 6, path a_2b_2, for a visual depiction of RO5.

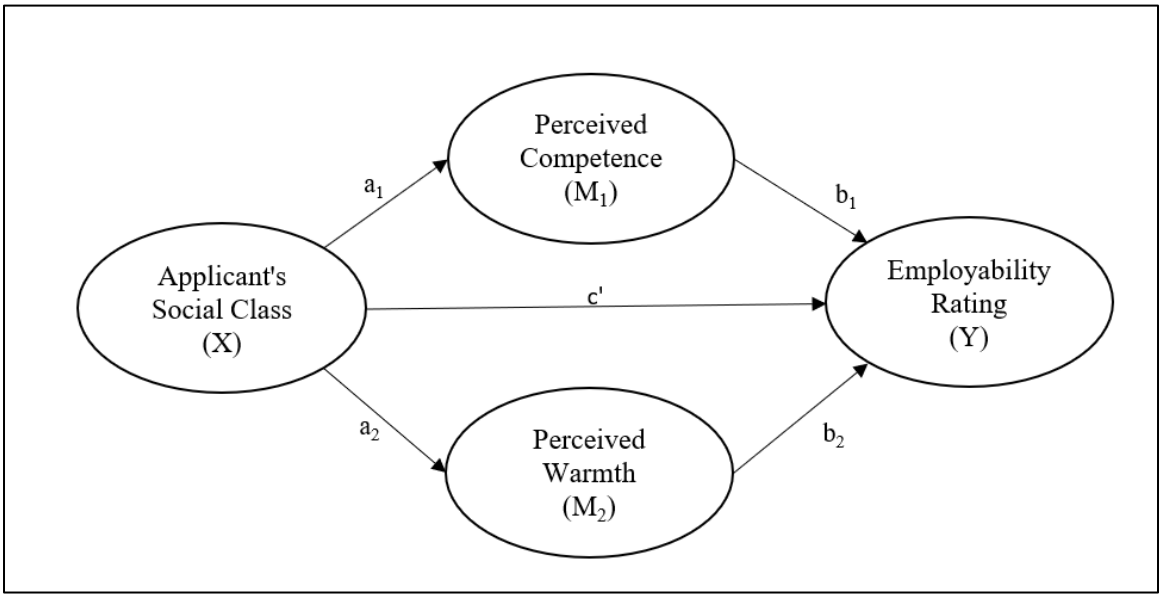

Figure 6. Statistical Diagram RO5

RO6

Determine the relationship between the applicant's social class and the employability ratings mediated by both perceived warmth and perceived competence.

The total indirect effect is the sum of the specific indirect effects (Montoya & Hayes, 2017). When the total indirect effect is significant, the predictor variable indirectly influences the outcome variable through at least one of the mediator variables (Montoya & Hayes, 2017). The total indirect effect is significant when zero does not fall between the lower and upper bounds of the bootstrapped confidence interval (Montoya & Hayes, 2017). When the total indirect effect is significant, the combined specific indirect effects mediate the effect of the predictor variable on the outcome variable (Montoya & Hayes, 2017). In this study, if the total indirect effect was significant, the resumé screener's perceived competence and perceived warmth collectively mediated the effect

of the applicant's social class on the resumé screener's employability ratings for the applicant.

This study used parallel mediation analysis for RO6. Refer to the discussion about RO4 for an overview of parallel mediation analysis and the macro used to analyze RO4, RO5, and RO6. As discussed in the previous section, the parallel mediation output produced RO4, RO5, and RO6 results simultaneously.

Summary

This study targeted a population of people who screen resumés as part of their current job duties. The purposive sampling method increased the likelihood of a representative sample (Trochim, 2012). Thomas' (2018) study on social class bias during resumé screening and existing pretest-post-test designs in bias reduction studies (Devine et al., 2012) informed the methodology and design.

The researcher recruited study participants on Amazon Mechanical Turk and administered the study on Qualtrics. A pre-screening questionnaire provided a multiple-choice list of current job duties, one of which is resumé screening (Wessling et al., 2017). The researcher used the pre-screening questionnaire to determine whether potential study participants met the inclusion criteria

Instruments and materials included a pre-screening questionnaire, a fictional job description for a rotational management training program, fictional resumés depicting upper-middle and lower-middle-class applicants (Thomas, 2018), perceived warmth and competence scales (Fiske, 2018), a previously validated Employment Assessment scale (Cole et al., 2009), a demographic questionnaire (Thomas, 2018), and four short

instructional videos designed by the researcher about two tactics to reduce biased behavior (Carter et al., 2020).

The data analysis included descriptive statistics for RO1. The researcher used the non-parametric sign test for RO2 and RO3 because the data was not normally distributed or symmetrical. The researcher analyzed RO4, RO5, and RO6 with a parallel mediation analysis for a two-condition within-subjects design (Montoya & Hayes, 2017). The report of findings in Chapter 4 includes the results for all research objectives.

CHAPTER IV – RESULTS

This quantitative causal, single-group, pretest-post-test, quasi-experimental study determined whether a training intervention to teach resumé screeners how to control biased decision-making resulted in equal employability ratings for upper-middle-class and lower-middle-class applicants. The situational context was a rotational management training program. This study determined the differences in employability ratings for UMC and LMC applicants during a pretest and a post-test. A parallel mediation analysis determined whether a resumé screener's perceived warmth and competence of an applicant mediated the relationship between the applicant's social class and employability.

Workers on MTurk who self-reported screening resumés or making hiring decisions for first-level management applicants or higher were eligible to participate in the study. Of the 340 people eligible to participate in the study, 189 had completed records in Qualtrics. Data cleaning resulted in the removal of 37 participants for gibberish responses, 10 where people made multiple attempts to circumvent qualifying questions, and a further 14 due to straight-lined responses. The data the researcher used for analysis included 128 records.

The following sections discuss the results of each research objective's data analysis. The researcher used SPSS (Version 28) to conduct all analyses. The first section for RO1 describes the study's participants. The second and third sections for RO2 and RO3 discuss the pretest and post-test differences in employability ratings between upper-middle-class (UMC) and lower-middle-class (LMC) applicants. The following three sections for RO4, RO5, and RO6 discuss the output of the pretest and post-test parallel

mediation analysis for the competence and warmth dimensions of the Stereotype Content Model. The discussions about the parallel mediation results are organized into three components: an overview of the pretest and post-test results, a discussion of the pretest analysis, and a discussion about the post-test results.

Research Objective One

The first research objective was to describe the demographics of the study participants in terms of age, ethnicity, sex, education, the industry of employment, and self-reported socioeconomic strata of origin. Table 14 depicts demographic data by age group. Only 3.1% of participants were 60 years of age or older, 43.8% were in the 18-34 age group, and 53.1% were between 35-59 years of age.

Table 14

Age Distribution

Age group	n	%	Cumulative %
18-34	56	43.8	43.8
35-59	68	53.1	96.9
60+	4	3.1	100.0
Total	128	100.0	100.0

Most participants were Caucasian (71.1%), 10.2% were African American, 7.8% were Asian, 3.9% were Hispanic, 0.8% were Native American/Pacific Islander, and 4.7% self-identified as an ethnicity other than the available selections. Refer to Table 15.

Table 15

Ethnicity Distribution

Ethnicity	n	%
African American	13	10.2
Asian	10	7.8
Caucasian	91	71.1
Hispanic	5	3.9
Native American/Pacific Islander	1	0.8
Other	6	4.7
No response	1	0.8
Total	128	100.0

Participants provided their gender as an open-ended response. Men comprised 51.6%, women 44.5%, one participant was trans-gendered, and four participants (3.1%) did not provide a response. Refer to Table 16 and Table 17.

Table 16

Gender Distribution

Gender*	n	%
Male	66	51.6
Female	57	44.5
Transgender Person	1	0.8
No response	4	3.1
Total	128	100.0

*This item was open-ended.

Table 17

Age Range by Gender Distribution Frequency

	Gender				
Age	Female	Male	No response	Trans	Total n
18-34	25	28	2	1	56
35-59	31	35	2	0	68
60+	1	3	0	0	4
Total	57	66	4	1	128

Almost half of the participants, or 46.9% had a bachelor's degree, 29.7% had a master's degree, 3.9% had a Doctorate or Professional degree, 9.4% had an Associate's or Technical degree, and 9.4% had a high school diploma or its equivalent. Refer to Table 18.

Table 18

Education Distribution

Degree	n	%	Cumulative %
High School or equivalent	12	9.4	9.4
Associate's/Technical	12	9.4	18.8
Bachelor's	60	46.9	65.7
Matter's	38	29.7	95.4
Doctorate/ Professional (J.D./M.D.)	5	3.9	99.3
No response	1		
Total	128	100.0	100.0

On average, participants had 8.65 years of experience screening resumés. Participants entered their number of years of experience screening resumés as an open-ended response. Refer to Table 19 and Figure 7.

Table 19

Resumé Review Experience

Variable	μ	sd	n
Years of Experience	8.65	6.95	126
Non-response			2
Total			128

*Two responses were phrased as '10+' and '20+', which resulted in non-response

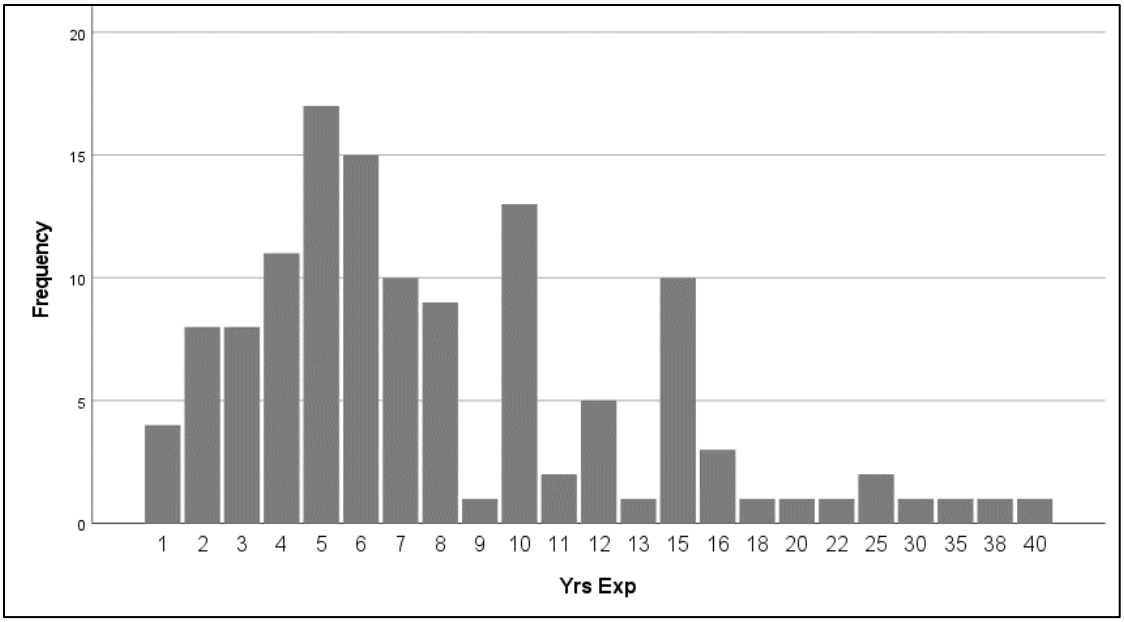

Figure 7. Years Screening Resumés Frequency Chart

The majority of participants, 73.4%, worked for a private, for-profit organization, 13.3% worked for a private, non-profit, 3.9% worked for a local government, 3.1% worked for a state government agency, and 6.3% were self-employed small business owners. Refer to Table 20.

Table 20

Organization Type

Type	n	%
Private, for-profit	94	73.4
Private, non-profit	17	13.3
Local government	5	3.9
State government	4	3.1
Federal government	0	0
Self-employed small business owner	8	6.3
Total	128	100.0

The frequency distribution of the number of employees in participants' place of current employment by industry type is in Table 21.

Table 21

Number of Participants by Organization Type Crosstabulation

Number employees	Private, for profit	Private, non-profit	Local government	State government	Self-employed small business owner	Total
2-10	7	1	0	0	6	14
11-99	23	2	1	2	2	30
100-999	36	7	2	0	0	45
1000+	28	7	2	2	0	39
Total	94	17	5	4	8	128

Participants entered their industry of employment as an open-ended response. Participants self-reported over 30 industries of employment. Table 22 provides a cross-tabulated format of each self-reported industry by the industry type.

Table 22

Industry and Industry Type Crosstabulation

Industry	Private for profit	Private non-profit	Local government	State government	Self-employed small business owner	Total
Accounting firm	1	0	0	0	0	1
Arts/Entertainment	1	1	0	0	0	2
Automotive/Auto Dealer	2	0	0	0	0	2
Aviation/ Engineering	2	0	0	0	0	2
Business/ Administrative	6	0	0	0	1	7
Design/Graphic Design	1	0	0	0	1	2
Education/ Academia	5	5	1	2	0	13

Industry	Private for profit	Private non-profit	Local government	State government	Self-employed small business owner	Total
Fashion production	1	0	0	0	0	1
Finance/Banking	5	0	0	1	0	6
Government	0	0	1	0	0	1
Government-behavioral health	0	0	0	1	0	1
Healthcare/ Medical/Wellness	4	2	0	0	1	7
Healthcare Administration	0	1	0	0	0	1
Healthcare - Pharmaceuticals	2	0	0	0	0	2
Healthcare - Public health	0	0	1	0	0	1
Hospitality/ Restaurant	8	0	0	0	1	9
Information technology	19	0	0	0	0	19
International consulting	1	0	0	0	0	1
Legal	2	0	0	0	0	2
Manufacturing	4	0	0	0	0	4
Marketing	5	0	0	0	0	5
Non-profit/ Consulting	1	3	0	0	0	4
Printers	1	0	0	0	0	1
Real Estate	2	0	0	0	1	3
Retail	5	0	1	0	1	7
Sales	3	1	0	0	0	4
Science	1	3	0	0	0	4
Skilled Trades/ Construction	4	0	0	0	1	5
Social services	0	1	0	0	0	1
Software/tech	4	0	0	0	0	4

Industry	Private for profit	Private non-profit	Local government	State government	Self-employed small business owner	Total
Telecommunicat-ions	2	0	0	0	0	2
Transportation/ Logistics	1	0	0	0	1	2
Water and energy infrastructure	0	0	1	0	0	1
Wholesale trade	1	0	0	0	0	1
Total	94	17	5	4	8	128

Table 23 shows participant frequency distribution by their self-reported socioeconomic strata of origin. Lower-middle-class (36.7%) and upper-middle-class (35.2%) combined comprised 71.9% of all participants. The working class was the next most frequent social stratum (21.1%). Poor (4.7%) and upper class (1.6%) comprised 6.3% of all participants. There was one or 0.8% non-response.

Table 23

Participant Social Class

Participant social class	n	%	Cumulative %
Poor	6	4.7	4.7
Working Class	27	21.1	25.8
Lower-Middle Class	47	36.7	62.5
Upper-Middle Class	45	35.2	97.7
Upper Class	2	1.6	99.3
No response	1	0.8	
Total	128	100.0	100.0

Research Objective Two

The second research objective compared the pretest differences in employability ratings between upper-middle-class and lower-middle-class applicants. The two

categories of the independent variable were upper-middle-class and lower-middle-class. The two categorical groups were related because the same resumé screener (study participant) rated the employability of one upper-middle-class (UMC and one lower-middle-class (LMC) applicant during the pretest. The dependent variable was the composite employability rating, the average of each participant's responses to the four-item Cole et al. (2009) Employment Assessment scale. All scale items used a six-point Likert range, with six being the most favorable. The composite employability rating was an interval variable. The null hypothesis was that the composite employability ratings were equal for UMC and LMC applicants.

Test of normality. As discussed in Chapter 3, the original data analysis plan called for the researcher to use a paired t-test to achieve RO2. The paired t-test assumes that the data is normally distributed (Laerd Statistics, 2018). Using the Shapiro-Wilk test, the researcher tested the distribution of the UMC and LMC pretest employability composites for normality distribution. The Shapiro-Wilk test null hypothesis is that the data tested is normally distributed (Laerd Statistics, 2018). According to Laerd Statistics (2018), the data is normally distributed when p. > .05. As shown in Table 24, the Shapiro Wilk test showed evidence that neither the pretest composite UMC employability, $W(128) = .930$, $p < .001$ nor the pretest composite LMC employability rating data were normally distributed, $W(128) = .957$, $p < .001$.

Table 24

RO2 Tests of Normality

Variable	Shapiro-Wilk		
	Statistic	df	Sig.
Pretest Upper Middle-Class Employability	.930	128	<.001
Pretest Lower Middle-Class Employability	.957	128	<.001

a. Lilliefors Significance Correction

Non-parametric test. Due to the violation of normal distribution, the researcher planned to use the non-parametric equivalent of the paired t-test, the Wilcoxon signed rank test (Laerd Statistics, 2018). One test assumption of the Wilcoxon signed rank test is that the differences of the related pairs are symmetrical in distribution (Laerd Statistics, 2018). The paired differences were symmetrical for the pretest data but not the post-test data. Therefore, the researcher used the non-parametric sign test (Laerd Statistics, 2018).

According to Laerd Statistics (2018), the sign test is appropriate when data is not suitable for either the paired t-test or the Wilcoxon signed rank test. Therefore, the researcher used the sign test to accomplish RO2. The sign test determines if there is a significant difference in the median of the two variables (Laerd Statistics, 2018).

The test assumptions for the non-parametric sign test are:

1. The dependent variable is continuous or ordinal (Laerd Statistics, 2018). Laerd Statistics (2018) states that Likert items are ordinal.
2. The independent variable includes two related pairs (Laerd Statistics, 2018). A related pair means one participant has two measures for the dependent variable (Laerd Statistics, 2018). In this study, each participant rated one upper-middle-class applicant and one lower-middle-class applicant at the pretest and again at the post-test.

3. Each related pair is independent of the others (Laerd Statistics, 2018).
4. The difference scores of the two dependent variable measurements for the related pairs constitute a continuous distribution (Laerd Statistics, 2018).

The researcher ran the sign test following the steps provided by Laerd Statistics (2018). At the pretest, there was not a statistically significant difference ($Z = -1.54$, $p = .122$) between employability ratings for the upper-middle-class and lower-middle-class applicants. Refer to Table 25.

Table 25

RO2 Non-parametric Sign Test Statistics

Item	PreEU – PreEL
Z	-1.547
Asymp. Sig. (2-tailed)	.122

a. Sign Test

Research Objective Three

The third research objective determined the post-test differences in employability ratings between upper-middle-class and lower-middle-class applicants. As shown in Table 28, the Shapiro Wilk test showed evidence that neither the post-test composite UMC employability rating $W(128) = .884$, $p < .001$ nor the post-test composite LMC employability rating $W(128) = .857$, $p < .001$ were normally distributed.

Table 26

RO3 Tests of Normality

Variable	Shapiro-Wilk		
	Statistic	df	Sig.
Post-test Upper-Middle-Class Employability	.884	128	<.001
Post-test Lower-Middle-Class Employability	.857	128	<.001

a. Lilliefors Significance Correction

The data also violated the Wilcoxon signed rank test assumption of symmetrical distribution among the paired differences (Laerd Statistics, 2018). Therefore, the researcher used the sign test to achieve RO3 following Laerd Statistics' (2018) recommendation. The sign test revealed a significant difference in the employability ratings of UMC and LMC applicants at the post-test ($Z = -5.80$, $p = <.001$). Refer to Table 27.

Table 27

RO3 Non-parametric Sign Test Statistics

Item	PostUE – PostLE
Z	-5.427
Asymp. Sig. (2-tailed)	.0000

Research Objective Four

Research objective four determined the relationship between the applicant's social class and employability ratings mediated by perceived competence. The independent variable was the social class of the applicant, the dependent variable was the employability rating of the applicant, and the mediator variable was perceived competence. The data used for the analysis of the fourth research objective included composite scores from the Cole et al. (2009) four-item Employment Assessment Scale,

the six-item warmth scale (Fiske, 2018), and the six-item competence scale (Fiske, 2018). The composite scores used for the analysis were the averaged scale item responses in each scale for each participant.

The researcher conducted a parallel mediation analysis using the MEMORE macro for SPSS (Montoya & Hayes, 2017). As discussed in Chapter 3, the researcher used the MEMORE macro (Montoya & Hayes, 2017) because it was developed for conducting mediation analysis on within-subjects data and, thus, provided a robust analysis not otherwise available for this study. The researcher conducted the parallel mediation using the multiple mediator protocol provided by Montoya and Hayes (2017).

Because the parallel mediation used difference scores, the researcher entered the variables so that the LMC composite ratings were subtracted from the UMC composite ratings of the variables used in the model (UMC – LMC). The researcher set the macro to run 10,000 bootstrap samples based on the example provided by Montoya and Hayes (2017). The syntax command entered to run the macro was:

Memore y=PreEU PreEL/m=PreUC PreLC PreUW PreLW/samples=10000/contrast=1.

The MEMORE macro's output provided the following relevant information:

1. If the specific indirect effect of the mediator variable was significant. According to Kenney (n.d.), researchers may infer mediation using only the '*ab*' paths without regard to the total and direct effects. The *'ab'* paths are called the specific indirect effects in the MEMORE macro's output. Additionally, Montoya and Hayes (2017) note that a statistical difference in the two conditions of the dependent variable is not necessary when determining if mediation exists. Therefore, if a specific indirect effect in this study was significant, the researcher inferred a mediating effect for that

particular mediator variable. Indirect effect significance was determined using the lower and upper bounds of the bootstrapped confidence interval, as recommended by Montoya and Hayes (2017). Significance existed if zero did not fall between the lower and upper bounds of the bootstrapped confidence interval (Montoya & Hayes, 2017).

2. If significant, whether the mediation effect contributed to higher employability ratings for the UMC or LMC applicant. Given the variable order for analysis (UMC – LMC), the mediating effect resulted in higher employability scores for the LMC applicant if the specific indirect effect was negative.

Results overview. Resumé screeners' perceived competence of the applicants acted as a mechanism through which an applicant's social class was related to employability ratings at the pretest and again at the post-test. At both the pretest and post-test, resumé screeners perceived the UMC applicant as less competent than the LMC applicant. The following narrative discusses the pretest and post-test results for RO4.

Pretest. At the pretest, the specific indirect effect of applicant social class on employability through perceived competence was significant because zero did not fall within the upper and lower bounds of the bootstrapped confidence interval (Montoya & Hayes, 2017). At pretest, the indirect effect of social class on employability through the mediator variable perceived competence was a_1b_1 = -0.1432(1.0394) = -0.1489 with 95% bootstrap CI [-0.2714, -0.0258]. This means that, at the pretest, perceived competence acted as a mechanism through which social class influenced employability ratings. Refer to Table 28 for the effect and confidence interval for the specific indirect effect of perceived competence at the pretest.

Table 28

RO4 Pretest Specific Indirect Effect 'a$_1$b$_1$' for Perceived Competence

Pretest indirect effect 'ab'	Effect	BootLLCI	BootULCI
Perceived Competence (a_1b_1) = Ind_1	-0.1489	-0.2714	-0.0258

The pretest parallel mediation 'a' paths output in Table 29 explains if there was a significant difference in the UMC and LMC competence ratings. In this analysis, the MEMORE macro subtracted the LMC competence ratings from the UMC competence ratings (UMC – LMC). On average, there was a difference of -0.1432 between UMC and LMC perceived competence ratings. This means that participants perceived the UMC applicant as less competent. Refer to Appendix Q for the MEMORE macro's full pretest output.

Table 29

RO4 Pretest Parallel Mediation 'a' and 'b' Paths for Perceived Competence

Pretest 'a' and 'b' paths				
Pretest 'a' path	Effect	p	LLCI	ULCI
(a_1) = PreUC - PreLC = M_1 diff	-0.1432	0.0200	-0.2635	-0.0229
Pretest 'b' path	Coeff	p	LLCI	ULCI
(b_1) = Perceived Competence = M_1 diff	1.0394	0.0000	0.8264	1.2525

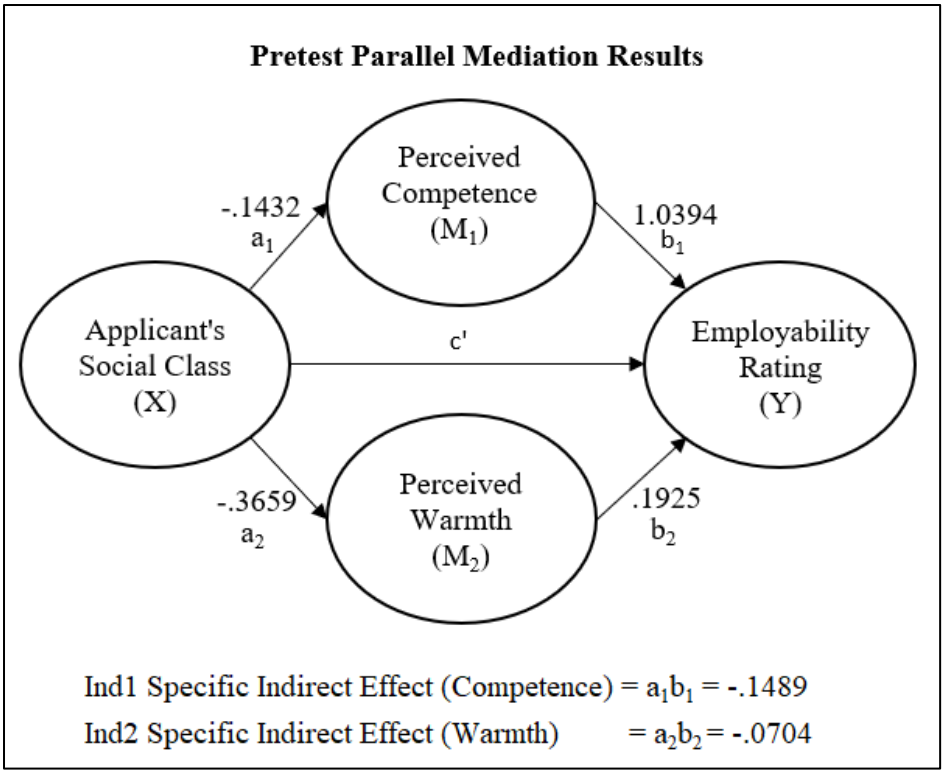

Figure 8. Pretest Parallel Mediation Diagram for RO4

Post-test. At the post-test, the specific indirect effect of applicant social class on employability through perceived competence was significant because zero did not fall within the upper and lower bounds of the bootstrapped confidence interval (Montoya & Hayes, 2017). At the post-test, the indirect effect of social class on employability through the mediator variable perceived competence was a1b1 = -0.2721(0.9029) = -.02457 with 95% bootstrap CI [-0.3808, -0.1307). The negative direction of the M_1 specific indirect effect (-0.2457) reveals that the effect of perceived competence, controlling for perceived warmth, led to lower employability ratings for the UMC applicant. Refer to Table 30 for a tabular depiction of the post-test specific indirect effect for perceived competence.

Table 30

RO4 Post-test Specific Indirect Effect 'a_1b_1' for Perceived Competence

Post-test indirect effect 'ab'	Effect	LLCI	ULCI
Perceived Competence (a_1b_1) = Ind_1	-0.2457	-0.3739	-0.1323

The post-test parallel mediation 'a' paths output in Table 31 explains if there was a significant difference in the UMC and LMC competence ratings. In this analysis, the MEMORE macro subtracted the LMC competence ratings from the UMC competence ratings. A significant difference exists if $p \leq .05$. There was a significant post-test difference in competence ratings between UMC and LMC applicants ($p < .01$). The upper-middle-class applicant was perceived as less competent (-0.2721) at the post-test. Refer to Table 31 and Figure 9 for the post-test 'a' and 'b' paths results for perceived competence. Refer to Appendix R for the MEMORE macro's full post-test output.

Table 31

RO4 Post-test Parallel mediation 'a' and 'b' Paths for Perceived Competence

Post-test 'a' and 'b' paths				
Post-test 'a' path	Effect	p	LLCI	ULCI
(a_1) = PostUC – PostLC = M_1 diff	-.2721	.0000	-.3827	-.1615
Post-test 'b' path	Coeff	p	LLCI	ULCI
(b_1) = Perceived Competence = M_1 diff	.9029	.0000	.6434	1.1624

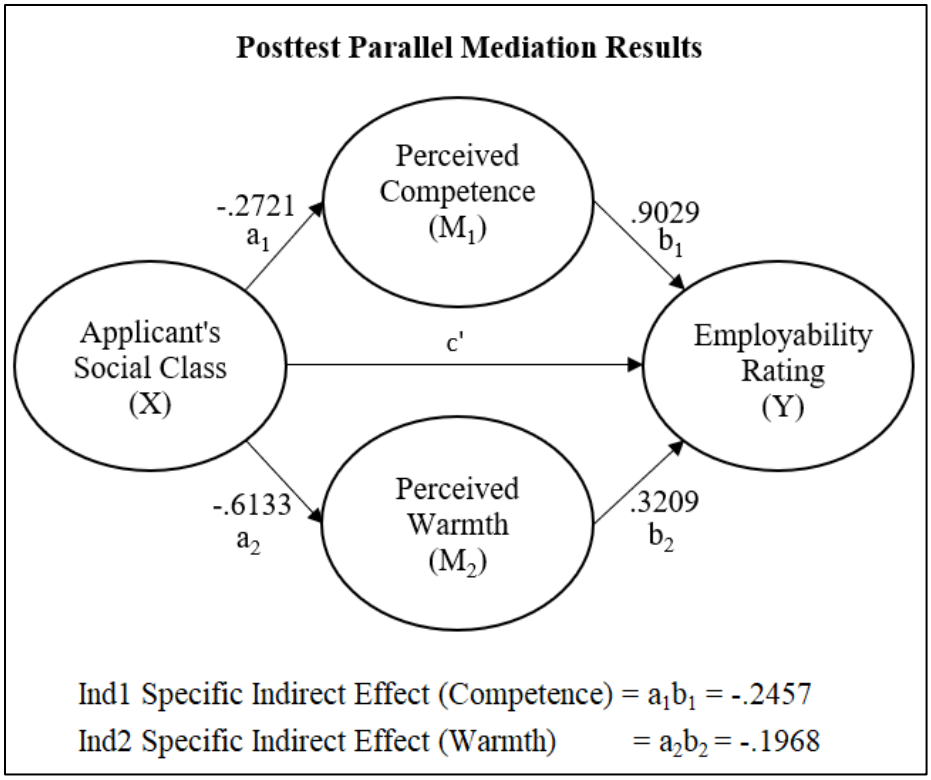

Figure 9. Post-test Parallel Mediation Diagram for RO4

Research Objective Five

Research objective five determined the relationship between the applicant's social class and the employability ratings mediated by perceived warmth. The independent variable was the social class of the applicant, the dependent variable was the employability ratings of the applicant, and the mediator variable was perceived warmth. The data used for the analysis of the fourth research objective included composites from the Cole et al. (2009) four-item Employment Assessment Scale, the six-item warmth scale (Fiske, 2018), and the six-item competence scale (Fiske, 2018). The composite scores used for the analysis were each participant's averaged responses for the items in each scale. The researcher conducted a parallel mediation analysis utilizing bootstrapping using the MEMORE macro for SPSS (Montoya & Hayes, 2017).

An indirect effect of a mediator variable must be significantly different from zero to act as a mechanism through which an applicant's social class affects employability (Montoya & Hayes, 2017). The indirect effect of a mediator variable is significantly different from zero when zero does not fall between the lower and upper bounds of the bootstrapped confidence interval (Montoya & Hayes, 2017).

Results overview. Resumé screeners' perceived warmth of the applicants acted as a mechanism through which an applicant's social class affected employability ratings only at the post-test. This result means the resumé screeners preferred the applicant perceived as more warm at the post-test. This result contributed to higher overall employability ratings for the LMC applicant at the post-test. The following narrative discusses the pretest and post-test results for RO5.

Pretest. At the pretest, the specific indirect effect of applicant social class on employability through perceived warmth was not significant because zero fell within the range of the lower and upper bounds of the bootstrapped confidence interval. At the pretest, the specific indirect effect of the applicant social class through the resumé screener's perceived warmth of the applicant was a_2b_2 = -0.3659(0.1925) = -0.0704, with a 95% bootstrap confidence interval CI [-0.1524, 0.0138]. Refer to Table 32 for the effect and confidence interval for the specific indirect effect of perceived warmth at the pretest.

Table 32 *RO5*

Pretest Specific Indirect Effect 'a_2b_2' for Perceived Warmth

Pretest total indirect effect *'ab'*	Effect	BootLLCI	BootULCI
Perceived Warmth (a_2b_2) = Ind_2	-.0704	-.1524	.0138

The pretest parallel mediation ‘a’ paths output in Table 33 explains if there was a significant difference in the UMC and LMC warmth ratings. In this analysis, the MEMORE macro subtracted the LMC warmth ratings from the UMC warmth ratings (UMC – LMC). A significant difference existed if $p \leq .05$. There was a significant difference in warmth ratings between UMC and LMC applicants ($p < .01$). The upper-middle-class applicant was perceived as less warm (-0.3659) at the pretest. Refer to Table 33, and Figure 10 for the pretest ‘a’ and ‘b’ paths results for perceived warmth. Refer to Appendix Q for the MEMORE macro’s full pretest output.

Table 33

RO5 Pretest Parallel Mediation ‘a’ and ‘b’ Paths for Perceived Warmth

Pretest ‘a’ and ‘b’ paths				
Pretest ‘a’ path	Effect	P	LLCI	ULCI
(a_2) = PreUW – PreLW = M_2 diff	-.3659	.0000	-.4644	-.2674
Pretest ‘b’ path	Coeff	P	LLCI	ULCI
(b_2) = Perceived Warmth = M_2 diff	.1925	.1463	-.0682	.4532

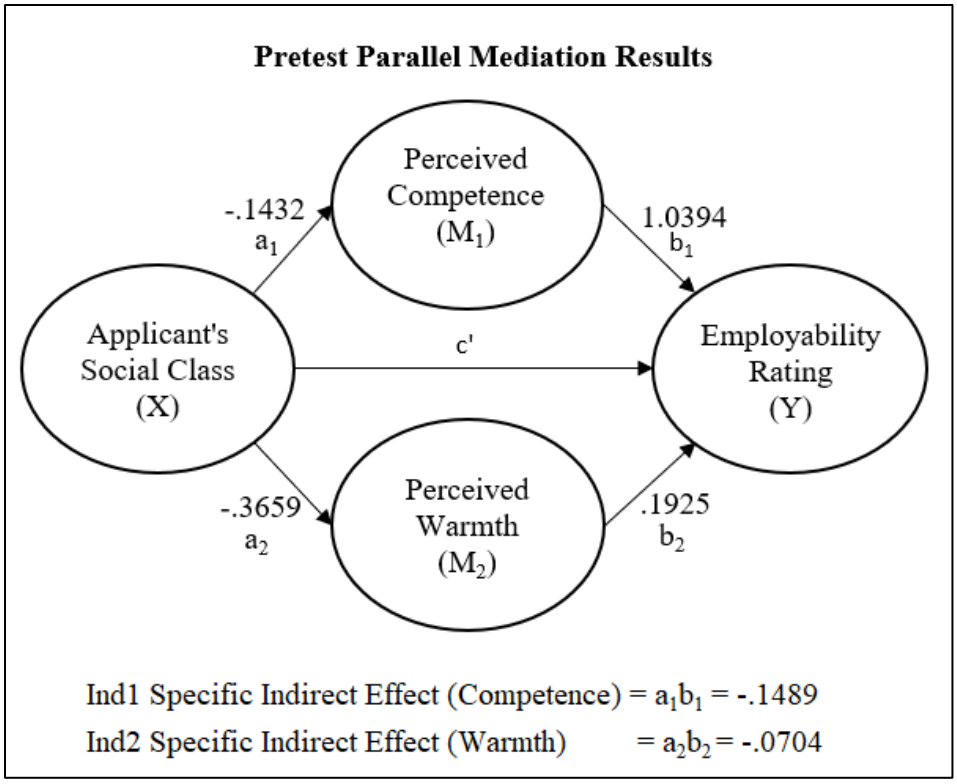

Figure 10. Pretest Parallel Mediation Diagram for RO5

Post-test. At the post-test, the specific indirect effect of applicant social class on employability through perceived warmth was significant because zero did not fall within the upper and lower bounds of the bootstrapped confidence interval (Montoya & Hayes, 2017). At the post-test, the indirect effect of applicant social class through the resumé screener's perceived warmth of the applicant was a_2b_2 = -0.6133(0.3209) = -0.1968, with a 95% bootstrap confidence interval CI [-0.3299, -0.0932]. The negative direction of the M_2 specific indirect effect (-0.1968) reveals that the effect of perceived warmth, controlling for perceived competence, led to lower employability ratings for the UMC applicant at the post-test. In other words, resumé screeners perceive UMC applicants as less warm than LMC applicants at post-test. Controlling for perceived competence, the indirect effect of social class on employability through perceived

warmth is related to lower employability scores for UMC applicants compared to LMC applicants after the study's intervention. Refer to Table 34 for the effect and confidence interval of the post-test specific indirect effect of perceived warmth.

Table 34

RO5 Post-test Specific Indirect Effect 'a_2b_2' for Perceived Warmth

Post-test total indirect effect 'ab'	Effect	LLCI	ULCI
Perceived Warmth (a_2b_2) = Ind_2	-.1968	-.3299	-.0932

The post-test parallel mediation 'a' paths output explains if there was a significant difference in the UMC and LMC warmth ratings. In this analysis, the MEMORE macro subtracted the LMC warmth ratings from the UMC warmth ratings (UMC – LMC). A significant difference exists if $p \leq .05$. There was a significant difference in post-test warmth ratings between UMC and LMC applicants ($p < .01$). The upper-middle-class applicant was perceived as less warm (-0.6133) at the post-test. Refer to Table 35 and Figure 11 for the post-test 'a' and 'b' path results for perceived warmth. Refer to Appendix R for the MEMORE macro's full post-test output.

Table 35 *RO5*

Post-test Parallel Mediation 'a' and 'b' Paths for Perceived Warmth

Post-test 'a' and 'b' paths				
Post-test 'a' path	Effect	P	LLCI	ULCI
(a_2) = PostUW – PostLW = M_2 diff	-.6133	.0000	-.7528	-.4738
Post-test 'b' path	Coeff	P	LLCI	ULCI
(b_2) = Perceived Warmth = M_2 diff	.3209	.0027	.1134	.5284

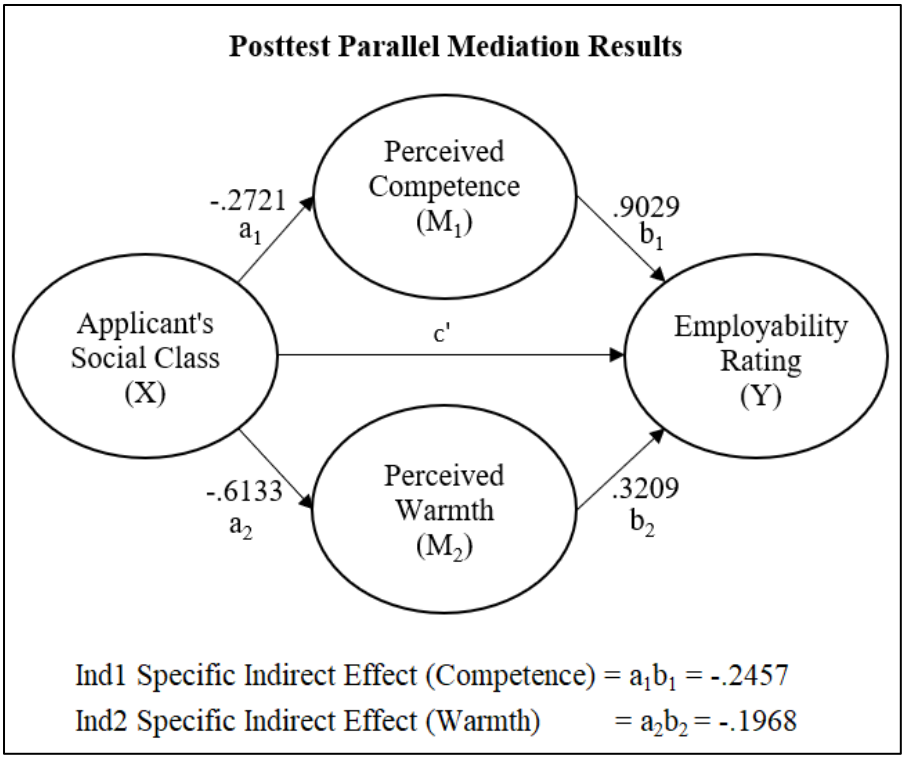

Figure 11. Post-test Parallel Mediation Diagram for RO5

Research Objective Six

The sixth research objective determined the relationship between the applicant's social class and the employability ratings mediated by both perceived warmth and competence.

The MEMORE macro's output section titled "TOTAL, DIRECT, AND INDIRECT EFFECTS" contains the total effect, direct effect, and indirect effects. The total effect is the sum of the direct effect and the total indirect effects (Montoya & Hayes, 2017). The total effect is found in the "Total effect of X on Y" sub-section. The MEMORE output provides the total indirect effects on the bottom line of the sub-section titled "Indirect Effect of X on Y through M."

Pretest

The pretest total indirect effect was statistically different from zero, *CI* [-0.3667, -0.0620]. The direct effect, c'= *Direct effect of applicant social class on employability*, was not statistically different from zero, 1.095(127), p = 0.2756, 95% *CI* [-.0730, .2539]. The total effect, *cˆ = Total effect of applicant social class on employability*, is the sum of the direct and indirect effects or (-0.2193) + (0.0904) = -0.1289. The total effect was not statistically different from zero, -1.3196(127), p = 0.1893, 95% *CI* [-.3222, .0644]. Refer to Figure 12 for the pretest total effect, direct effect, and the total indirect effect contained in the MEMORE output. Refer to Appendix Q for the MEMORE macro's full pretest output.

```
****************** TOTAL, DIRECT, AND INDIRECT EFFECTS *********************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
     -.1289      .0977    -1.3196   127.0000      .1893     -.3222      .0644

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      .0904      .0826     1.0950   123.0000      .2756     -.0730      .2539


Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1      -.1489      .0635     -.2714     -.0258
Ind2      -.0704      .0424     -.1524      .0138
Total     -.2193      .0773     -.3667     -.0620
```

Figure 12. Pretest Total and Direct Effects

Post-test

The post-test total indirect effect was significantly different from zero, CI [-0.6076, -0.2924]. The post-test direct effect, c'= *Direct effect of applicant social class on employability*, was not statistically different from zero, -1.2903(127), p = 0.1994, 95% CI [-0.2942, 0.0620]. The total effect, *cˆ = Total effect of applicant*

social class on employability, is the sum of the indirect and direct effects or (-0.4425) + (-0.1161) = -0.5586. The total effect was statistically different from zero -5.7851(127), $p < .001$, 95% CI [-0.7497, -0.3675]. Refer to Figure 13 for the post-test total effect, direct effect, and the total indirect effect contained in the MEMORE output. Refer to Appendix R for the MEMORE macro's full post-test output.

```
******* TOTAL, DIRECT, AND INDIRECT EFFECTS *******

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
     -.5586      .0966    -5.7851   127.0000      .0000     -.7497     -.3675

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
     -.1161      .0900    -1.2903   123.0000      .1994     -.2942      .0620

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1      -.2457      .0621     -.3739     -.1323
Ind2      -.1968      .0598     -.3299     -.0932
Total     -.4425      .0798     -.6076     -.2924
```

Figure 13. Post-test Total and Direct Effects

Summary

At the pretest, there was no significant difference in employability ratings between the UMC and LMC applicants, but there was at post-test, which is discussed in Chapter 5. A parallel mediation analysis revealed that at the pretest, perceived competence but not perceived warmth mediated the effect of social class on employability. At the post-test, both perceived competence and perceived warmth mediated the effect of social class on employability.

CHAPTER V – DISCUSSION

Organizations often exclude social class from diversity and inclusion initiatives (Ingram & Oh, 2022). According to Ingram and Oh (2022), people from the upper classes are 68% more likely to work in management roles. This study heeded the call to investigate interventions designed to increase organizational diversity, including social class (Stephens et al., 2021).

Bad hires in management are costly and lead to lost productivity and turnover among subordinates (Allen, 2019). Turnover costs are approximately 150% of each departing employee's salary (Allen, 2019). In sum, hiring the wrong people to develop for management roles is a barrier to achieving competitive advantage through human capital (Coff & Kryscynski, 2011).

Summary of the Study

This study aimed to determine if teaching resumé screeners how to control biased decision-making resulted in equal employability scores for upper-middle-class and lower-middle-class applicants in the context of a management training program. The survey instrument used the Stereotype Content Model's (Fiske et al., 2002) warmth and competence scales (Fiske, 2018) and the Cole et al. (2009) employment assessment scale. The target population was people in the United States who screened resumés for first-level managers or higher. The researcher recruited participants using the Amazon Mechanical Turk platform. The sampling frame was created based on self-reported responses for a pre-screening questionnaire where people self-reported their current job duties. Of the 340 people eligible to participate in the study, 189 had completed records in Qualtrics. Data cleaning resulted in the removal of 37 participants for gibberish

responses, 10 where people made multiple attempts to circumvent qualifying questions, and a further 14 due to straight-lined responses. The data the researcher used for analysis included 128 records.

Participants rated their perceived employability for upper-middle-class and lower-middle-class applicants during the pretest. Participants then rated one upper-middle-class and one lower-middle-class applicant on the Stereotype Content Model (Fiske et al., 2002) dimensions of perceived warmth and competence (Fiske, 2018). After providing their pretest responses, participants viewed four videos that (a) explained how human capital contributes to a competitive advantage, (b) provided an overview of a rotational management training program, (c) explained that social class is a source of bias, and (d) introduced tactics (FitzGerald et al., 2019, Devine et al., 2012) to control biased decision-making during resumé screening. Participants then received two new resumés, one UMC and one LMC, and rated them for employability (Cole et al., 2009), warmth, and competence (Fiske, 2018).

The theoretical underpinnings of the study included the Stereotype Content Model (Fiske et al., 2002), human capital theory (Becker, 1962), and dual process theory (Kahneman, 2011). Microlearning best practices discussed by Zhang and West (2020) and the ADKAR® personal change model informed the design of the training intervention. The training videos were delivered using a whiteboard animation software called Doodly.

The study's results from Chapter 4 provide information about the findings discussed in this chapter. This chapter provides the study's findings, limitations, implications for scholars and practitioners, and recommendations for future research.

Summary of Findings

There was no significant difference in employability ratings between UMC and LMC applicants at the pretest. At the pretest, the Stereotype Content Model (Fiske, 2018; Fiske et al., 2002) dimension of perceived competence mediated the effect of applicant social class on employability ratings. However, it was surprising that participants rated the pretest LMC applicant higher in perceived competence than the UMC applicant. This is surprising because it contrasts the Stereotype Content Model (Fiske, 2018; Fiske et al., 2002), which ascertains that, in general, people perceive wealthier individuals as more competent. In the context of this study, the wealthier person was the UMC applicant. Based on the theoretical underpinning of the Stereotype Content Model (Fiske, 2018; Fiske et al., 2002), the researcher expected higher competence ratings for the UMC applicant compared to the LMC applicant at the pretest.

At the post-test, there was a significant difference in employability ratings between UMC and LMC applicants. Participants assigned significantly greater employability ratings to LMC applicants than UMC applicants. At the post-test, participants rated the LMC applicant higher for both the perceived warmth and competence dimensions of the Stereotype Content Model (Fiske, 2018; Fiske et al., 2002).

Overall, these results provide evidence that the intervention activated the dual process theory System 2 process of decision-making. When System 2 decision-making is activated, the brain engages in a conscious and deliberate process (Kahneman, 2011) instead of automatically and subconsciously drawing on stored associations and stereotypes. The following section provides more details about the study's findings.

Findings, Conclusions, and Recommendations

This section includes findings, conclusions, and recommendations. The results presented in Chapter 4 inform the narrative in this section. Each finding includes a discussion and a conclusion narrative summarizing the finding. The researcher also provides recommendations for employers and HRD scholar-practitioners relative to each finding.

Finding 1

Counterstereotype imaging may result in positive perceptions of warmth when emphasizing positive traits of a negatively stereotyped group.

The training intervention's specific mention of LMC interpersonal skills as a leadership strength may have contributed to this finding. Perceived warmth did not mediate the effect of social class on employability ratings at the pretest but did at post-test. Perceived warmth was not expected to mediate the effect of social class on employability ratings, given the situational context of the rotational management training program as the job role.

Conclusion. This finding supports FitzGerald et al.'s (2019) discussion about using counterstereotype imaging as an anti-bias tactic. The training intervention's content about the benefits of interpersonal skills among lower-middle-class people could have contributed to the mediating effect of perceived warmth at the post-test. This finding also indicates that the counterstereotype content of the training intervention activated System 2 decision-making relative to the warmth dimension of the SCM. According to Kahneman (2011), System 2 thinking results in conscious and deliberate decision-making. As with other findings discussed in this section, this finding provides evidence

that post-intervention, participants made a conscious effort to review the resumés at the post-test.

Recommendation. When designing anti-bias training interventions, HRD practitioners should include counterstereotype content. Training interventions may cover positive traits commonly associated with a negatively stereotyped group. More specifically, training should include positive traits of the stereotyped groups that are also job role competencies.

Finding 2

Counterstereotype imaging may result in a preference for the marginalized group when the purpose is equalizing employability ratings for all fully qualified applicants.

There was evidence that resumé screeners employed conscious and deliberate decision-making about the lower-middle-class applicant post-intervention. The purpose of this study's training intervention was to equalize employability ratings between UMC and LMC applicants. There was a literature-based assumption (Thomas, 2018) that resumé screeners would have assigned higher employability ratings to the UMC applicant at the pretest. Thomas' (2018) study found that overall, resumé screeners preferred applicants whose resumés contained highbrow signals of taste in the context of middle-wage job roles in the hotel industry. In this study, there was no difference in employability ratings between the UMC and LMC applicants at the pretest. At the post-test, resumé screeners assigned higher employability ratings to the LMC applicant. Therefore, in the absence of biased behavior toward a marginalized group, counterstereotype imaging may trigger reactivity and subsequent inflation of employability ratings for the marginalized group.

Conclusion. This finding provides evidence that the treatment activated System 2 decision-making. According to Kahneman (2011), System 2 is a conscious and deliberate thought process. In other words, this finding indicates that the intervention resulted in a conscious and deliberate evaluation of LMC applicants. This finding also supports FitzGerald et al.'s (2019) discussion about the potential effectiveness of counterstereotype imaging. However, given the higher employability ratings for the LMC applicant compared to the UMC applicant at post-test, counterstereotype imaging may have resulted in reactivity. Reactivity occurs when participants attempt to provide responses they think the researcher wants (Shadish et al., 2002).

Recommendation. Training employees about social class bias during resumé screening may result in more favorable perceptions of LMC applicants. When practitioners design anti-bias interventions, learning outcomes should include the ability to equally consider fully qualified applicants. Training content should specifically address how to identify equally qualified applicants without consideration of social class signals of taste. Training content should also explain the concept of and how to avoid trainee reactivity.

Finding 3

Post-intervention, resumé screeners preferred applicants perceived as more competent with a situational context, or job role, of a rotational management training program.

Pretest baseline measurements found no difference in employability ratings between the upper-middle-class and lower-middle-class applicants. At the post-test, resumé screeners preferred the lower-middle-class applicant, and perceived competence

mediated the effect of applicant social class on employability. This finding means there is a relationship between the resumé screeners' perceived competence of an applicant and employability ratings. When there was a significant difference in employability ratings between the UMC and LMC applicants, resumé screeners preferred the applicant perceived as more competent. In this study, resumé screeners perceived the LMC applicant as more competent and, therefore, more employable at the post-test.

Conclusion. In this study, the applicant selected for the rotational management training program would begin employment as a first-level manager. Imhoff et al. (2013) found that on a 10-point scale, the position of manager is rated high competence (M = 7.73; SD = 1.72) and low warmth (M = 3.63, SD = 1.65). Also, Cuddy et al. (2011) discuss job role stereotype matching, which occurs when an employer attempts to match their perceptions of an applicant's warmth and competence to the degree of warmth and competence they think a job requires (Cuddy et al., 2011). For example, Cuddy et al. (2011) discussed the high proportion of women in cashier jobs because people generally perceive women as high in warmth. Therefore, the mediating effect of perceived competence may strengthen, weaken, or cease to exist depending on the type of job under investigation.

Recommendation. When training resumé screeners about social class bias during resumé screening, employers should understand the cognitive mechanisms that influence decision-making relative to the job role. Educating resumé screeners about how attitudinal evaluations influence decisions may help control biased behavior. When a job role requires higher levels of competence, implicit biases may cause lower perceptions of

competence for some groups of people. Subsequent decision-making could result in the exclusion of otherwise qualified applicants.

Finding 4

There was evidence that the attitudinal evaluations may not strictly adhere to the Fiske et al. (2002) Stereotype Content Model.

In contrast with the Stereotype Content Model (Fiske, 2018; Fiske et al., 2002), participants perceived the LMC applicant as more competent than the UMC applicant at the pretest. According to the Stereotype Content Model (Fiske et al., 2002), people judge others on the dimensions of warmth and competence. The higher a person's status, the higher others perceive their level of competence (Fiske, 2018).

Conclusion. This finding provides evidence that the attitudinal evaluations may not strictly adhere to the Fiske et al. (2002) Stereotype Content Model. This finding also contradicts Thomas' (2018) finding where participants perceived applicants whose resumés contained higher class signals of taste as more competent. A relationship may exist between the resumé screener's social class of origin and how they perceive the competence of people from the same or different social classes. However, investigating whether such a relationship exists was beyond the delimited scope of this study.

Recommendation. Employers should understand how resumé screeners form attitudinal evaluations of applicants from different social classes. An understanding of the factors contributing to attitudinal evaluations aids in the design of effective training interventions. For HRD practitioners, preliminary audience analysis should include investigating factors contributing to perceived competence of applicants in different social classes.

In summary, the findings of this study provide evidence that the training intervention activated the System 2 (Kahneman, 2011) process of decision-making, leading to higher employability ratings for the LMC applicant, compared to the UMC applicant, at the post-test. The parallel mediation analysis revealed that while competence influences employability ratings, participants perceived LMC applicants as more competent at both the pretest and post-test. While this finding contradicts the Stereotype Content Model (Fiske et al., 2002), it presents an opportunity for further investigation into the role of the SCM in decision-making during resumé screening.

Implications

According to Ingram and Oh (2022) and Williams et al. (2018), organizations typically omit social class bias diversity and inclusion initiatives. Stephens et al. (2021) noted that diversity initiatives should co-occur at the organizational and individual levels. The findings of this study provide a basis for employers to design anti-bias training for individuals. This section discusses this study's implications for HRD practitioners and scholars.

Practitioners

The findings of this study provide evidence that training resumé screeners about social class bias can have an immediate impact on behavioral outcomes. The intervention used in this study can provide a reference for HRD practitioners when designing anti-bias programs that address social class bias during resumé screening. However, the study's intervention is not meant to function as a stand-alone or "out-of-the-box" training solution.

HRD practitioners should approach anti-bias training from a holistic perspective (Stephens et al., 2021). As discussed in prior research, a diverse workforce spurs innovation (Hewlett et al., 2013). Practitioners should emphasize the importance of controlling biased decision-making at both the organizational and individual levels (Stephens et al., 2021).

Practitioners should educate people about social class bias and job role stereotypes. The job role provides a situational context during resumé screening that may influence the degree to which attitudinal evaluations influence perceptions of employability (Cuddy et al. 2011).

Individuals should understand the cognitive processes that lead to exclusionary behavior. Practitioners should educate people about non-evaluative social class signals our brains use to categorize others and how subconscious attitudinal evaluations influence behavioral outcomes.

Practitioners should consider a training design that maximizes learning transfer while minimizing delivery time when designing anti-bias training. Zhang and West (2020) discussed that when training design implements microlearning, the learner experiences minimal disruption in their normal workflow. The training intervention used in this study was based on microlearning concepts and totaled under seven minutes in viewing time. As demonstrated by the results of this study, resumé screeners rated LMC applicants higher for employability after viewing four videos totaling under seven minutes in run-time.

Once again, the researcher cautions against using this study's training intervention as a stand-alone solution. This study's training intervention focused on personal change

relative to only one source of bias and at a single time point. Practitioners should establish organizational goals, tailor training to those goals, provide clear learning outcomes, establish a baseline measurement, and define metrics to quantify results.

In summary, HRD practitioners can use this study's training intervention as a basis for developing one tailored to their respective organizations. Practitioners should educate resumé screeners about social class bias and job role stereotypes. Resumé screeners should understand the latent cognitive processes that occur during resumé screening. A training intervention designed using microlearning best practices and a personal change model may produce immediate results.

Scholars

The findings of this study contribute to the existing body of knowledge about anti-bias training. This study focused on social class bias as a source of implicit bias during resumé screening. The anti-bias tactics used in this study's training intervention were informed by the Devine et al. (2012) study and included self-awareness and counterstereotype imaging.

The study's findings provide evidence that the training intervention activated System 2 decision-making during resumé screening. Following the training intervention, participants rated lower-middle-class applicants significantly greater in employability than upper-middle-class applicants. This finding indicates that the intervention stimulated a conscious and deliberate evaluation of the resumés.

The most surprising finding in this study is that participants rated LMC applicants as more competent at both the pretest and post-test. Because this finding contradicts the Stereotype Content Model (Fiske et al., 2002), there is an opportunity for further research

about how the competence and warmth dimension of the SCM influence decision-making during resumé screening.

Limitations

The limitations identified for this study involve generalizability and participant behavior that may have adversely impacted data quality or inference of findings. The researcher identified four limitations for this study. The limitations of this study were a lack of generalizability, small sample size, self-reported data, and possible reactivity at post-test.

First, the study's findings may not generalize to study conditions that address social class bias for job roles other than a management training program. As seen in other research (Henderson, 2018; Rivera, 2011, 2012; Thomas, 2018), job roles may influence whether resumé screeners favor upper-class applicants. Rivera (2011, 2012) found that resumé screeners prefer upper-class applicants for job roles in 'elite' consulting, law, and finance firms. Thomas (2018) found a preference for upper-class applicants for customer-facing roles at an upscale hotel. However, Henderson (2018) found no preference for upper-class applicants when the job role (Training Specialist) requires extensive human interaction in a learning environment. In this study, fictional applicants were applying for a management training program. The researcher recommends replication using various job role scenarios.

Second, the study's sample size was n = 128. The sample size was limited to study submissions from participants who initially qualified for participation based on self-reported responses in the pre-screening questionnaire. The low small sample size resulted in an 8.66% margin of error (Raosoft, n.d.).

Third, this study relied on self-reported data from people registered as Amazon Mechanical Turk workers who self-reported that they screen resumés for first-level managers or higher as part of their current job duties. The study assumed that participants would respond truthfully. If participants did not truthfully self-report that they screened resumés for first-level managers or higher during the pretest, the sample might not have been representative of the target population.

The fourth limitation was the threat of participant reactivity. Reactivity during the post-test might have impacted data quality. Reactivity occurs when participants attempt to respond how they think the researcher wants (Shadish et al., 2002). The purpose of the intervention was to equalize perceived warmth, competence, and employability ratings between upper-middle-class and lower-middle-class applicants by stimulating System 2 decision-making. According to Shadish et al. (2002), reactivity to the experimental situation occurs when participants respond based on what they think the researcher wants. There was a potential for reactivity during the post-test (Shadish et al., 2002). The training videos provided specific information about two strategies one may use to control biased decision-making (Carter et al., 2020). Based on Shadish et al.'s (2002) discussion about reactivity, the content of the training videos may have influenced participants to inflate employability ratings for the lower-class applicants, which could have affected data quality.

Recommendations for Future Research

This study addressed a gap in the literature regarding a need for research on training interventions designed to increase diversity in organizations, including social class (Stephens et al., 2021). This study also sought to provide a basis for organizations to

develop effective training interventions to address social class bias during resumé screening. The post-test results indicated a preference for lower-middle-class applicants. This study determined that a training intervention that teaches resumé screeners how to control biased decision-making during resumé screening resulted in higher employability scores for LMC applicants at post-test.

The first recommendation for future research is to conduct the study using different job roles. The contextual hiring condition for this study was a rotational management training program. Based on Cuddy et al.'s (2011) discussion about stereotype matching relative to different types of job roles should result in varying degrees of initial employability ratings.

The second recommendation is to conduct the study using a longitudinal design. Future research could include a longitudinal design that utilizes short ‘training boosters.' Training boosters at numerous time points following the initial intervention would expand this study by implementing the ADKAR® personal change model reinforcement stage. This recommendation could benefit human resource development scholar-practitioners who work with organizations seeking effective anti-bias training initiatives.

The third recommendation for future research is to investigate the effects of the intervention in an organizational setting. This study recruited participants from Amazon Mechanical Turk who self-reported that they screen resumés for first-level managerial applicants and higher. Administration of the study in an organizational setting, whether as a one-shot training intervention or in a longitudinal design, could yield more significant insights into the real-world application and effectiveness of the training intervention.

The fourth recommendation for future research is to conduct the study using different versions of the training intervention. Devine et al.'s (2012) study informed the anti-bias tactics used in this study's training intervention. This study's anti-bias tactics were self-awareness and counterstereotype imaging. However, there are additional anti-bias tactics that should be investigated.

The fifth recommendation is to further investigate resumé screeners' perceptions of the Stereotype Content Model's (Fiske et al., 2002) warmth and competence dimensions on applicant employability. This study found that resumé screeners perceived LMC applicants as more competent at the pretest, contrasting with the Fiske et al. (2002) Stereotype Content Model and prior research (Thomas, 2018). Future research could investigate if there is a relationship between the resumé screener's social class of origin and perceptions of applicant competence and warmth.

Summary

This chapter provided an overview of the study and discussed the study's findings. This study presented a training intervention designed to control biased decision-making for individuals. This study's post-test results provide evidence that the training intervention activated System 2 decision-making during resumé screening. Perceived competence mediated the effect of social class on employability ratings at the pretest and again at the post-test. However, participants perceived the lower-middle-class applicant as more competent than the upper-middle-class applicant at both the pretest and post-test. Perceived warmth mediated the effect of social class on employability ratings at the post-test but not at the pretest. The mediating effect of perceived warmth at the post-test

provides evidence that the inclusion of positive traits framed as job role competencies contributes to System 2 decision-making.

This study's findings provide evidence that the anti-bias training intervention activated System 2 decision-making and resulted in more favorable perceptions of the lower-middle-class applicant. The training intervention used in this study provides HRD practitioners with a basis to design anti-bias training programs for individuals. Scholars may use this study to conduct further research and solidify theory-based training methods to control biased decision-making during resumé screening.

In conclusion, the primary contribution of this study is a training intervention that addresses how to consciously control social class bias during resumé screening. Even though this study's training intervention was specifically designed for a situational context of a rotational management training program, Human Resource Development practitioners can employ the framework of this study's intervention. The researcher's use of Bloom's taxonomy, action objectives, a personal change model, and previously researched anti-bias tactics facilitate effective learning transfer. With the detailed design elements of the training intervention included in this manuscript, Human Resource Development practitioners can transfer this knowledge into practice.

APPENDIX A– Permission to use ADKAR® Trademark

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Wed 6/9/2021 1:44 PM
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Please let me know, if you have any questions.

Sincerely,

Delanie Robertson
Growth Enablement Manager
Pronouns: she, her, hers
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APPENDIX B – Pre-Screening Questionnaire

Q1. Please indicate which of the following job duties you perform in your current job.

- Accounts payable/receivable
- Purchase internet services
- Prepare budgets
- Greet customers
- Database management
- Train employees
- Approve vendor contracts
- Approve computer hardware/software purchases
- Screen resumés/make hiring decisions
- Make business travel arrangements
- Purchase/lease company vehicles
- Manage factory operations
- Purchase medical equipment
- Use a company vehicle
- None of the above
- I am not currently employed

Qualtrics administers Question 2 on a new page if respondents select "Screen resumés/make hiring decisions" for the first screening question.

Q2. You indicated that you screen resumés as part of your current job duties. What category of job roles do you screen resumés for?

- Front-line workers
- Managers
- Directors
- Executives/C-Suite
- I made a mistake, I do not screen resumés or make hiring decisions

Item 3 is a decoy question used to prevent respondents from determining the combination of correct responses (Wessling et al., 2017). Item 3 is displayed if a participant selects "Prepare budgets" as a response for Q1.

Q3. You indicated that you prepare budgets as part of your current job duties. Please indicate the level of budget preparation you do at your organization.

- My department only
- 2-3 departments
- 4-5 departments
- 6-7 departments

I prepare all the budgets for my organization

APPENDIX C – Employment Assessment Scale

Employment Assessment Scale (Cole et al., 2009)

Scale for Q1:

1 = Extremely Negative, 2 = Somewhat Negative, 3 = Slightly Negative, 4 = Slightly Positive, 5 = Somewhat Positive, 6 = Extremely Positive

Q1. Taking everything into consideration regarding the applicant's resumé, what is your overall evaluation of the candidate?

Scale for Q2 to Q4:

1 = Extremely Unlikely, 2 = Somewhat Unlikely, 3 = Slightly Unlikely, 4 = Slightly Likely, 5 = Somewhat Likely, 6 = Extremely Likely

Q2. What is the likelihood you would be interested in interviewing the applicant?

Q3. What is the likelihood you would recommend hiring the applicant?

Q4. If hired for the hypothetical position, how likely is it that this applicant would succeed in the job?

APPENDIX D – Permission to use the Employment Assessment Scale

From: Cole, Michael <m.s.cole@tcu.edu>
Sent: Wednesday, April 28, 2021 10:07 AM
To: Mindy Gambino
Subject: RE: Permission to use the 2009 Employability Assessment scale

Dear Mindy –

Yes, of course. Best of luck with the dissertation and defending it!

Regards,

~Michael

From: Mindy Gambino <Mindy.Gambino@usm.edu>
Sent: Wednesday, April 28, 2021 8:41 AM
To: Cole, Michael <m.s.cole@tcu.edu>
Cc: Dale Lunsford <Dale.Lunsford@usm.edu>
Subject: Permission to use the 2009 Employability Assessment scale

[EXTERNAL EMAIL WARNING] DO NOT CLICK LINKS or open attachments unless you recognize the sender and know the content is safe.

Dr. Cole,

My name is Mindy Gambino. I am a Human Capital Development doctoral candidate at the University of Southern Mississippi. I want to request permission to use the four-item Employability Assessment scale published in your 2009 article, "Recruiters' Inferences of Applicant Personality Based on Resume Screening: Do Paper People have a Personality?", for my dissertation research. I would also like to request permission to reproduce the scale in the appendix of the dissertation. The scale items will not be sold or reproduced for commercial use.

My research focuses on reducing social class bias during resume screening. I will use the scale as a dependent variable. I will score the scale using the scoring protocol stated in the article.

Thank you for your consideration. I look forward to your response.

Respectfully,

Mindy K. Gambino, M.B.A., M.S.
Doctoral Candidate
The University of Southern Mississippi
Human Capital Development
School of Interdisciplinary Studies and Professional Development

APPENDIX E – Warmth and Competence Scales

Scale for Q9 – Q20: 1 = Not at all; 5 = Extremely

Please rate how well you think the following attributes match the applicant (1 = Not at all; 5 = Extremely).

Warmth Scale (Fiske, 2018)

Q1. Warm
Q2. Trustworthy
Q3. Friendly
Q4. Honest
Q5. Likable
Q6. Sincere

Competence Scale (Fiske, 2018)

Q7. Competent
Q8. Intelligent
Q9. Skilled
Q10. Efficient
Q11. Assertive
Q12. Confident

APPENDIX F – Permission to use the Warmth and Competence Scales

From: Susan T. Fiske <sfiske@princeton.edu>
Sent: Wednesday, April 28, 2021 8:45 AM
To: Mindy Gambino
Subject: Re: Permission to use warmth and competence scales
Attachments: Fiske Durante for Jetten Mutual Status Stereotypes Maintain Inequality.docx; Durante Fiske SES ineq COP 2017 print.pdf

Yes, of course; they are published scales with no restrictions.

Your topic is great. I enclose two review papers (somewhat overlapping). Probably you did not come across

Fiske, S. T., & Durante, F. (2019). Mutual status stereotypes maintain inequality. In J. Jetten & K. Peters (Eds.), *The social psychology of inequality* (pp. 335-348). Springer.

Best wishes for your project.
STF

--
Susan T. Fiske
Eugene Higgins Professor
Psychology and Public Affairs
Princeton University
www.fiskelab.org

From: Mindy Gambino <Mindy.Gambino@usm.edu>
Date: Wednesday, April 28, 2021 at 9:17 AM
To: Susan Fiske <sfiske@princeton.edu>
Cc: Dale Lunsford <Dale.Lunsford@usm.edu>
Subject: Permission to use warmth and competence scales

Dr. Fiske,

My name is Mindy Gambino. I am a Human Capital Development doctoral candidate at the University of Southern Mississippi. I want to request permission to use the warmth (warm, trustworthy, friendly, honest, likable, and sincere) and competence (competent, intelligent, skilled, efficient, assertive, and confident) scale items published in your 2018 article, "Stereotype Content: Warmth and Competence Endure", in my dissertation research. I would also like to request permission to reproduce the scales in the appendix of the dissertation. The scale items will not be sold or reproduced for commercial use.

My research is focused on reducing social class bias during resume screening. The warmth and competence scales will be used as mediator variables between applicant social class and applicant employability. I will score the scales in accordance with any scoring protocol you provide.

Thank you for your consideration. I look forward to your response.

Respectfully,

1

Mindy K. Gambino, M.B.A., M.S.
Doctoral Candidate
The University of Southern Mississippi
Human Capital Development
School of Interdisciplinary Studies and Professional Development

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Portions	Employability Assessment section and scale items

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APPENDIX G – Demographic Questionnaire

Demographic Questionnaire (Thomas, 2018)

Q1. What is your age

18-34 35-59 60+

Q2. What is your ethnicity?

African-American
Asian
Caucasian
Hispanic
Native American/Pacific Islander
Other
Prefer not to answer

Q3. What is your gender? *(open-ended question)*

Q4. What is the highest degree you have earned?

Less than High School
High School or equivalent
Associate's
Bachelor's
Master's
Doctorate/Professional (J.D./M.D.)

Q5. How many years of work experience reviewing resumés do you have? *(open-ended question)*

Q6. What industry are you currently working in? *(open-ended question)*

Q7. Please select which best describes your organization:

Private, for-profit
Private, non-profit
Local government
State government
Federal government
Self-employed small business owner
Self-employed or independent contractor; no other employees

Q8. How many people are employed with your organization?

1 2-10 11-99 100-999 1,000+ I don't know

Q9. Please select your social class of origin:

Poor
Working Class
Lower-Middle-Class
Upper-Middle-Class
Upper Class

APPENDIX H – Job Description

Job title: Rotational management training program

The rotational management training program provides a hands-on learning environment for management trainees. Participants in the program rotate through Marketing, Finance, and Human Resources during three six-month appointments over eighteen months. During the program, trainees work with cross-functional teams on various projects to further the organization's overall performance. Participants will have the opportunity to build professional relationships with internal and external stakeholders. Trainees who complete the program are offered a permanent position in a first-level management role.

Applicants must have a business degree in a related field. The degree must have been earned no longer than two years before applying for the rotational management training program.

Applicants are required to have the following qualifications:

- strong interpersonal skills
- the ability to adapt quickly to change
- strong analytical skills
- the ability to collaborate and effectively communicate with people at all levels of the organization

APPENDIX I – Resumé Templates

	Lower-Middle Class	
	Pretest	**Post-test**
Name	Michael Johnson	Joshua Williams
College	Georgia Tech	Auburn University
Degree	Bachelor of Science Business Administration Major: General Business Graduation date: May 2021	Bachelor of Science Business Administration Major: Management Graduation date: May 2021
GPA	3.84	3.84
Work History	Baxter's Bistro Server August 2018 – March 2020 • Provided a superior customer experience for guests in a fast-paced environment • Used upselling techniques to increase sales of high margin food and alcohol items • Trained new employees on the point of sale systems and sales procedures • Highest food sales award in 2019	Brewer's Motel Front Desk Clerk January 2018 – March 2020 • Served customers in a fast-paced environment • Processed check-in and check-out transactions • Provided training for new hires on the reservation system • Maintained a 99% customer service rating throughout employment
Music Club	Bluegrass Music Appreciation Club August 2018 – May 2021	Country & Western Music Appreciation Club December 2018 – May 2021
Sports	Bowling League – Treasurer January 2018 – May 2021	Boxing Team June 2018 – May 2021

	Upper-Middle Class	
	Pretest	**Post-test**
Name	Jacob Anderson	Matthew Davis
College	Louisiana State University	University of Tennessee
Degree	Bachelor of Science Business Administration Major: General Business Graduation date: May 2021	Bachelor of Science Business Administration Major: Management Graduation date: May 2021
GPA	3.84	3.84
Work History	Nebula Hotel Group Internship – Business to Business Sales January 2021-May 2021 • Assisted with convention sales for new clients • Updated client communication in sales management software • Used mass email software to send promotional offers and newsletters	Aucoin Restaurant Group Social Media Specialist January 2021-May 2021 • Maintained social media pages in accordance with company procedures • Submitted ad copy for online advertising campaigns • Monitored performance of ad campaigns and sent reports to company executives
Music Club	Classical Music Club January 2018 – May 2021	Opera Music Appreciation Club June 2018 – May 2021
Sports	Golf Team July 2018 – May 2021	Sailing Team August 2018 – May 2021

APPENDIX J – Training Script

Video	Learning Points for the Video	Video_Scene_Line WITH CITATIONS
Video 1	1. Human capital leads to a competitive advantage (DeNisi et al., 2003).	**Video 1 Scene 1** 1.1.1 An organization may achieve a competitive advantage through human capital by hiring the right person at the right time (Coff & Kryscynski, 2011). 1.2.1 The human capital that leads to a competitive advantage adds value to the organization's output, is difficult to duplicate and is not easily replaceable (del Valle & Castillo, 2009).
	2. Organizations use management training programs to develop future leaders (Chang & Busser, 2017).	**Video 1 Scene 2** 1.2.1 Many organizations use rotational management training programs to strategically develop future leaders (Gabriel et al., 2020). 1.2.2 Rotational management training programs provide a hands-on learning environment for a fixed time period (Gabriel et al., 2020). 1.2.3 Trainees may rotate through departments such as operations, marketing, or human resources (Gabriel et al., 2020). 1.2.4 Before an organization can use management training programs to develop the human capital that leads to a competitive advantage, the right candidates must be selected (Gabriel et al., 2020). 1.2.5 As a resumé screener, your role is very important in deciding which applicants are selected for further consideration.
	3. Recent college graduates with limited work experience are often selected to participate in management training programs (Gabriel et al., 2020).	**Video 1 Scene 3** 1.3.1 Recent college graduates are often selected to participate in management training programs (Gabriel et al., 2020). 1.3.2 Since recent graduates typically have very little work experience, resumé screeners interpret the limited information on an applicant's resumé to estimate their future worth (Spence, 1973). 1.3.3 When a resumé screener's personal biases

Video	Learning Points for the Video	Video_Scene_Line WITH CITATIONS
	4. Social class is a source of biased decision-making during resumé screening (Rivera and Tilcsik, 2016).	influence their decisions, they may recommend applicants who are not the best fit. 1.3.4 A source of personal bias that can influence whether a qualified applicant is excluded from further consideration is the applicant's social class (Rivera, 2011, 2012; Rivera & Tilcsik, 2016; Thomas, 2018).
Video 2	1. Biased decision-making during resumé screening impedes competitive advantage.	**Video 2 Scene 1** 2.1.1 During resumé screening, subconscious biases may impact decision-making and result in the exclusion of qualified applicants (Derous & Ryan, 2019). 2.1.2 Subconscious or implicit biases can impact our decision-making without us even knowing (National Institute of Health, n.d.). 2.1.3 This is important because biased decision-making can hinder the organization's ability to acquire the human capital that may lead to a competitive advantage.
	2. Social class bias forms during childhood (Shutts et al., 2016; Sigelman, 2012; Woods et al., 2005).	**Video 2 Scene 2** 2.2.1 Where does bias about social class come from? 2.2.2 Beginning at a young age, our brains form associations with rich and poor (Gonzalez et al., 2017). 2.2.3 Research has shown that young children think of rich as good and poor as bad. 2.2.4 Older children have been found to associate better academic performance with upper-class students (Woods et al., 2005). 2.2.5 Generally speaking, one stereotype trait is that upper-class people have higher levels of competence (Fiske et al., 2002). 2.2.6’Let's take a look at how the brain formulates a PERCEIVED social class of an applicant.
	3. How the brain uses signals to form a perceived social class	**Video 2 Scene 3** 2.3.1 Our brains like to put things in categories so we can quickly sort information. 2.3.2 We already learned that basic associations

Video	Learning Points for the Video	Video_Scene_Line WITH CITATIONS
	of an individual (Thomas, 2018) and apply stereotypes to an individual (Kanahara, 2006).	form in early childhood. 2.3.3 When we have limited information about a person, our brain processes the available information to recall an association (Moskowitz et al., 2012). 2.3.4 The association leads to the brain using widely held stereotypes about groups of people to form an impression about the individual (Moskowitz et al., 2012). 2.3.5 For example, a person plays golf at a private club, the brain associates golf with an upper-class person, and a stereotype is that upper-class people are more competent than lower-class people. 2.3.6 Therefore, the brain applies the group stereotype to the person and tells us this person is competent (Kanahara, 2006). 2.3.7 This all happens without our conscious awareness and within a fraction of a second (Moskowitz et al., 2012).
Video 3	1. Sports are social class signals (Thomas, 2018).	**Video 3 Scene 1** 3.1.1 Sports and music are two social class signals our brains use to form a perceived social class (Thomas, 2018). 3.1.2 Sports such as golf and tennis are commonly associated with more upper-class people, and sports such as bowling are associated with lower classes (Thomas, 2018). 3.1.3 Of course, people from any class may like or participate in any of these sports. 3.1.4 These examples are to show how the brain uses these common associations, not how accurate the associations actually are (Rivera & Tilcsik, 2016).
	2. Music genre is a social class signal (Thomas, 2018)	**Video 3 Scene 2** 3.2.1 Another signal of social class is a person's taste in music (Thomas, 2018). 3.2.2 For example, music genres such as classical and jazz are associated more with upper-class people (Thomas, 2018). 3.2.3 Musical genres that are more associated

Video	Learning Points for the Video	Video_Scene_Line WITH CITATIONS
	3. Prior job roles are social class signals. Recap Video 3 and Transition to Video 4	with people from lower social classes include metal and bluegrass (Thomas, 2018). **Video 3 Scene 3** 3.3.1 Employment history during college is another signal of social class. 3.3.2 People from lower classes are associated with work roles in low-status jobs in the service industry. 3.3.3 Studies have shown that upper-class students are more likely to work in jobs or internships that provide a foundation for a professional career (Csikszentmihalyi & Schneider, 2001). **Video 3 Scene 4** 3.4.1 We have now discussed how implicit associations about social class influence how our brains form an impression of a person. 3.4.2 We also covered how the brain uses the limited information on a recent college graduate's resumé to form an impression of the applicant. 3.4.3 Now, let's review a few ways to mitigate social class bias on decision-making during resumé screening.
Video 4	1. Explain two tactics participants can use to reduce biased behavior (Carter et al., 2020). a. Self-awareness b. Counterstereotype Imaging	**Video 4 Scene 1** 4.1.1 In order for us to control the effects of social class bias on our decision-making during resumé screening, we must be aware that the bias exists (Devine et al., 2012; Kahneman, 2011) and the situations that trigger it (Kahneman, 2011). 4.1.2 Earlier, we discussed how stereotypes are associated with job roles. 4.1.3 When our brains automatically associate a particular type of person with leadership roles, this creates a situation where biased decision-making can occur (Cuddy et al., 2011). **Video 4 Scene 2** 4.2.1 One method we can use to offset biased

Video	Learning Points for the Video	Video_Scene_Line WITH CITATIONS
		decision-making is called counter-stereotype imaging (Devine et al., 2012). 4.2.2 We can use counter-stereotype imaging to train our brains to create a positive association with a stereotyped group (Devine et al., 2012). 4.2.3 Our brains construct and store profiles of what types of people are employed in leadership roles (Martin et al., 2017). 4.2.4 As we have discussed, our brains use signals on a resumé to form a perceived social class of the applicant and then automatically apply the stereotype to the individual. 4.2.5 One common stereotype is that people from lower social classes are less competent (Fiske et al., 2002). 4.2.6 Using counter-stereotype imaging, we can think of a person from a lower social class background as a successful leader. 4.2.7 People from lower social classes may be in leadership roles at all levels of the organization, including CEO. 4.2.8 Also, research has shown that people from lower social classes may have a greater ability to effectively utilize their interpersonal skills when leading their employees (Ingram & Oh, 2022). **Video 4 Scene 3**
	2. Encourage the participant to practice the strategies in their daily lives.	4.3.1 We have discussed a few ways we can train our brains to control biased decision-making during resumé screening. 4.3.2 Think about how you can apply these exercises. 4.3.3 Even though you already have a lot to do, these brain exercises are easy to practice. 4.3.4 All we need is a conscious awareness of the bias and what triggers it (Kahneman, 2011). 4.3.5 Then, we simply make a conscious effort to remove the bias from our decision-making process.

APPENDIX K – IRB Approval Letter

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

118 COLLEGE DRIVE #5116 • HATTIESBURG, MS | 601.266.6756 | WWW.USM.EDU/ORI

NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below 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 regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and 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 involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER:	21-257
PROJECT TITLE:	Social class & employability: Equalizing perceived competence and warmth to control biased decision-making during resume screening
SCHOOL/PROGRAM	School of Leadership
RESEARCHERS:	PI: Mindy Gambino Investigators: Gambino, Mindy~Lunsford, Dale~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	13-Jan-2022 to 12-Jan-2023

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX L – MTurk Portal Public-facing Descriptions of the Pre-screener and Study

Item	MTurk Description Displayed
Pre-screener Title	Paid screener with an opportunity for an academic study that pays over $3.00 (~1 minute)
Pre-screener Brief Description	Answer a few questions about your job duties. This pre-screener should take about one minute to complete after reading the informed consent form and entering your MTurk worker ID. However, the timer is set to 20 minutes. Qualifying workers will be eligible to participate in an academic study that takes approximately 35 minutes to complete and pays over $3.00.
Survey Instructions	You MUST be at least 18 years of age and physically located in the United States to participate in this pre-screening questionnaire. You will answer a few questions about your job duties. Qualifying workers will be eligible to participate in an academic study that takes approximately 35 minutes to complete and pays over $3.00. You may only complete and submit this HIT ONCE; you will NOT receive ANY compensation if you complete and submit this HIT more than once. You must accept the HIT before you can access the questionnaire via the link on this page. Make sure to leave this window open as you complete the questionnaire. At the end of the questionnaire, you will receive a completion code. When you are finished, you will return to this page to paste the code into the box. The researcher uses a software that collects IP addresses for the purpose of determining what country a participant is located in because only participants located in the United States are eligible for participation. Before beginning the questionnaire, you will complete a CAPTCHA, receive a notification to disable any VPN or VPS you may be using, and you will receive an informed consent form. If you do not wish to participate after reading the informed consent form, you must close the study tab/window and return the HIT in MTurk to avoid a rejection. You will be asked to enter your MTurk worker ID.

Item	MTurk Description Displayed
	This pre-screener should take about one minute to complete after reading the informed consent form and entering your MTurk worker ID. However, the timer is set to 20 minutes. If you submit an incomplete HIT, the HIT is subject to rejection with no compensation. The researcher is a doctoral student. This survey is part of the researcher's doctoral dissertation assignment. The researcher does not receive funding to administer this questionnaire.
Study Title	Resumé screening study – pre-screener required (~35 minutes)
Study Brief Description	This is an academic study about resumé screening that is part of the researcher's dissertation assignment. You qualify for participation based on your answers to a pre-screener you took.
Study Description	You MUST be at least 18 years of age and physically located in the United States to participate. You may only complete and submit this HIT ONCE; you will NOT receive ANY compensation if you complete and submit this HIT more than once. You are invited to participate in an academic study about resumé screening. You qualify for participation based on your answers to a pre-screener you participated in. Before beginning the study, you will complete a CAPTCHA, and you will receive an informed consent form. If you do not wish to participate after reading the informed consent form, you must close the study tab/window and return the HIT in MTurk to avoid a rejection. You will be asked to enter your MTurk worker ID. You will also answer a question or two about your current job duties. The study includes reading a job description, answering a question about the job description, viewing some resumés, answering questions about the resumés, watching four informative videos that are each about two minutes long, answering some questions about the videos, and answering some demographic questions. You will need to answer one or two multiple-choice questions after each video that are about the content of the video you just watched. After watching all the videos, you will write a total of 2-3 concise sentences about the subject matter of the videos as a whole; there are two specific

Item	MTurk Description Displayed
	topics provided for guidance. This is not a long writing task and is meant to gauge if you understood the content of the videos. All attention check questions allow two attempts. If any single attention check question is answered incorrectly twice, the participant is disqualified from further participation in the study. Please participate in the study in a quiet environment where you will not be distracted. The researcher used a pilot test to determine the estimated completion time. The length of time to complete the study may vary from the stated completion time, depending on your individual circumstances. The timer is set for two hours. THIS STUDY IS NOT OPTIMIZED TO WORK ON MOBILE DEVICES OR TABLETS. PLEASE USE A DESKTOP OR LAPTOP COMPUTER WITH AUDIO TO PARTICIPATE IN THIS STUDY. LEAVE THIS WINDOW OR TAB OPEN AS YOU WORK ON THE STUDY. At the end of the study, you will receive a completion code you must copy and paste into the completion code box on this page. If at any time you wish to withdraw from the study, close the study's tab or window and return the HIT to avoid a rejection. Participants who do not complete the survey do not receive compensation for participation. If you submit an incomplete HIT, the HIT is subject to rejection with no compensation. The researcher is a doctoral student. This study is part of the researcher's doctoral dissertation assignment. The researcher does not receive funding to conduct this study.

APPENDIX M – Administration Details

Pre-screening Questionnaire

The researcher administers the pre-screening questionnaire during the sample recruitment stage, which occurs during a one-week before the administration of the actual study.

Participants may opt-in to the pre-screening questionnaire via the MTurk platform. Participants access the pre-screening questionnaire that is hosted on Qualtrics by clicking a link in the MTurk portal. Upon entering the Qualtrics platform, participants must complete a CAPTCHA, which detects whether a human or a bot is attempting to participate. Upon completing the CAPTCHA, a new page opens, and participants receive instructions to disable any VPN or VPS they may be using.

A new page opens that contains the informed consent statement. Participants must check that they agree to participate in the pre-screening questionnaire after reading the informed consent statement.

If the participant's IP address indicates that they are using a VPN or VPS, are geographically located outside the United States, or their country of location cannot be determined, they receive one of the following notifications based on Winter et al.'s (2019) protocol:

VPS Notification

> Our system has detected that you are using a Virtual Private Server (VPS) or proxy to mask the country in which you are geographically located.
>
> Because of this, we cannot allow you to participate in this questionnaire.

If you are geographically located in the United States and feel you have received this message in error, please report it to the researcher (mindy.gambino@usm.edu) and enter your MTurk worker ID below.

Outside US Notification:

Our system has detected that you are attempting to participate in the questionnaire from a geographic location outside the United States of America. Unfortunately, this questionnaire only allows participation from a geographic location inside the U.S. and we cannot accept participants who are geographically located outside the U.S. (including U.S. citizens located outside the U.S.).

Cannot Detect Country Notification

Our system is not able to detect the country in which you are located. We ask that you assist us in getting this protocol correct. Please enter your MTurk worker ID below and contact the researcher to report the problem if you like (mindy.gambino@usm.edu).

Once you click the Next button, you will be allowed to participate in the questionnaire. By clicking the Next button and participating in the questionnaire, you certify that you are geographically located in the United States of America and are not using a Virtual Private Server. We will check your locating manually, and you will be contacted if our checks identify you violate these requirements. Please enter your MTurk ID below.

A new page opens for participants who are not flagged by the geographic location detection, and participants enter their MTurk worker ID in a text field.

A new page opens that contains Q1 shown below.

Q1. Please indicate which of the following job duties you perform in your current job.

Accounts payable/receivable
Purchase internet services
Prepare budgets
Greet customers
Database management
Train employees
Approve vendor contracts
Approve computer hardware/software purchases
Screen resumés/make hiring decisions
Make business travel arrangements
Purchase/lease company vehicles
Manage factory operations
Purchase medical equipment
Use a company vehicle
None of the above
I am not currently employed

Qualtrics administers Question 2 on a new page if respondents select "Screen resumés/make hiring decisions" for the first screening question.

Q2. You indicated that you screen resumés as part of your current job duties. What category of job roles do you screen resumés for?

Front-line workers
Managers
Directors
Executives/C-Suite
I made a mistake, I do not screen resumés or make hiring decisions

Item 3 is a decoy question used to prevent respondents from determining the combination of correct responses (Wessling et al., 2017). Item 3 is displayed if a participant selects "Prepare budgets" as a response for Q1.

Q3. You indicated that you prepare budgets as part of your current job duties. Please indicate the level of budget preparation you do at your organization.

My department only
2-3 departments
4-5 departments
6-7 departments
I prepare all the budgets for my organization

At the end of the pre-screening questionnaire, a participant receives a survey completion code. The participant receives instructions to enter the completion code into the appropriate text field in the MTurk platform.

Administration of the Study

Participants opt-in to the study via the MTurk platform. Participants access the study that is hosted on Qualtrics by clicking a link in the MTurk portal. Upon entering the Qualtrics platform, participants must complete a CAPTCHA, which detects whether a human or a bot is attempting to participate.

A new page opens that contains the informed consent statement. Participants must check that they agree to participate in the study after reading the informed consent statement.

A new page opens, and participants enter their MTurk worker ID in a text field.

A new page opens. Participants receive an item where they self-report job duties they perform in their current job.

Please indicate which of the following job duties you perform in your current job.

- Accounts payable/receivable
- Purchase internet services
- Prepare budgets
- Greet customers
- Database management
- Train employees
- Approve vendor contracts
- Approve computer hardware/software purchases
- Screen resumés/make hiring decisions
- Make business travel arrangements
- Purchase/lease company vehicles
- Manage factory operations
- Purchase medical equipment
- Use a company vehicle
- None of the above
- I am not currently employed

If participants select that they screen resumés/make hiring decisions, a new page opens and participants self-report the positions for which they screen resumés/make hiring decisions.

> You indicated that you screen resumés as part of your current job duties. What category of job roles do you screen resumés for?
>
> Front-line workers
> Managers
> Directors
> Executives/C-Suite
> I made a mistake, I do not screen resumés or make hiring decisions

If participants do not self-report that they screen resumés/make hiring decisions as part of their current job duties, they receive a notice that their responses do not match the qualifying responses they submitted during their participation in the pre-screener. The notice states that the participant is disqualified from further participation.

> Participation in this study is restricted to people located in the United States who meet certain requirements, including specific qualifying criteria relative to the job duties participants perform at their current job.
>
> The qualifying responses you submitted during your participation in the pre-screening questionnaire do not match your current responses.
>
> Unfortunately, you are disqualified from further participation in the study.
>
> Please close the survey tab and return the HIT in MTurk to avoid a rejection.

A new page opens. Participants receive a notification about the presence of attention check questions throughout the study. At the bottom of the page, participants answer an item about their agreeance to pay attention and answer truthfully and accurately throughout the study.

Do you agree that you will pay careful attention as you participate in this study and provide truthful and accurate responses for all questions in the study?

Yes, I agree that I will pay careful attention as you participate in this study and provide truthful and accurate responses for all questions in the study.

No, I do not agree to pay attention or provide truthful and accurate responses.

Job Description Shown to Participants

A new page opens. The job description for the rotational management program appears on the page. Refer to Appendix H for the job description. There is an attention check question at the bottom of the page. The attention check question is:

What is a required qualification based on the job description you just read?

Know how to use a copy machine

Have a commercial driver's license

Ability to collaborate and effectively communicate with people at all levels of the organization.

Participants are allowed two attempts to answer the attention check question correctly. If a participant answers the attention check question incorrectly a second time, they are disqualified from further participation in the study and receive a disqualification notification.

Pretest (Administered twice, once for LMC and once for UMC)

A new survey page opens. The participant receives both resumés simultaneously (on the same page) and is instructed to review both resumés. This is a read-only task. The participant does not rate the resumés at this time. The participant answers an attention check question about the content of each resumé (one question total). The attention check

question is on the same page as the resumés. The pretest attention check question that appears on the same page as both resumés is:

Jacob Anderson worked in a _____ during college, and Michael Johnson was in a _____ music club.

Washed cars & Classical

Internship in Business to Business Sales & Country

Worked on copy machines & Hip-Hop

Participants are allowed two attempts to answer the attention check question correctly. If a participant answers the attention check question incorrectly a second time, they are disqualified from further participation in the study and receive a disqualification notification.

A new survey page opens. The participant receives the upper-middle-class resumé again and rates the applicant's employability using the four-item Employment Assessment Scale (Cole et al., 2009). Only the upper-middle-class resumé and scale are visible on the page. The resumé remains visible on the same page as the scale.

Employment Assessment Scale (Cole et al., 2009)
Scale for Q1:
1 = Extremely Negative, 2 = Somewhat Negative, 3 = Slightly Negative, 4 = Slightly Positive, 5 = Somewhat Positive, 6 = Extremely Positive

Q10. Taking everything into consideration regarding the applicant's resumé, what is your overall evaluation of the candidate?

Scale for Q2 to Q4:
1 = Extremely Unlikely, 2 = Somewhat Unlikely, 3 = Slightly Unlikely, 4 = Slightly Likely, 5 = Somewhat Likely, 6 = Extremely Likely

Q11. What is the likelihood you would be interested in interviewing the applicant?
Q12. What is the likelihood you would recommend hiring the applicant?
Q13. If hired for the hypothetical position, how likely is it that this applicant would succeed in the job?

A new survey page opens. The participant receives the lower-middle-class resumé again and rates the applicant's employability using the four-item Employment Assessment Scale (Cole et al., 2009). Only the lower-middle-class resumé and scale are visible on the page. The resumé remains visible on the same page as the scale.

Employment Assessment Scale (Cole et al., 2009)
Scale for Q5:
1 = Extremely Negative, 2 = Somewhat Negative, 3 = Slightly Negative, 4 = Slightly Positive, 5 = Somewhat Positive, 6 = Extremely Positive

Q14. Taking everything into consideration regarding the applicant's resumé, what is your overall evaluation of the candidate?

Scale for Q6 to Q8:
1 = Extremely Unlikely, 2 = Somewhat Unlikely, 3 = Slightly Unlikely, 4 = Slightly Likely, 5 = Somewhat Likely, 6 = Extremely Likely

Q15. What is the likelihood you would be interested in interviewing the applicant?

Q16. What is the likelihood you would recommend hiring the applicant?

Q17. If hired for the hypothetical position, how likely is it that this applicant would succeed in the job?

A new survey page opens. The participant receives the upper-middle-class resumé a third time and rates the applicant on the warmth and competence dimensions of the Stereotype Content Model (Fiske, 2018). Only the upper-middle-class resumé and scale are visible on the page. The resumé remains visible on the same page as the scales.

Scale for Q9 – Q20: 1 = Not at all; 5 = Extremely

Please rate how well you think the following attributes match the applicant (1 = Not at all; 5 = Extremely).
Warmth Scale (Fiske, 2018)

Q18. Warm
Q19. Trustworthy
Q20. Friendly
Q21. Honest
Q22. Likable
Q23. Sincere

Competence Scale (Fiske, 2018)

Q24. Competent
Q25. Intelligent

Q26. Skilled
Q27. Efficient
Q28. Assertive
Q29. Confident

A new survey page opens. The participant receives the lower-middle-class resumé a third time and rates the applicant on the warmth and competence dimensions of the Stereotype Content Model (Fiske, 2018). Only the lower-middle-class resumé and scales are visible on the page. The resumé remains visible on the same page as the scale.

Scale for Q21 – Q32: 1 = Not at all; 5 = Extremely

Please rate how well you think the following attributes match the applicant (1 = Not at all; 5 = Extremely).

Warmth Scale (Fiske, 2018)

Q30. Warm
Q31. Trustworthy
Q32. Friendly
Q33. Honest
Q34. Likable
Q35. Sincere

Competence Scale (Fiske, 2018)

Q36. Competent
Q37. Intelligent
Q38. Skilled
Q39. Efficient
Q40. Assertive
Q41. Confident

This concludes the administration of the pretest.

Training Videos

A new page opens. Participants receive viewing instructions for the training videos.

A new page opens that contains the first training video. After viewing the first training video, a new page opens containing the first attention check question for Video 1.

Note, for all attention check questions associated with the videos, participants are allowed two attempts to answer any single attention check question correctly. First

attempt attention check questions for the videos appear on a page that displays only the attention check question, but not the video. If the second attempt is administered, it is displayed on a new page where the respective video and the attention check question are displayed on the same page. When attempting an attention check question for the videos a second time, participants may view the video again if they like. If a participant answers the attention check question incorrectly a second time, they are disqualified from further participation in the study and receive a disqualification notification. The attention check questions for each video are below.

Video	**Question and Choices**	**Correct Response**
1	What leads to a competitive advantage? Meetings Taking away vacation time Human Capital	Human Capital
1	What do organizations use to strategically develop future leaders? Weekly meetings Pizza parties Rotational management training programs	Rotational management training programs
2	What is the result of biased decision-making during resumé screening? Qualified applicants may be excluded from further consideration It hinders the organization's ability to acquire the human capital that leads to a competitive advantage Both a and b	Both a and b
2	What is a source of bias during resumé screening? The applicant doesn't know calculus The applicant's social class The applicant doesn't meet any of the minimum job qualifications	The applicant's social class
3	What are some things on a recent college graduate's resumé that signal social class? The type of sports they participated in during college The type of music club they were in during college The type of jobs they had during college All of the above	All of the above

4	How can we reduce biased decision-making during resumé screening? Make a conscious effort to eliminate biased decision-making Have an awareness of the bias and what triggers it Learn to think of the stereotyped group differently All of the above	All of the above

After participants view all four videos, they are presented with a final attention check question, which is:

Please write a two to three sentence summary explaining:

1. Why it is important to reduce social class bias during resumé screening.
2. What you can do to reduce social class bias during resumés screening.

Post-test Job Description Shown to Participants

A new page opens, and the same job description for the rotational management program shown during the pretest appears on the page. There is not an attention check question for the post-test job description.

Post-test (Administered twice, once for LMC and once for UMC)

A new survey page opens. The participant receives both resumés simultaneously (on the same page) and is instructed to review both resumés. This is a read-only task. The participant does not rate the resumés at this time. The participant answers an attention check question about the content of each resumé (one question total). The attention check question is on the same page as the resumés. The post-test attention check question that appears on the same page as both resumés is:

Matthew Davis was on the ____ team during college, and Joshua Williams worked as a _____.

Bowling & Law Clerk

Sailing & Barista

Croquet & Intern at a Senator's office

Participants are allowed two attempts to answer the attention check question correctly. If a participant answers the attention check question incorrectly a second time, they are disqualified from further participation in the study and receive a disqualification notification.

A new survey page opens. The participant receives the upper-middle-class resumé again and rates the applicant's employability using the four-item Employment Assessment Scale (Cole et al., 2009). Only the upper-middle-class resumé and scale are visible on the page. The resumé remains visible on the same page as the scale.

Employment Assessment Scale (Cole et al., 2009)
Scale for Q33:
1 = Extremely Negative, 2 = Somewhat Negative, 3 = Slightly Negative, 4 = Slightly Positive, 5 = Somewhat Positive, 6 = Extremely Positive

Q42. Taking everything into consideration regarding the applicant's resumé, what is your overall evaluation of the candidate?

Scale for Q34 to Q36:
1 = Extremely Unlikely, 2 = Somewhat Unlikely, 3 = Slightly Unlikely, 4 = Slightly Likely, 5 = Somewhat Likely, 6 = Extremely Likely

Q43. What is the likelihood you would be interested in interviewing the applicant?

Q44. What is the likelihood you would recommend hiring the applicant?

Q45. If hired for the hypothetical position, how likely is it that this applicant would succeed in the job?

A new survey page opens. The participant receives the lower-middle-class resumé again and rates the applicant's employability using the four-item Employment Assessment Scale (Cole et al., 2009). Only the lower-middle-class resumé and scale are visible on the page. The resumé remains visible on the same page as the scale.

Employment Assessment Scale (Cole et al., 2009)

Scale for Q37:

1 = Extremely Negative, 2 = Somewhat Negative, 3 = Slightly Negative, 4 = Slightly Positive, 5 = Somewhat Positive, 6 = Extremely Positive

Q46. Taking everything into consideration regarding the applicant's resumé, what is your overall evaluation of the candidate?

Scale for Q38 to Q40:

1 = Extremely Unlikely, 2 = Somewhat Unlikely, 3 = Slightly Unlikely, 4 = Slightly Likely, 5 = Somewhat Likely, 6 = Extremely Likely

Q47. What is the likelihood you would be interested in interviewing the applicant?

Q48. What is the likelihood you would recommend hiring the applicant?

Q49. If hired for the hypothetical position, how likely is it that this applicant would succeed in the job?

A new survey page opens. The participant receives the upper-middle-class resumé a third time and rates the applicant on the warmth and competence dimensions of the Stereotype Content Model (Fiske, 2018). Only the upper-middle-class resumé and scale are visible on the page. The resumé remains visible on the same page as the scales.

Scale for Q41 – Q52: 1 = Not at all; 5 = Extremely

Please rate how well you think the following attributes match the applicant (1 = Not at all; 5 = Extremely).

Warmth Scale (Fiske, 2018)

Q50. Warm
Q51. Trustworthy
Q52. Friendly
Q53. Honest
Q54. Likable
Q55. Sincere

Competence Scale (Fiske, 2018)

Q56. Competent
Q57. Intelligent
Q58. Skilled
Q59. Efficient
Q60. Assertive
Q61. Confident

A new survey page opens. The participant receives the lower-middle-class resumé a third time and rates the applicant on the warmth and competence dimensions of the

Stereotype Content Model (Fiske, 2018). Only the lower-middle-class resumé and scales are visible on the page. The resumé remains visible on the same page as the scales.

Scale for Q53 – Q64: 1 = Not at all; 5 = Extremely

Please rate how well you think the following attributes match the applicant (1 = Not at all; 5 = Extremely).

Warmth Scale (Fiske, 2018)

Q62. Warm
Q63. Trustworthy
Q64. Friendly
Q65. Honest
Q66. Likable
Q67. Sincere

Competence Scale (Fiske, 2018)

Q68. Competent
Q69. Intelligent
Q70. Skilled
Q71. Efficient
Q72. Assertive
Q73. Confident

Demographic Questionnaire

A new survey page opens that contains the demographic questionnaire.

Demographic Questionnaire (Thomas, 2018)

Q74. What is your age
18-3435-5960+

Q75. What is your ethnicity?
African-American
Asian
Caucasian
Hispanic
Native American/Pacific Islander
Other

Q76. What is your gender? _____ *(open-ended question)*

Q77. What is the highest degree you have earned?
Less than High School
High School or equivalent
Associate's
Bachelor's
Master's
Doctorate/Professional (J.D./M.D.)

Q78. How many years of work experience reviewing resumés do you have? _____ *(open-ended question)*

Q79. What industry are you currently working in? _____ *(open-ended question)*

Q80. Please select which best describes your organization:

Private, for-profit
Private, non-profit
Local government
State government
Federal government
Self-employed small business owner
Self-employed or independent contractor; no other employees

Q81. How many people are employed with your organization?

12-99100-9991,000+I don't know

Q82. Please select your social class of origin:

Poor
Working Class
Lower-Middle-Class
Upper-Middle-Class
Upper Class

After completing the demographic items, a new page opens, and participants are shown a debriefing statement that explains the purpose of the study.

At the end of the study, a participant receives a survey completion code. The participant receives instructions to enter the completion code into the appropriate text field in the MTurk platform.

APPENDIX N – Informed Consent Statement for Pre-screener Questionnaire

Purpose

The researcher is a doctoral student in Human Capital Development at The University of Southern Mississippi. The purpose of this pre-screening questionnaire is to assign a custom worker qualification to MTurk workers who meet the inclusion criteria for a future study. You must be at least 18 years of age and located in the United States to participate in this questionnaire.

Description:

Participation in this pre-screening questionnaire should take 1-3 minutes. The timer for the questionnaire allows 10 minutes for completion. The number of people who will fill out this questionnaire is unknown. However, we expect at least 1,000 participants.

The researcher does not receive funding for administering this questionnaire.

By participating in this study, you agree that you will not disclose the content of the questions or other materials to anyone.

Benefits:

No direct benefits are guaranteed as a result of participating in this pre-screening questionnaire. If selected to participate in a future study, your responses will contribute to research about training people who make decisions about job applicants.

Upon completion and approval of your submission, you will receive ten cents USD ($0.10).

If you submit an incomplete HIT, the HIT is subject to rejection with no compensation.

Risks:

There are no known or anticipated risks associated with participation beyond the discomforts associated with daily life.

Confidentiality:

The researcher asks that you enter your Amazon Mechanical Turk worker ID. Only the research team will have access to the original data you provide, and the stored data is password protected. The original data you provide is deleted five years after the dissertation is published. The original data that is stripped of personally identifying information becomes de-identified data that may be stored indefinitely.

No personally identifiable information is included in any written reports, publications, or presentations. The results of this study may be published in academic journals, books, blogs, on websites, news outlets, and/or presented in live or recorded presentation form. De-identified data may be used for future research that may be published in academic journals, books, blogs, on websites, news outlets, and/or presented in live or recorded presentation form without additional informed consent from you. We will make de-identified data from any published study available to researchers who request it.

The researcher does not request personally identifiable information as required by Amazon Mechanical Turk's terms of service agreement.

If you contact the researcher or anyone at The University of Southern Mississippi via email, phone, or other communication channel, you acknowledge that your email address, phone number, or other personally identifiable information you provide in the correspondence or as a default of the communication channel utilized for transmission does not fall under the protection of the confidentiality protocol associated with participation in this questionnaire; the researcher does not request any of this information.

The researcher uses a software that collects IP addresses for the purpose of determining what country a participant is located in because only participants located in the United States are eligible for participation.

The researcher's supervising professor is Dr. Dale L. Lunsford.

Alternative Procedures:

There are no alternative procedures associated with the administration of this questionnaire.

I understand that participation in this project is completely voluntary, and I may withdraw at any time without penalty, prejudice, or loss of benefits except as stated above. Unless described above, all personal information will be kept strictly confidential, including my name and other identifying information. All procedures to be followed and their purposes were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected. Any new information that develops during the project will be provided to me if that information may affect my willingness to continue participation in the project.

The IRB chair’s phone number is 601-266-5997.

CONSENT TO PARTICIPATE IN RESEARCH

By clicking the box below, I give my consent to participate in this research project. If you do not wish to participate, please close the survey tab now and return the HIT in MTurk to avoid a rejection.

APPENDIX O – Informed Consent Statement for Main Study

Purpose:

The researcher is a doctoral student at The University of Southern Mississippi in the Human Capital Development program. This study is conducted as part of the researcher's dissertation assignment. This is a study about resumé screening. For data quality purposes, the full purpose of the study is disclosed in a debriefing statement at the end of the study.

Description of the Study:

You must be at least 18 years of age and located in the United States to participate in this study. This study should take approximately xxx minutes to complete. Your actual completion time may vary depending on your individual circumstances.

During this study, you will view and evaluate fictional resumés, answer questions, view some videos, and write a two to three-sentence summary about the content of the videos you watch. You will also complete a demographic questionnaire at the end of the study.

Attention check questions are embedded throughout the study. If an attention check question is answered incorrectly, you will be given a second chance to answer the question correctly. If you provide two incorrect answers to any single attention check question, you will be disqualified from further participation in the study and will receive no monetary compensation.

This study is not optimized for viewing on a mobile device or tablet. You should use a desktop computer or laptop with audio to participate in this study.

Approximately 350-450 people will participate in this study.

The researcher does not receive funding for administering this study.

By participating in this study, you agree that you will not disclose the content of the questions or other materials to anyone.

Benefits:

No direct benefits are guaranteed as a result of participating in this study. By participating in this study, your responses will contribute to research about training people who screen resumés as part of their job duties. Upon completion of the study and approval of your submission, you will receive four dollars and twenty-five cents ($4.25) USD.

If you withdraw from the study before completion, no compensation is awarded.

If you submit an incomplete HIT, the HIT is subject to rejection with no compensation.

Risks:

There are no known risks associated with participating in this study beyond the discomforts associated with daily life.

Confidentiality:

The researcher asks that you enter your Amazon Mechanical Turk worker ID. Only the research team will have access to the original data you provide, and stored data is password protected. The original data you provide is deleted five years after the dissertation is published. The original data that is stripped of personally identifying information becomes de-identified data that may be stored indefinitely.

No personally identifiable information is included in any written reports, publications, or presentations. The results of this study may be published in academic journals, books, blogs, on websites, news outlets, and/or presented in live or recorded presentation form. De-identified data may be used for future research that may be published in academic

journals, books, blogs, on websites, news outlets, and/or presented in live or recorded presentation form without additional informed consent from you. We will make de-identified data from any published study available to researchers who request it.

The researcher does not request personally identifiable information as required by Amazon Mechanical Turk's terms of service agreement.

If you contact the researcher or anyone at The University of Southern Mississippi via email, phone, or other communication channel, you acknowledge that your email address, phone number, or other personally identifiable information you provide in the correspondence or as a default of the communication channel utilized for transmission does not fall under the protection of the confidentiality protocol associated with participation in this study; the researcher does not request any of this information.

The researcher may use a software that collects IP addresses for the purpose of determining what country a participant is located in because only participants located in the United States are eligible for participation.

The researcher's supervising professor is Dr. Dale L. Lunsford.

Alternative Procedures:

There are no alternative procedures associated with the administration of this study.

I understand that participation in this project is completely voluntary, and I may withdraw at any time without penalty, prejudice, or loss of benefits except as stated above. Unless described above, all personal information will be kept strictly confidential, including my name and other identifying information. All procedures to be followed and their purposes were explained to me. Information was given about all benefits, risks, inconveniences, or

discomforts that might be expected. Any new information that develops during the project will be provided to me if that information may affect my willingness to continue participation in the project.

The IRB chair's phone number is 601-266-5997.

CONSENT TO PARTICIPATE IN RESEARCH

By clicking the box below, I give my consent to participate in this research project.

If you do not wish to participate in this study, please close the survey tab now and return the HIT in MTurk to avoid a rejection.

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Institution name	The University of Southern Mississippi
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Portions	Figure 4

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APPENDIX Q – Pretest Parallel Mediation Output

```
********************* MEMORE Procedure for SPSS Version 2.1 ***************

                        Written by Amanda Montoya

                   Documentation available at akmontoya.com***

Model:
  1

Variables:
Y =   PreEU    PreEL
M1 =  PreUC    PreLC
M2 =  PreUW    PreLW

Computed Variables:
Ydiff =           PreEU     -       PreEL
M1diff =          PreUC     -       PreLC
M2diff =          PreUW     -       PreLW
M1avg  = (        PreUC     +       PreLC    )        /2       Centered
M2avg  = (        PreUW     +       PreLW    )        /2       Centered

Sample Size:
  1***
Outcome: Ydiff =  PreEU     -       PreEL

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -.1289      .0977    -1.3196      .1893     -.3222      .0644

Degrees of freedom for all regression coefficient estimates:
  1***
Outcome: M1diff = PreUC     -       PreLC

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -.1432      .0608    -2.3557      .0200     -.2635     -.0229


Degrees of freedom for all regression coefficient estimates:
  1***
Outcome: M2diff = PreUW     -       PreLW

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -.3659      .0498    -7.3502      .0000     -.4644     -.2674

Degrees of freedom for all regression coefficient estimates:
  1***
Outcome: Ydiff =  PreEU     -       PreEL

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .7186      .5163      .6100    32.8250     4.0000   123.0000      .0000

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .0904      .0826     1.0950      .2756     -.0730      .2539
M1diff      1.0394      .1077     9.6558      .0000      .8264     1.2525
M2diff       .1925      .1317     1.4619      .1463     -.0682      .4532
```

```
M1avg      -.5574      .1869    -2.9817      .0035     -.9274     -.1874
M2avg       .6337      .1783     3.5546      .0005      .2808      .9865


Degrees of freedom for all regression coefficient estimates:
  123

****************** TOTAL, DIRECT, AND INDIRECT EFFECTS ********************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
     -.1289      .0977    -1.3196   127.0000      .1893     -.3222      .0644

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      .0904      .0826     1.0950   123.0000      .2756     -.0730      .2539

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1      -.1489      .0635     -.2714     -.0258
Ind2      -.0704      .0424     -.1524      .0138
Total     -.2193      .0773     -.3667     -.0620

Indirect Key
In‘1’ 'X'      ->       M1diff   ->       Ydiff
In‘2’ 'X'      ->       M2diff   ->       Ydiff

Pairwise Contrasts Between Specific Indirect Effects
          Effect     BootSE   BootLLCI   BootULCI
(C1)      -.0784      .0753     -.2344      .0599

Contrast Key:
(C1)  Ind1      -       Ind2

********************** ANALYSIS NOTES AND WARNINGS *************************

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        PreUC     +       PreLC    )        /2
 (        PreUW     +       PreLW    )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

APPENDIX R – Post-test Parallel Mediation Output

```
******** MEMORE Procedure for SPSS Version 2.1 ***************

                        Written by Amanda Montoya

                   Documentation available at akmontoya.com***

Model:
  1

Variables:
Y =   PostUE   PostLE
M1 =  PostUC   PostLC
M2 =  PostUW   PostLW

Computed Variables:
Ydiff =           PostUE    -       PostLE
M1diff =          PostUC    -       PostLC
M2diff =          PostUW    -       PostLW
M1avg  = (        PostUC    +       PostLC   )        /2       Centered
M2avg  = (        PostUW    +       PostLW   )        /2       Centered

Sample Size:
  1***

Outcome: Ydiff =  PostUE    -       PostLE

Model
       Effect         SE          t          p       LLCI       ULCI
'X'    -.5586      .0966    -5.7851      .0000    -.7497    -.3675

Degrees of freedom for all regression coefficient estimates:
  1***
Outcome: M1diff = PostUC    -       PostLC

Model
       Effect         SE          t          p       LLCI       ULCI
'X'    -.2721      .0559    -4.8695      .0000    -.3827    -.1615

Degrees of freedom for all regression coefficient estimates:
  1***
Outcome: M2diff = PostUW    -       PostLW

Model
       Effect         SE          t          p       LLCI       ULCI
'X'    -.6133      .0705    -8.7002      .0000    -.7528    -.4738

Degrees of freedom for all regression coefficient estimates:
  12***
Outcome: Ydiff =  PostUE    -       PostLE

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      .6920      .4789      .6421    28.2616     4.0000   123.0000      .0000

Model
           coeff         SE          t          p       LLCI       ULCI
'X'       -.1161      .0900    -1.2903      .1994    -.2942      .0620
M1diff     .9029      .1311     6.8875      .0000     .6434     1.1624
M2diff     .3209      .1048     3.0612      .0027     .1134      .5284
```

```
M1avg      -.2853      .2053    -1.3897      .1671     -.6917      .1211
M2avg       .4442      .1990     2.2325      .0274      .0504      .8380

Degrees of freedom for all regression coefficient estimates:
  123


******* TOTAL, DIRECT, AND INDIRECT EFFECTS *******

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
     -.5586      .0966    -5.7851   127.0000      .0000     -.7497     -.3675

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
     -.1161      .0900    -1.2903   123.0000      .1994     -.2942      .0620

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1      -.2457      .0621     -.3739     -.1323
Ind2      -.1968      .0598     -.3299     -.0932
Total     -.4425      .0798     -.6076     -.2924


Indirect Key
In‘1’ 'X'      ->       M1diff   ->       Ydiff
In‘2’ 'X'      ->       M2diff   ->       Ydiff

Pairwise Contrasts Between Specific Indirect Effects
          Effect     BootSE   BootLLCI   BootULCI
(C1)      -.0489      .0923     -.2245      .1399

Contrast Key:
(C1)  Ind1      -       Ind2

******** ANALYSIS NOTES AND WARNINGS ********

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        PostUC    +       PostLC   )        /2
 (        PostUW    +       PostLW   )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

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