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# The Mitigation of In-Group and Outgroup Biases: Understanding the Perceptions of Educators on the Contact Approach Theory

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# THE MITIGATION OF IN-GROUP AND OUTGROUP BIASES: UNDERSTANDING THE PERCEPTIONS OF EDUCATORS ON THE CONTACT APPROACH THEORY

By

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## ABSTRACT

The contact approach theory was introduced in the 1950s, by Allport, as a method to mitigate biases. Since then, many DEI practitioners in the United States have formed alliances to create a social justice movement to combat racism, prejudice, and biases in our society. Nevertheless, little research has been conducted in the contact approach theory as these biases, initially observed as in-group and outgroup biases, originate in the early years of life. To begin to fill this gap in the literature, the purpose of this study was to better understand and identify to what extent, if any, prekindergarten through third grade teachers had training and knowledge on the contact approach theory, how often the contact approach theory was being used, teachers' perceptions of their overall success, and the extent to which teacher demographics were able to explain variation in these three constructs.

The 77 participants in this study were prekindergarten through third grade teachers in San Diego, California. Teachers completed a 63 question, 5-point Likert scale survey, that in addition to collecting demographic information, was used to form the three constructs central to the study of the contact approach: training and knowledge, application, and perceptions of success. Results revealed teachers had significantly less training and knowledge than their reported execution and perceptions of success. In fact, teachers reported being less successful in the contact approach theory than their frequency of application. Multiple regression analyses were also conducted on the constructs and revealed some interesting findings; for instance, teachers who worked in the nonprofit sector had greater training and knowledge than teachers in other sectors, and first grade teachers had less training and knowledge than other teachers.

Taken together, these findings underscore the need to build more knowledge and create trainings in the contact approach theory to mitigate biases for young children. Hopefully, the

deeper empirical understanding of the contact approach theory provided by this research will provide important context in future applications of the technique to education, and will provide teachers and society at large with another important tool in the struggle to solve the complex issue of racism.

## DEDICATION

At my eighth grade graduation, I was given an award for my perseverance. Who knew that two decades later, my perseverance award would be tested and applied in full swing to achieve my lifetime educational goal of a doctorate. By the time I knew I wanted to attend a Master's program, I made it imperative my Master's program had a Ph.D. program, so I found myself at the beautiful University of San Diego. I enjoyed my Master's in Nonprofit Leadership and Management because I was able to learn about nonprofit leadership methodologies and best practices, and even how to apply the learning to real life experiences. During this time, I quickly learned I have a passion for diversity, equity, and inclusion. I wanted to dive deeper to better understand racism and actionable items to end prejudicial thoughts. My ambitious goal was to leave behind a legacy- to end racism, at least begin the process to make this needed change. I was motivated, determined, and willing to put my perseverance to the test.

Immediately, I dove deep into the research and was excited to make a large impact. Through the literature review, I learned about all the complexities of diversity, racism, biases, and prejudice. As soon as I thought I understood a concept to mitigate biases, I read more literature as to the limitations of this concept. I felt lost, going down one rabbit hole after the next. Throughout this entire process, there were many endless nights where I felt overwhelmed and could not sleep. The workload of the Ph.D., whether it was preparing for the proposal defense presentation, hustling to find teachers to participate in the survey, or making additional, never ending edits, was not easy. During this difficult time, the mantra I remembered was "How do you eat an elephant?" "One bite at a time." So, I embarked on my Ph.D. journey- eating my elephant, one bite at a time.

The last year of my doctorial program was the biggest challenge, overcoming the obstacles of the COVID-19 pandemic, having my ethics challenged, and feeling lost on my journey. I was able to overcome these challenges and ultimately grew into a deeper more resilient leader: a strategic, thoughtful leader, who always did what was best for children and youth. I couldn't have grown into the person I am today without the help from some of my mentors, advisors, and supporters. It means so much to me to have such extraordinary people support me throughout some of the most challenging times of my life. So, I dedicate this study to the following people who both personally and professional helped me grow:

Dr. Laura Detrick, who is an active listener and a remarkable problem solver;

Dr. Leslie Boozer, who supported me in community organizing efforts;

Dr. Fred Galloway, who developed an authentic, genuine interest in my work and taught me how to be a better researcher, colleague, and friend;

Jocelyn Staunton, who watched me grow and always reminded me to put God first.

In addition, a special thank you to my closest family and friends:

Marlene and Roland Blazys, my parents who always reminded me to take breaks and relax;

Brett Blazys, my brother who always challenged me and made me want to be smarter;

Corysa Martinez, my best friend who edited many of my papers countless times;

Susie Guarrera, my "partner in crime" who always kept me level headed;

Robbie Teel, my comrade who has the ability to cheer me up, no matter my mood;

Dobilo, my (dog) first love of my life that always cheered me up and made me go outside;

Donald McCann, the love of my life, who always stood by my side every step of the way.

I want the people who I acknowledged here to know they left a legacy of support and they truly changed the trajectory of my life. I could not have done this without you! Thank you for all your support, acts of love, words of encouragement, and confidence in me.

Now that this study is completed, I have realized my legacy is to make the world a little better place. I believe this study is contributing to the field of education so adults better understand the world of prejudice in the eyes of young students. Hopefully this is just the beginning of addressing diversity, equity, and inclusion for children and youth and our country can continue down this journey- ending racism for all.

With love,

Brigitte Blazys

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# CHAPTER ONE

## INTRODUCTION TO THE STUDY

Our nation has been engaged in a long-overdue reckoning with both the existence and consequences of systemic racism. Despite the best intentions of many professional educators, our education system continues to struggle with this significant challenge. While much of the discussion has centered on ways to either mitigate or completely eliminate this vexing problem throughout the entire education system, one area that seems to be particularly important is the role educators may play in reducing biases, which form among our youngest members of society. As diversity, equity, and inclusion practices are becoming more prevalent in our conversations, news stories, and initiatives, it is vital to include the foundation in which prejudicial thoughts develop as a starting point to reduce biases in our communities. These biases, often referred to as in-group and outgroup biases, originate in the early years of life and can easily turn into prejudicial thoughts that last throughout adolescence and adult years. So, in order to end prejudice in our communities and have an impact on systemic racism, we must start at the foundation, at the beginning of life (Brown, 2000).

The prejudice problem is not just about race or even socioeconomic status; it begins in early childhood with negative in-group and outgroup biases that are formed within relationships (Cameron et al., 2001; Killen et al., 2013). In-group bias occurs when a child begins to identify with a specific group of people and an outgroup bias is when a child does not identify with a specific group of people (Brow & Gaertner, 2003). In-group and outgroup bias begins to take root in children as young as three years of age (Yee & Brown, 1992). For example, a prekindergarten student will identify with children who have his or her same interests, which means the student who is interested in dinosaurs will play with other children who are interested

in dinosaurs. Those children who are not interested in dinosaurs would be considered to be part of the outgroup. Likewise, a child whose favorite color is pink will identify with other children whose favorite color is pink, and these children will form the in-group; whereas, other children whose favorite color is not pink would be considered the outgroup. These early childhood in-group and outgroup biases form the groundwork for establishing deep rooted prejudicial thoughts, bias-free beliefs, and everything in between (Brewer & Kramer, 1985; Werkman et al., 1999; Yee & Brown, 1992).

In the 1950s, Allport identified the contact approach theory, also known as the intergroup contact theory, as a method to mitigate these biases in adults and adolescents. However, little research has been conducted in early childhood education as it relates to the contact approach theory and the concepts that make the contact approach theory successful in reducing biases. To address this gap in the literature, this quantitative study will use survey research methods to better understand teacher training involving the contact approach theory, the implementation of this training, and the teachers' views on their success of their efforts. Childhood and elementary school educators were selected from three different educational sectors: public school districts (government-led), private schools, and educational nonprofit organizations. This study had 77 diverse participants who teach mixed-ages between four to eight years old, prekindergarten, kindergarten, first, second, or third grade in San Diego, California. The survey itself was divided into participant demographics and three constructs central to the inquiry: (a) training and knowledge, (b) applied practice, and (c) perceptions of success, which are detailed in Chapter 3. After gathering this information, both descriptive and inferential techniques were used to first describe the levels of training, implementation, and ultimately success; this was followed by regression analysis that was attempted to explain variation in these three constructs.

Taken together, this research will allow for a better understanding of how the contact approach theory is used in the world of practice, helping those in the field of education better understand how teachers impact our world of prejudice. Without any hyperbole, it is truly imperative children ages four through eight years old not be left out of these social justice conversations because the lessons children learn early in life will stick with them as they develop during adolescents and grow into adults (Werkman et al., 1999; Yee & Brown, 1992).

## Background

In the 1940s, a study known as the "doll test" was conducted by Kenneth Clark and Mamie Clark to better understand how segregation in our education system was effecting children, specifically African-American children aged three to seven years old (Clark, 1939). During the Clark study, the children were given the opportunity to choose and play with one of the four dolls of different colors. Each child got to choose the doll he or she preferred and identified the race of each doll. The children often chose the White doll as their preference (Clark, 1939). As many know, this "doll test" study was used in the *Brown vs. Board of Education* decision as a contributing reason for implementing integrated education for children (Warren, 1954). Over a half of century ago, the "doll test" study, along with many others, showed most children, regardless of race and as young as three years of age, can identify race and even preferred a specific race: White (Clark, 1939). So, in 1954, the United States was motivated to change our education system with the *Brown vs. Board of Education* decision (Warren, 1939). More recently, a similar study was conducted in preschools where children were given opportunities to engage in play with dolls of different colors (Sturdivant & Alanis, 2021). Researchers found these young children still preferred the nonblack dolls (Sturdivant & Alanis, 2021). This significant challenge of addressing biases in children tickles down to relooking at

our education system and how our teachers present opportunities for young children to engage in positive interactions during racial conversations.

Since the 1940s, researchers have shown our education system influences bias thoughts throughout a child's academic journey (Sturdivant & Alanis, 2021; Warren, 1939). For example, a teacher who is well trained in strategies to mitigate biases and then implements the techniques will establish ways to expand student thinking. For this reason, our education system is searching for better ways to cultivate a bias-free perspective. Since we know strategic planning often leads to desired outcomes, I looked to the research to find one such strategy to reduce in-group biases. The contact approach theory was most prevalent in many of the anti-bias theories (Killen et al., 2013). Conceptualized in 1954 by a theorist named Allport, the contact approach theory puts members in direct contact with members of the outgroup, and is designed to enforce positive, trust-building connections with members of the outgroup (Killen et al., 2013). When members of the in-group and outgroup share similar values such as goals, interests, and status, the results reinforce positive, trust building connections; while any differences in values, goals, interests, and status results in less favorable outcomes (Brown & Gaertner, 2001; Pettigrew & Tropp, 2006). Biases are rooted in certain opinions and stereotypes, and if the education system can change these viewpoints and labels through contact with outgroup members, the quest to cure one of the society's greatest evils will be one step closer to being accomplished.

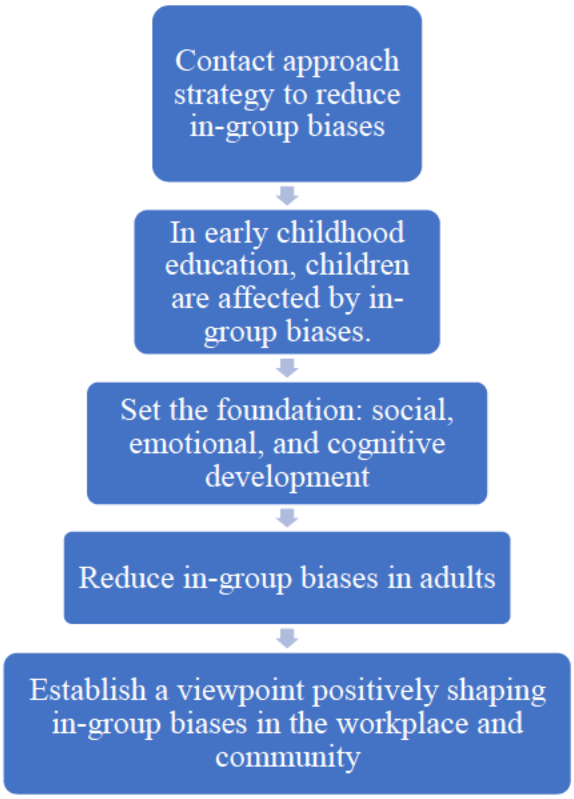
Therefore, the contact approach strategy may give teachers in the field of early childhood and elementary education an effective technique to combat in-group and outgroup biases and build a less biased foundation for children. While some research showed the contact approach theory had negative effects or no significant change in biases, this research study will review the existing literature and address some of these limitations to support early childhood

and elementary school educators in further understanding the contact approach theory and being able to apply it in the classroom.

Since the contact approach theory has been identified as a strategy to mitigate biases and biases begin at the age of three, it becomes apparent that educators must use the contact approach theory in the curriculum. When using contact approach theory strategies throughout a child's educational journey, educators are positively shaping biases and supporting a child in his or her development towards an anti-bias foundation. This can lead to building a more inclusive lifestyle in the adult years. Figure 1 describes the effects and importance of using the contact approach theory.

**Figure 1**

*Long Term Consequences/ Benefits of the Contact Approach Theory in Early Childhood Education*



As emphasized throughout this background section, the contact approach theory is a strategy a teacher can use when considering an anti-bias curriculum. However, the extent of teacher training in the contact approach theory for mitigating biases in early childhood and elementary school education is unclear. This study seeks to better understand the contact approach theory and related anti-bias concepts being applied for children in prekindergarten through third grade, hereby refereed to as early childhood education.

## Problem Statement

Research has shown early childhood education sets the foundation of development in the adult years (Brown, 2000; Brown & Gaertner, 2001; Leithwood & Riehl, 2003). However, limited research is available on the contact approach theory being implemented with children under the age of eight, as most of the contact approach theory research focused on older children and adults (Brewer, & Kramer, 1985). The research that has been conducted on younger children has mixed results regarding the extent to which the contact approach theory actually reduces in-group biases (Brewer, & Kramer, 1985). The critique of these results was dependent on who was present and the type of environmental set up, naturalistic or experimental (Brewer, & Kramer, 1985). A diverse presence means children from different backgrounds, including but not limited to, a variety of social, economic, racial backgrounds. A naturalistic environment attempts to mimic the real world; whereas, an experimental environment is when the researcher(s) alter the environment to better analyze the independent variables. When a naturalistic environment was set up and the set of children were not diverse, the results of the contact approach theory reducing in-group biases were not as strong as in an experimental environment with a diverse set of children. For this reason, the contact approach theory has been discounted in the minimal amount of research on the effectiveness of the contact approach theory in early childhood.

However, this study's focus is on early childhood teachers and the use of successful concepts related to contact approach theory to address biases in the classroom.

This problem framing section has identified three major gaps in the existing literature: (a) training and knowledge on the contact approach theory, (b) applied practice in the prekindergarten through third grade classrooms, and (c) the teacher's perceptions of success. When I pursued my Bachelors of Science in Child Development at a four-year university, anti-bias strategies, such as the contact approach theory, were not taught. Having said that, the courses taught child and human development and strategies used to support children in reaching developmental milestones. Throughout my professional career, I had many conversations with colleagues in the early childhood field and reviewed existing literature on anti-bias curriculum, but there seemed to be a lack of understanding, training, and applied practice on the contact approach theory. This research study seeks to better understand early childhood educators' training and knowledge, applied practice, and success rates on the contact approach theory. First, this research identifies to what degree early childhood development teachers are aware of the contact approach theory and how much training the teacher received. Second, this research explores how often early childhood development teachers use the contact approach theory in the classroom. Third, this research identifies the teacher's perceptions of success when using the contact approach theory.

Optimistically, the contact approach theory would mix and mingle many different children from many different backgrounds in order to defuse in-group and outgroup biases. Practically speaking, detractors have pointed out this set of complexities are often improbable which is why the contact approach theory may be lacking validity in its effectiveness (Pettigrew & Tropp, 2006). Accordingly, the third research question for this study will further understand

how teachers view their successes of implementing the contact approach theory. Therefore, this research study seeks to better understand early childhood educators' knowledge or training, applied practice, and success rates on the contact approach theory.

## Purpose of the Study

In-group biases are an important topic in the field of early childhood education because the lessons learned early in life set the foundation in which each child is brought up. This foundation lays the groundwork for future success in mitigating the systemic racism problem that currently exists in education. Researchers show teaching strategies affect the social, emotional, and cognitive development of these young learners (Aboud & Amato, 2003). Children aged five years old in early childhood development education are encountering in-group biases, which is affecting the way the children view the world (Bennett, 2014; Gaertner & Dovidio, 2014). This research is the starting point for learning about in-group biases and will provide clarification on how early childhood teachers can reduce in-group bias. The purpose of this study is to better understand and identify to what extent, if any, prekindergarten through third grade teachers had training and knowledge on the contact approach theory, how often the contact approach theory was being used, teachers' perceptions of their overall success, and the extent to which teacher demographics were able to explain variation in these three constructs.

## Context

For the last decade, California state policymakers have recognized the importance of early childhood education and have put into action Universal Transitional Kindergarten (TK) programs for children who are four years of age. The importance of addressing the inequities of the education system and having quality early childhood programs have been strong values Governor Newsom and the state government promote, and these key policymakers have

accordingly created a Master Plan for Early Learning and Care (California Health and Human Service Agency, 2022). This Master Plan addressed the issue of access and inequities, in hope to provide quality services to the young children in low-income areas. State policymakers and leaders recognize the importance of early childhood education, and yet, struggle to provide quality care to the children who need it most.

The Plan's intention was based on providing equal opportunities to families who could not afford the transitional tuition-based preschool and to allow these children who are at-risk to get an early start in the education system (California Health and Human Service Agency, 2022). While our education system has tried to address this inequity gap, the system has not addressed how teachers are trained in mitigating biases in young children. Throughout the literature reviewed here, there is a significant gap in the research between teacher training and knowledge, applied practice, and success rates. During this vital time when early childhood is being discussed as a priority with policymakers, it is crucial to understand how teaching strategies are being used, and how often early childhood teachers use these strategies to address biases. Without this empirical knowledge policymakers and key stakeholders cannot properly invest in the field of early childhood; thus, making it difficult to make any needed changes in addressing biases in our educational system.

## Research Questions

When framing the research questions, there are three main components this study will focus on: training and knowledge, applied practice, and perceptions of success. As such, the research questions are:

1. How much training in the contact approach theory for mitigating in-group biases in the classroom, if any, did early childhood education teachers receive, and to what extent, if

any, do early childhood teachers have knowledge in the contact approach theory, and does this differ by select teacher demographics?

2. How often do early childhood teachers use the contact approach theory for mitigating in-group biases by keeping the children apart or together, and does this differ by select teacher demographics?
3. To what extent were the teachers successful in using the contact approach strategy to mitigate biases, and to what extent, can variation in this success be explained by training and knowledge and select teacher demographics?

## Methodological Overview

This study used descriptive and inferential statistics to analyze data on the contact approach theory. Three research questions were constructed to better understand three main constructs: training and knowledge, applied practice, and perceptions of success. All three constructs were developed to provide a deeper understanding of how teachers address in-group and outgroup biases and provide an anti-bias curriculum to children aged four through eight years of age. This study was completed in San Diego, California and surveyed prekindergarten through third grade teachers. The survey was divided into the aforementioned constructs and took approximately fifteen minutes to complete.

## Summary

The California education system has been struggling to identify exactly how anti-bias ideas are being taught in our early childhood and elementary classrooms. Researchers have shown these prejudicial beliefs and thoughts begin in young children and form as in-group and outgroup biases during the early years when a child begins to form relationships (Cameron et al., 2001; Killen et al., 2013). The contact approach theory has been identified as a way to mitigate

these biases, however there is limited research on the contact approach theory being used in classrooms with children ages four to eight years old (Brewer, & Kramer, 1985). This study attempts to better understand whether teachers have training and knowledge on the contact approach theory and to what extent, if any, the contact approach theory is being applied in the classroom to address biases, and does training and knowledge differ by select teacher demographics. This study seeks to understand the teacher's viewpoints on how successful they were in using the contact approach strategy and examines how success varies by training and teacher demographics.

# CHAPTER TWO

## LITERATURE REVIEW

Throughout life, people will experience social challenges where they feel rejected by others based on prejudicial perceptions. The challenge with explaining these prejudicial perceptions is similar to the challenge with all social research, “to be able to explain what exists or what is happening” (Blaikie & Priest, 2017, p. 2). When examining the social challenges of prejudicial perceptions, in-group and outgroup relationships play a role in these biases (Killen et al., 2013). In-group and outgroup biases are central in shaping our attitudes, behaviors, and experiences towards other people. These relationships are established in our early educational experiences and are the foundation for all of our future relationships. Therefore, it is crucial to discover when these in-group and outgroup biases are first identified, how biases originate, and what ways negative biases can be mitigated.

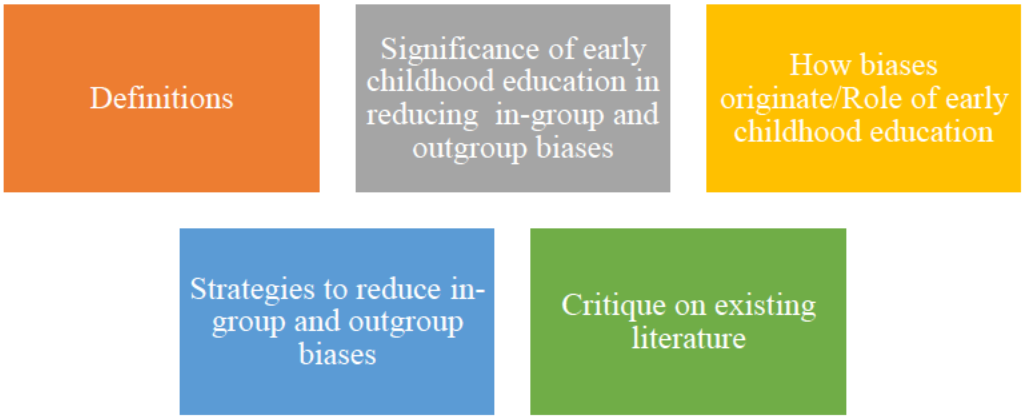
During this search for research, it became apparent the majority of the studies were quantitative, with relatively few qualitative studies. Out of the research that was found, I focused only on peer-reviewed studies that were the most inferentially robust. I purposefully choose to discuss in detail two types of studies: (1) the randomized control trials, which were designed to prove causation, (2) the correlational studies provided a large sample size.

The literature review is organized into five main sections, as shown in Figure 2. The first section discusses the definitions of in-group and outgroup biases as it relates to the effects of early child development and future developmental milestones. The second section discusses the significance of the research and the lasting effects of early childhood development education concerning in-group and outgroups biases. The third section discusses how in-group and outgroup biases originate, and how early childhood education can mitigate the effects of in-group

and outgroup biases in the adult years. The fourth section discusses strategies on reducing in-group and outgroups in young children. More specifically, section four examines the contact approach theory as an appropriate intervention to reduce biases in younger children. Lastly, the literature identifies the limitations in the existing research underlying the contact approach theory.

**Figure 2**

*Five Sections in the Literature Review*




## Definitions

In early childhood development education, in-group and outgroup biases refer to behaviors and attitudes towards gender, race, or culture, which effect social interactions (Killen et al., 2013). By five years of age, a child is able to recognize the ethnicity of others and identify with a certain ethnic group (Brow & Gaertner, 2003). When a child begins to identify with a specific group of people, this is known as the in-group for the child (Brow & Gaertner, 2003). Similarly, when a child does not identify with a specific group of people, this is known as the outgroup for the child (Brow & Gaertner, 2003). Allport developed a theory as a way to mitigate in-group and outgroup biases, the theory is often referred to as the contact approach theory, intergroup contact theory, contact hypothesis, or contact theory throughout existing literature.

Social identity theory offers a framework to understand how a child identifies in a social setting with other individuals and groups. The social identity theory has examined and acknowledged two main identification dynamics: self-identification and group-identification. The self-identification dynamic allows a child to identify with a group that is favorable to his or her own attitudes, beliefs, and behaviors (Yee & Brown, 1992). The group-identification dynamic allows a child to develop his or her perspectives based on the larger group attitude, beliefs, and behaviors (Yee & Brown, 1992). A child will usually develop their group-identification with the same predispositions as his or her parents (Aboud & Amato, 2003). For convenience, definitions of key terms used in this study are summarized in Table 1.

**Table 1**

*Terms and Definitions Used Through This Study*

| Terms | Definitions |
|---|---|
| Early childhood | Children under the age of 8 years old |
| Early childhood education | This is not exclusive to only preschool, it includes education up until third grade |
| In-group and outgroup biases | Behaviors and attitudes towards gender, race, or culture, which effect social interactions |
| In-group bias | When a child begins to identify with a specific group of people |
| Outgroup bias | When a child does not identify with a specific group of people |
| Social identity theory | A framework to understand how a child identifies in a social setting with other individuals and groups |
| Self-identification dynamic | A child's ability to identify with a group that is favorable to his or her own attitude, belief, and behavior |
| Group-identification dynamic | A child's ability to develop his or her perspectives based on the larger group attitude, belief, and behavior |
| Contact approach theory | Putting students in direct contact to other children who are in the outgroup; Also known as the intergroup contact theory, contact hypothesis, and contact theory. |
| Nature | Biological fate; the development of a child based on genetics |
| Nurture | Interactions children have in the environment, positive or negative |
| Trust | The ability to whole-heartedly have a feeling of security and believe in someone or something |
| Viewed transgressions | An act or behavior that goes against members of the in-group |
| Role-playing | Play-based learning when one member is acting out a specific role |
| Anti-racist teaching/ | Where a teacher opens conversations about discrimination and allows |

| | |
|---|---|
| Anti-bias curriculum | children to become more aware of prejudices through research-based best practices |
| Overt messaging | Creating communication between members of the in-group and outgroup to shine light on positive characteristics, thoughts, opinions, and attitudes |
| Equity/ equity-minded | Starting where people are at to provide justice and fairness based on a persons current state |
| Diverse | People with very different backgrounds; including but not limited to, social, economic, and racial backgrounds |

*Note.* (Aboud & Amato, 2003; Brow & Gaertner, 2003; Forsyth, 2003; Kang & Inzlicht, 2012; Killen et al, 2013; Leithwood & Riehl, 2003; Mulvey, 2016; Skinner & Meltzoff, 2019; Yee & Brown, 1992).

## Significance of Early Childhood Development Education to Reduce Biases

In-group and outgroup biases are an important and relatively new research topic in early childhood development education (Brewer, & Kramer, 1985; Killen at al., 2013). There is not yet a consensus on how important childhood education is in shaping in-group and outgroups biases (Killen et al., 2013). Some research studies show no significant long-term effects, while other studies see significant effects in tracking the way children develop the skills needed to build relationships for the rest of their lives (Brewer & Kramer, 1985; Killen et al., 2013). Further research, however, is still needed to examine if and how teaching strategies affect the social, emotional, and cognitive development in the child's later years. One major aspect to understanding the effects of early childhood education includes understanding how group dynamics are formed and what role these group dynamics play in developing life skills. Thus, researching in-group and outgroup biases in young children is the starting point for understanding the impact of early childhood development education as it relates to developmental success in group dynamics.

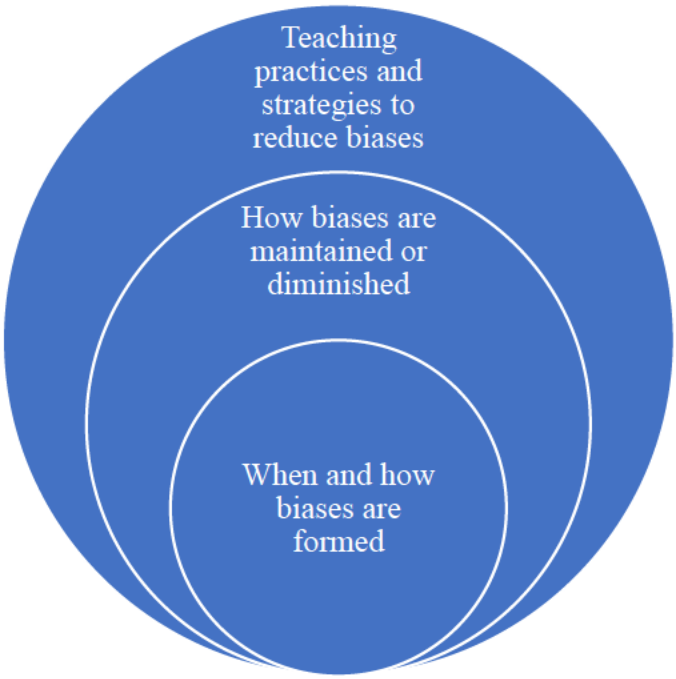
For the purpose of this literature review, I examined research that showed teaching strategies and the type of environment had empirically documented effects on biases in early childhood education. If children are provided positive interactions in a healthy environment, the

children had a more positive school experience (Killen et al., 2013). In a healthy environment, interactions must be free from prejudice in order to build the framework for future interactions to become free from prejudice in the adult years. By establishing positive in-group and outgroup perspectives at an early age, group dynamics can be more collaborative, welcoming, and supportive. Essentially, these positive interactions in childhood will help foster a positive attitude and collective open-mindedness that will last for the rest of the child's life.

In order to accomplish a perspective free of in-group and outgroup biases, researchers must understand these biases through three different lenses, as shown in Figure 3. The first lens examines when and how these biases are formed, while focusing specifically on the role of early childhood education. It is important to recognize the starting point of biases, so interventions can ultimately be better targeted. The second lens examines how in-group and outgroup biases are shaped and formed. The second lens includes understanding how these biases are maintained or diminished through certain practices and strategies. The third lens examines teaching practices and strategies that reduce in-group and outgroup biases in the classroom environment and ways to communicate best practices to the teachers. The three lenses are important because teachers, educators, and caregivers need to realize their curriculum and instruction plays an important part in reducing biases.

**Figure 3**

*Three Lenses to Understand Biases*




### *Nature Versus Nurture*

The origins of in-group and outgroup biases have been linked by researchers to both biology and socialization (Gaertner et al., 1999). The concept of *nature vs. nurture* refers in some cases to a predetermined *biological fate vs. interactions in the environment* that determined outcomes (Gaertner et al., 1999). In another study, researchers used *biological fate vs. interactions in the environment* to examine biases in the developing minds of young children (Gaertner et al., 1999). What was increasingly prevalent in the research was both negative and positive interactions had an influence. In the cases where positive interactions occurred, the results were positive and less in-group and outgroup biases occurred. By manipulating the interactions and the environment, researchers were able to show positive effects on biases (Gaertner et al., 1999). Therefore, throughout this literature review, the empirical evidence tells

us *nurture* matters, and educational strategies can be effective to preventing or reducing in-group and outgroup biases (Gaertner et al., 1999).

### Teachers' Labeling in an Early Childhood Environment

Research has explained preschool children develop biases and *nurture* plays a vital role (Gaertner et al., 1999). For example, Patterson and Bigler (2006) address the environmental effects of teachers' labeling in 87 preschool aged children within two preschools. In the study, two groups were formed: one experimental group and one control group. The two groups were equally balanced in number, gender, and ethnicity. The experimental group used colored t-shirts to label the preschool children and maintained classroom management based on the t-shirt color. The control group placed colored t-shirts on the children, but the teachers ignored the labeling. Patterson and Bigler (2006) stated,

> Specifically, children in the experimental classrooms (in which teachers labeled individuals and organized classrooms by the color groups) showed higher levels of in-group bias than children in the control classrooms (in which teachers ignored the color groups) on two of the eight measures of group attitudes. In addition, children in the experimental classrooms (a) rated their group membership as more important and (b) stated that they were happier with their group membership than children in the control classrooms were. The pattern of findings suggests a role of the environment in producing in-group bias. (p. 856)

## Factors That Affect Biases

Empirical studies show the role of *nurture* affects in-group and outgroup bias perspectives in children. The knowledge and set of experiences a child brings into the group dynamic matters, just as much as the structure of the situation (Brewer, & Kramer, 1985).

Therefore, the social structures of the environment and the factors in *nurturing* a child may result in developing group-based exclusion and inclusion (Bennett, 2014). Researchers were able to identify exactly how children viewed both the in-group and outgroup to see where the positive or negative associations lie (Cameron et al, 2001). These studies showed children initially do not associate negativity to outgroup members, but rather, associate positivity to the in-group (Cameron et al., 2001). Therefore, prejudiced thoughts towards outgroup members are not initially developed, but the social environment shapes these thoughts throughout life (Cameron et al., 2001).

In-group and outgroup biases in children affect the social structure and interactions at preschool. For example, these biases predict whom a child plays with, how they relate to their peers, and whom a child builds a connection with. The effects of these biases start as young as three years old (Yee & Brown, 1992). Based on a significant amount of research, this literature review has identified three factors that affect biases: (1) the self-identification of a child, (2) trust, and (3) viewed transgressions (Bennett, 2014; Brewer & Kramer, 1985; Leithwood & Riehl, 2003; MacDonald et al., 2013; Mulvey, 2016; Yee & Brown, 1992). These three factors are described in separate sections of this literature review, with each factor highlighting a definitive study in the area.

**The Self-identification of a Child**

How a child categorizes himself or herself plays a massive role to in-group biases (Brewer, & Kramer, 1985). For example, a significant quantitative study showed children aged five to seven show the highest in-group bias attitude when compared to older children who are age nine, in part, due to how the younger children self-identified (Yee & Brown, 1992). This randomized control trial examined the effects of in-group and outgroup biases in 128 children,

aged three, five, seven and nine (Yee & Brown, 1992). Out of the 128 children, there was an equal number of males and females represented in all four age groups in the same white, middle-class South Wales, United Kingdom community (Yee & Brown, 1992). Two female interviewers explained a game called, "egg-and-spoon relay races," and used a Likert-scale to measure the child's self-evaluation of how fast the child felt he or she was. Then, each child actually performed the "egg-and-spoon relay race" independently and were paired with a photograph connected to his or her relay performance scores, which was categorized into two teams: "fast" or "slow" (Yee & Brown, 1992). Each child then repeated the self-evaluation. Yee and Brown's (1992) findings showed 86% of the children choose to stay on the "fast" team and 71% of the children choose to switch teams if they were on the "slow" team. In addition, the research revealed biases become less prevalent over time, although Yee and Brown (1992) are still unclear as to why this is true. Yet, some theories focus on the phenomenon that occurs when a child first experiences anxiety due to being exposed to the unfamiliar as compared to the familiar. (Yee & Brown, 1992). Another hypothesis is a younger child wants to be associated with the in-group because he or she believes the in-group to be more successful or most likely to succeed (Yee & Brown, 1992). In-group and outgroup relationships may be based on the identity of a child, social structures of the environment, or a combination of both (Bennett, 2014).

**Trust**

Trust is a critical trait that empirical research has shown to impact in-group and outgroup relationships. In fact, trust is a detrimental factor for increasing those who are part of the in-group (Leithwood & Riehl, 2003). Trust needs to be displayed in all of the child's social connections. When a child has the ability to whole-heartedly feel secure and believe in someone or something, a child is able to take risks and experience a fulfilling lifestyle. In essence, these

social interactions influence a child's cognitive development because the child develops a set of beliefs based on their peers, surroundings, and influencers, which leads to affecting the way a child behaves in social interactions.

Four-year-old children develop more trust for members of the in-group and significantly less trust for members of the outgroup (MacDonald et al., 2013). MacDonald et al. (2013) showed young children develop more trust and empathy for members of the in-group. This study had three different types of experiments. The first experiment showed four-year-old children were able to differentiate between reliable and unreliable members within an in-group. The outcome of this study was conclusive, children preferred reliable members thus demonstrating their ability to appreciate the utility of reliability. The second experiment was crucial in showing whether or not a child would value in-group over reliability. This experiment utilized reliable people from an outgroup and unreliable people from the in-group, and the four-year old children preferred unreliable people from the in-group. The third experiment then gave four-year old children the choice between reliable in-group members and unreliable in-group members. The outcome was clear in that the children preferred the reliable in-group members. The conclusion was children prioritized in-group members who were reliable, then in-group members who were unreliable, next outgroup members who were reliable, and lastly outgroup members who were unreliable. What stands out about this research was that children preferred unreliable in-group members over reliable outgroup members. Consequently, as a result of in-group and outgroup biases, children are not able to build strong connections without empathy and trust (MacDonald et al., 2013). At an early age, children are more likely to trust and empathize with someone who is part of the in-group as compared to someone who is part of the outgroup, even when it is to

their self-detriment like choosing an unreliable in-group member over a reliable outgroup member.

In parallel, adults develop similar empathy and trust perspectives for members of their in-group (MacDonald et al., 2013; Mulvey, 2016). Therefore, in order to establish trusting relationships throughout life, strategies to address in-group and outgroup biases need to be addressed at an early age. Consequently, the research shows how vital it is to start in-group and outgroup bias interventions as early as possible in preschool to mitigate negative biases in the relationships made throughout the rest of someone's life.

**Viewed Transgressions**

Victimization was examined to identify how young children viewed transgressions with an outgroup victim versus an in-group victim (Mulvey, 2016). The Mulvey study consisted of eighty-four children between the ages of three and eight years old from the middle class, southeastern part of the United States (Mulvey, 2016). This quantitative study was interested in measuring both moral transgressions and conventional transgressions. It introduced four randomized stories, two moral transgression stories and two conventional transgression stories. The children used a 6-point Likert scale for how appropriate or inappropriate each child felt the actions in the stories were (1= being inappropriate and 6= being appropriate). Results were identified using analyses of variance, where the children were placed in two categories: three to five-year-old children and six to eight-year-old children. The preschool aged children viewed transgressions with an in-group victim as less acceptable than if the transgressions were against outgroup victims (Mulvey, 2016). In contrast, the older children only focused on the transgression itself, regardless of the member being in-group or outgroup (Mulvey, 2016). Therefore, Mulvey's (2016) research concluded a victim's membership of an in-group received

more empathy than members of an outgroup for younger children; whereas, older children were able to put aside the group membership and appreciate the transgression regardless of the victim's group status.

## Strategies to Shape Biases

Research has found there are two successful strategies to change in-group and outgroup attitudes in older children. The first strategy is *role-playing*, since role-playing through play-based learning allows children to reevaluate their opinions and perceptions while having fun (Forsyth, 2003). Children under five years old, however, are not cognitively ready to reevaluate their beliefs and viewpoints (Aboud & Amato, 2003). The second strategy is *antiracist teaching*, where the teacher opens conversations about discrimination and allows children to become more aware of prejudices (Aboud & Amato, 2003). *Antiracist teaching* also requires high cognitive awareness and is generally not age-appropriate for preschool aged children. Due to the developmental inappropriateness of these two interventions, they are rarely used in early childhood (Aboud & Amato, 2003). One approach, however, to reduce in-group and outgroup biases in younger children is the contact approach theory, but even the contact approach comes with some limitations.

### The Contact Approach Theory

The contact approach theory provides opportunities for children to be in direct contact to members of the outgroup. Contact with members of the outgroup enables children to build trust and develop a relationship to counteract outgroup biases (Killen et al., 2013). The contact approach theory dates back to 1954 when Allport's contact theory showed contact with other outgroup members had an effect on thoughts (McKay, 2018). Allport's (1954) purpose was to explore the prejudice thought process when a person came in contact with members of their

outgroup. What Allport (1954) found was contact can positively influence a person's thoughts, if the following criteria are met: (a) equal status, (b) common goals, (c) cooperation, and (d) identification and acceptance of social norms provided by authority, which have been interpreted in a variety of ways in contact theory research (McKay, 2018).

Since 1954, the contact approach theory has been examined through laboratory research in naturalistic environments and experimental environments, all with different results and conclusions (Brewer & Kramer, 1985). For adults, the naturalistic environment and the experimental environment had similar results (Pettigrew & Tropp, 2006). When an adult from the in-group is present, the in-group bias can be established or diminished as quickly as a societal norm (Monteiro et al., 2018). Consequently, researchers became more inquisitive on specific characteristics of these encouraging results and wanted to translate this research to early childhood. For children, both the naturalistic environment and experimental environment needed to have positive experiences for the in-group biases to be reduced. On the contrary, when negative experiences were present for children, the in-group biases were increased (Skinner & Meltzoff, 2019).

Therefore, in early childhood the type of experiences the child went through played a major factor on the results. Skinner & Meltzoff (2019) stated these diverse sets of results are particularly linked to the "unmeasured variation in factors, such as the *quality* of these contact experiences" (p. 219). For instance, depending on the quality of interaction, some of these experimental results indicated contact between the in-group and outgroup lead to more conflicts and higher resentment; other experimental study results indicated contact between the in-group and outgroup created more collaboration and prosperity (Cameron et al., 2007; Pettigrew & Tropp, 2006; Skinner & Meltzoff, 2019).

One of the first researchers to explore the contact approach theory, Robin Williams, from Cornell University, conducted 102 experiments on in-group and outgroup relationships specifically focused on intermingling groups and the quality of these interactions (Pettigrew & Tropp, 2006). When members of the in-group and outgroup shared similar values, goals, interests, and status, the results were positive, while differences in values, goals, interests and status resulted in less favorable outcomes (Pettigrew & Tropp, 2006). Years later, when the contact approach theory was researched more rigorously, it consistently reported a reduction in biases when four optimal conditions were experienced: similar status with present situations, similar ambitions, ability to cooperate, and support from outside resources such as the law, authorities, and norms (Pettigrew & Tropp, 2006). This complex set of conditions, however, makes the contact approach theory an unappealing intervention to reduce biases, especially in the field of early childhood education (Pettigrew & Tropp, 2006)

The major reason why there is no feasible way to teach children under all four conditions is because prejudicial thoughts are an intrinsic emotion and without the ability to measure intrinsic emotions in the groups, the contact approach theory lacks validity and reliability (Killen et al., 2013). For example, just because boys and girls go to preschool together, which would qualify as the contact approach, this contact of going to school together does not mean boys and girls are playing together and developing relationships that reduce gender biases. In order to reduce these biases, the children have to develop connections in their relationships, which includes empathy and trust. These children have to have the ability to cooperate. Another factor to consider is the amount of contact children are encountering with members of the in-group and outgroup (Killen et al., 2013). For example, if gender integration is only happening at preschool, the child may not encounter a significant amount of gender integration to mitigate intergroup

biases when they go home. Children need support in all areas of their lives, including education advocates, parents/ caregivers, and other social norms. Accordingly, the field of early childhood education searched for additional interventions on how it may use the contact approach theory to mitigate in-group biases.

**Integrating Interventions Into Early Childhood Education**

When using the contact approach theory in early childhood education, teachers must consider additional interventions encouraging diversity and ensuring each child has a positive experience. The teacher's skill level and ability to teach social justice makes an impact on reducing in-group biases (Skinner & Meltzoff, 2019). As shown in Figure 4, along with the contact approach theory, there are two main interventions teachers can use in early childhood education. The first of these involves discussing diversity, peace, and social justice (Aboud & Doyle, 1996), while the second intervention involves using overt messages that include members of the outgroup and project positive messages (Kang & Inzlicht, 2012). These two interventions are linked to empirical evidence showing a reduction in biases. Due to the limited number of correlational studies in early childhood, this literature review synthesized the experimental research (Skinner & Meltzoff, 2019).

**Figure 4**

*Interventions to Mitigate In-Group and Outgroup Biases*


*Note.* (Aboud & Doyle, 1996; Kang & Inzlicht, 2012; Skinner & Meltzoff, 2019)

The first important experimental study showed a decrease in in-group biases in early childhood by discussing topics of diversity to enlighten children about prejudice (Skinner & Meltzoff, 2019; Aboud & Doyle, 1996). This research showed a decrease in in-group biases under two different circumstances: first, when White children learned about prejudices and African American history; second, when African American children learned about prejudice (Skinner & Meltzoff, 2019). Teachers have a variety of different strategies to use, such as peer-to-peer discussions focusing on two different viewpoints: one viewpoint having strong in-group biases, the other viewpoint with weak in-group biases (Aboud & Doyle, 1996).

The second important experimental study showed teachers could use overt communication that focuses on positive messaging about outgroup members (Skinner & Meltzoff, 2019). For example, two experimental quantitative studies by Kang and Inzlicht (2012)

indicated that during early childhood overt communication outweighed a child's personal experience. Both studies used 161 children in first, third, and fifth grade as their participants, with equal ethnic representation. The first study showed first graders were more influenced by communication than their experiences; but the fifth graders were more influenced by experiences than overt messages (Kang & Inzlicht, 2012). The second study showed when a young child hears the outgroup will be friendly and kind, and then experiences the outgroup as unpleasant, the young child is still more influenced by communication as by their actual experience (Kang & Inzlicht, 2012). Nesdale et al., (2005) studied the same concept with the very same results. In conclusion, as a child begins to age, overt messages become less impactful, and an older child starts to use his or her experiences to shape opinions and viewpoints (Kang & Inzlicht, 2012; Nesdale et. al, 2005). Therefore, the importance of messaging from teachers is crucial in early childhood education, for the reason that older children rely less on overt communication.

While additional research still needs to be completed in order to give early childhood educators the ability to mitigate in-group biases, this literature review has identified two main empirically driven strategies: contact approach theory and integrating in-group and outgroup communication (Skinner & Meltzoff, 2019). The history of research on the contact approach theory shows mixed results on the consequences due to placing a child in contact with members of the outgroup. It identified four criteria needed in order for in-group biases to be mitigated using the contact approach theory. In addition to using the contact approach theory, early childhood educators can conduct instruction that allows the children to discuss their behaviors and attitudes towards gender, race, or culture to reduce in-group and outgroup biases. By positively integrating collaborative discussions on social justice, the teacher will essentially affect the social interactions between members of the in-group and outgroup. Thus, early

childhood education has an effect on the social dynamics and will impact future relationships (Skinner & Meltzoff, 2019).

## Critique of Existing Literature

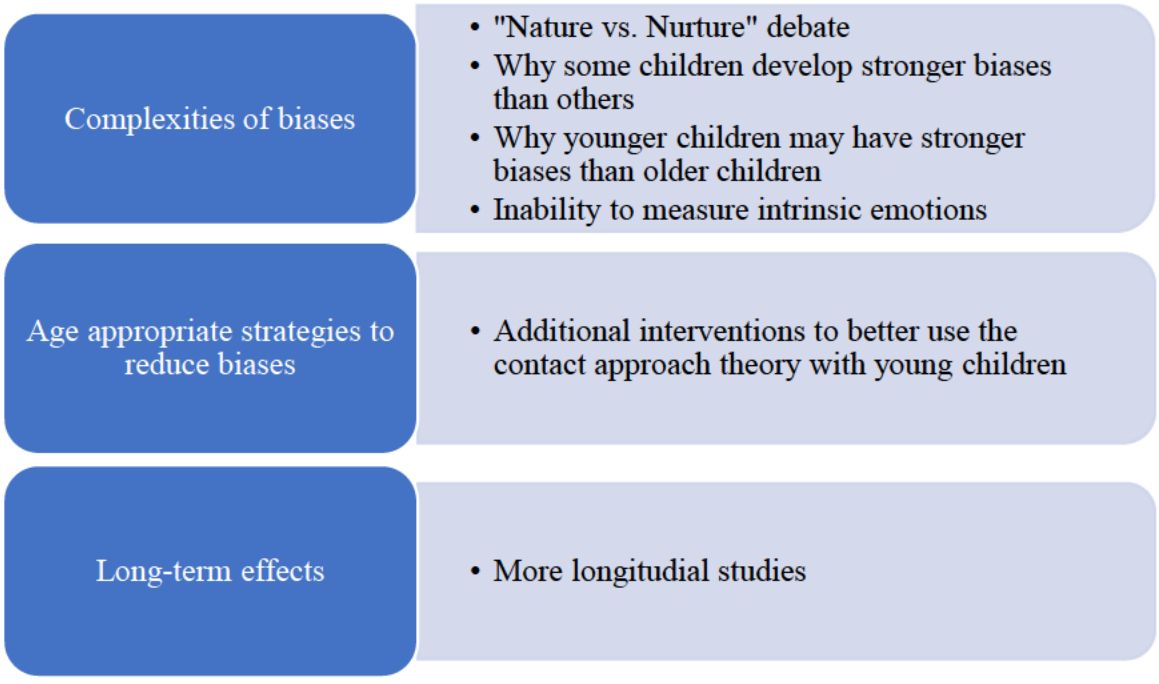
The studies review within this literature review showed early childhood education playing a vital role in reducing biases. With this, there are four main limitations. The first, and perhaps most important limitation is that biases are complex in nature. For example, the debate on *nature vs. nurture* is a research topic that continues to be investigated to understand precisely where prejudicial perspectives originate. In some research studies, in-group and outgroup biases are identified as psychopathological thoughts, whereas, other research studies show in-group and outgroup biases are developed through social experiences (Killen et al., 2013). Although this literature review focuses on a child's prejudicial development during social interactions, research is still needed to explain negative biases associated with the outgroup (Killen et al., 2013). Research has yet to fully examine why some children and not others develop a more prejudiced viewpoint (Aboud & Amato, 2003). Research also needs to examine why children ages five to seven show stronger bias attitudes than children who are older (Killen et al., 2013). Finally, many studies lack the ability to measure intrinsic emotions. For example, Gaertner et al. (1999) focused on what degree should the in-group interact with outgroup members and how does the complex interations of the large group affect biases. The limitations of existing literature included the inability to quantify the intrinsic emotions of the in-group and outgroup members. The ability to measure internal emotions of either group would provide insight on the contact approach theory and provide additional clues on what affects biases (Gaertner et al., 1999). Nevertheless, the study was able to measure the degree in which the in-group interacted with the outgroup, with results revealing that when both groups were able to effectively collaborate,

positive interactions occurred. However, any time one group as a whole threatened the other groups' identity, it resulted in greater chaos with perceptions related to biases (Gaertner et al., 1999).

The second limitation is researchers are unsure on how to best use the contact approach to develop equal status for both the in-group and outgroup (Brewer, & Kramer, 1985). Extensive research still needs to be done to fully evaluate the impacts of in-group and outgroup status. For instance, even though a child may be having contact with members of the outgroup, it does not mean that the child is cognitively considering these outgroup members as equals (Brewer, & Kramer, 1985). The third limitation is to understand the long-term effects of biases in order to mitigate biases throughout someone's life. Figure 5 shows these three limitations.

**Figure 5**

*Levels of Limitations*




*Note.* (Brewer, & Kramer, 1985; Killen et al., 2013)

## Summary

As young children continue to face a world with prejudicial perceptions, it is vital that early childhood education provide opportunities to reduce these biases and promote a collaborative world of high self-esteem, trust, and positive relationships. By teaching social justice in the education system by trained, early childhood teachers, young children will be able to receive instruction that reduces these prejudicial perceptions; thus, minimizing in-group and outgroup biases. This literature review is significant because it critically examined in-group and outgroup biases within the current state of early childhood education, regardless of any political views, and determined that early childhood education plays an important role in creating a socially just society.

Here, the research synthesized provides empirical evidence that in-group and outgroup biases are indeed present in early childhood and these influences have an impact on a child's thoughts, behaviors, and attitudes. This literature review also described terminology used within the variety of studies. It explored empirical evidence on when and how in-group and outgroup biases are initially formed. In addition, it focused on how early childhood education can mitigate the effects of these biases and what strategies can be used in the early years of a child's life. The review concluded that both in-group and outgroup biases affect social interactions and begins as young as three years of age. Both the environment and teachers play a role in establishing in-group biases. Two major ways to mitigate these biases in an early childhood setting are using the contact approach theory and using communication that promotes diversity. Although both of these interventions have led to empirical evidence that reduces biases, it was imperative that the *quality* of the contact approach and overt communication remain positive, collaborative, and supportive with optimistic attitudes towards all members of a group. While this literature review

provided a review of existing research on in-group and outgroup biases in early childhood, there were limitations in understanding the complexities of biases, such as the inability to accurately measure intrinsic emotions.

# CHAPTER THREE

## RESEARCH DESIGN AND METHODOLOGY

This study focused on prejudices at an early stage, prekindergarten through third grade. As a reminder, for the purpose of this study, early childhood education refers to education for children eight years old and under. This study identified a key strategy for reducing in-group and outgroups biases in early childhood as the contact approach theory. Simply stated, the contact approach theory is when members of the in-group come in direct contact with members of the outgroup (Killen et al., 2013). The contact approach has been implemented to enforce positive interactions with both members, as a way of building trusting relationships (Killen et al., 2013). This study examined early childhood educators' training and knowledge in using the concepts of contact approach theory as a strategy to reduce biases. In this particular study, the focus was to understand how the contact approach theory was used and how it played a role in mitigating in-group and outgroup biases in the field of early childhood education. Thus, the following research questions were used in guiding this study:

1. How much training in the contact approach theory for mitigating in-group biases in the classroom, if any, did early childhood education teachers receive, and to what extent, if any, do early childhood teachers have knowledge in the contact approach theory, and does this differ by select teacher demographics?
2. How often do early childhood teachers use the contact approach theory for mitigating in-group biases by keeping the children apart or together, and does this differ by select teacher demographics?

3. To what extent were the teachers successful in using the contact approach strategy to mitigate biases, and to what extent, can variation in this success be explained by training and knowledge and select teacher demographics?

This methodology chapter includes three main sections that correspond to the three general methodological procedures that have been employed in the study: participant selection procedures, data collection methods, and data analysis. The participant selection procedures explain how purposeful sampling was utilized to collect data. Next, the discussion of data collection methods section describes the processes on how data was collected. Finally, the data analysis discussion explains how the data was interpreted and analyzed.

## Overview of Quantitative Research Design

According to Creswell (2014), independent variables and dependent variables have three basic functions in a quantitative study.

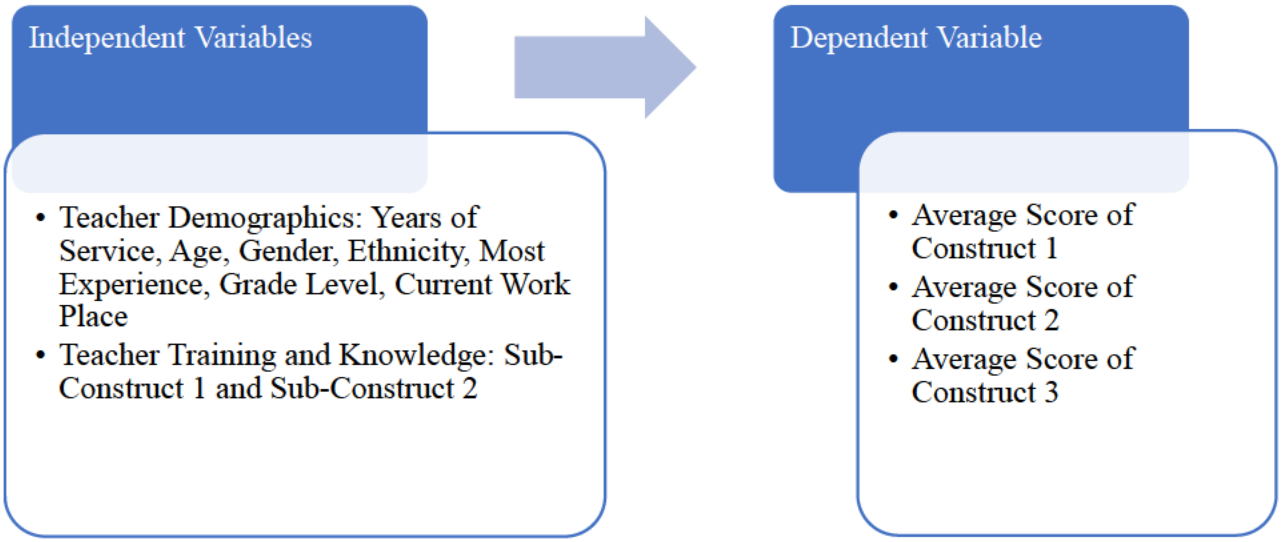
> The researcher may compare groups on an independent variable to see its impact on a dependent variable. Alternatively, the investigator may relate one or more independent variables to one or more dependent variables. Third, the researcher may describe responses to the independent, mediating, or dependent variables. (Creswell, 2014, p. 144)

For this research study, the literature claims there is a correlation between select independent variables and the dependent variable. As shown in Figure 6 below, the dependent variable includes the three research questions and the average score of each construct. This means the average score for each of the three different aspects of the contact approach strategy: (1) training and knowledge, (2) applied practices, and (3) perceptions of success will serve as the dependent variable. The independent variables are select teacher demographics and teacher training and knowledge. Through descriptive statistics and multiple regression analysis, this study identifies

correlations among key variables. This regression analysis reveals statistically significant relationships that help explain variation in teachers' training and knowledge, applied practice, and success with the contract approach strategy.

**Figure 6**

*Independent Variables That May Cause a Change in the Three Constructs/ Research Questions*




**Participants and Procedures**

This study was conducted within San Diego, California early childhood education setting. This study had 77 participants, all of whom work with children ages four to eight years of age. The selected teachers had different ethnic backgrounds, had been in the field of early childhood education for different lengths of time, vary in age, teach different age groups, and work for different sectors in education. The data was collected from San Diego teachers who are currently teaching prekindergarten, first grade, second grade, or third grade.

The study initially used probability sampling to select the organizations to participate. Probability sampling occurs when each participant has an equal likelihood of being selected.

(Patton, 2002). Once the organizations were selected, I reached out to the officers of each organization, which included the CEO of the educational nonprofits, superintendents from each of the school districts, and heads/principals of the private schools, to seek permission. At that time, I informed all the officers that although I would not be able share individual results, I could share the aggregate results. Particular care was taken to ensure teacher anonymity. The study's written consent form, which is in Appendix B, explicitly details these procedures. In order to elicit more genuine responses and to limit social desirability, respondents were ensured anonymity. In addition, an incentive of a $5 Amazon gift card was provided to all participants and all participants received a copy of the final dissertation with aggregated results. These gift cards were used to encourage teachers answered truthfully and to partially compensate the participants for their time. After sharing my proposal for this study with the officers, I submitted the adult consent form and the University of San Diego Institutional Review Boards permission form. Once these were approved from the IRB, which took about two and a half months, the research began.

After the initial quest to seek permission from the officers at each of the entities, I decided to use convenience sampling to select additional participants. I used two different methods when searching for San Diego California teachers on the social media platform LinkedIn. First, I used my current network and the search feature. I searched the following: "prekindergarten teacher," "kindergarten teacher," "first grade teacher," "second grade teacher," and "third grade teacher." Then, I looked through LinkedIn to ensure the teacher was from San Diego, California. The second method I used to gather participants was looking through a variety of San Diego public and private schools' websites, searching for teachers that met my criteria. Once the teacher matched both of my criteria, I added them to my connection and waited to see

if they accepted my invitation to connect on LinkedIn. If the teacher accepted my connection, I was able to reach out through a message on LinkedIn asking if they are willing to participate in my study.

## Data Collection Methods

The data collection method was an original survey that has been grounded in the contact approach theory literature on in-group biases. The survey was open to participants on October 13, 2021 and closed on December 8, 2021.

### *Surveys*

The instrument used was a self-reported survey, consisting of 63 questions. These questions were divided into demographic measures and three constructs:

1. Demographics of teacher participants
2. Training and knowledge in the contact approach theory for teachers
3. Applied practice based on teacher demographics
4. The perception of each participant's success on mitigating biases

The demographic measures consist of information from seven multiple-choice questions, which include the participant's gender, age, ethnicity, organizational identification, years of experience, and current grade level being taught. The purpose of this section was to gather nominal data, which is categorically self-reported in the survey. The three constructs, however, gathered ordinal data by using Likert scales. The first construct, training and knowledge in the contact approach theory for teachers, was formed from ten survey questions addressing the sub constructs of training and knowledge. The second construct, applied practice based on teacher demographics, was formed from twenty-five survey questions. The final construct, the outcome

of success on mitigating biases, had twenty questions. In total, the survey should take less than twenty minutes to complete.

For the three constructs, a 5-point Likert Scale was used; in essence, asking participants the extent to which they agree or disagree with a particular statement or how often they implement a specific statement. For instance, for the statement "I intermingle boys and girls in my classroom," participants would rate the extent of their implementation with the choices "never," "rarely," "sometimes," "frequently," and "always." Each question was assigned a numerical value in the Qualtrics system from 1 to 5, with higher numbers associated with greater use of the contact approach theory. The survey included reverse coded questions, where the opposite statements were made about the contact approach theory, to better engage the participants and to establish less positivity bias. To identify the total score for each construct the average score for all the statements that make up the construct was calculated, leading to an average between 1 and 5.

Appendix A includes the survey questions used in the study. The validity and reliability of the survey has not been determined prior to using the survey; however, the reliability of each construct was calculated as part of the analysis to make sure the instrument has internal consistency. When measuring the reliability, I used the Cronbach's Alpha Statistic, noting that values over 0.7 levels will be considered reliable (Galloway, 2021). Since the survey was original and had never been administered, subject matter experts reviewed it to establish face validity prior to its use. This process included having peers in the field of education and in the University of San Diego PhD program review each survey question and provide feedback. Then, based on the feedback, each survey question was reconstructed to ensure there were no leading questions that elicited a desired answer, double-barreled questions, and most importantly, that

the question measured the intended response. Content validity was also established, as each question was uniquely developed to align with the methodologies found in the research and created to focus on the three research questions. In order to provide additional clarity on the survey questions, Table 2 provides an example of a survey question from each of the three constructs and the teacher demographics.

**Table 2**

*Sample Survey Questions*

| Construct/Questions | Sample Research Question |
|---|---|
| 1. Demographics of participant | Select your gender<br>A. Male<br>B. Female<br>C. Transgender<br>D. Gender neutral<br>E. Non-binary<br>F. Two-spirit<br>G. Other |
| 2. Training and knowledge in the contact approach theory for teachers | Using the 5-point Likert scale, to what extent do you agree or disagree with this statement: I have received a great deal of training on anti-bias curriculum in the classroom. |
| 3. Applied practice based on teacher demographics | Using the 5-point Likert scale, to what extent do you implement this statement: I intermingle boys and girls in my classroom. |
| 4. The outcome of success on mitigating biases | Using the 5-point Likert scale, to what extent do you agree or disagree with this statement: I believe that I play a role in mitigating biases in the classroom. |

## Data Analysis Methods

Initially, this data analysis involved gathering the responses of the survey and entering and cleaning the responses in SPSS software. Part of this process was to ensure there was no missing data. While I coded Qualtrics to ensure the participants answered each survey question, this coding only worked on certain devices resulting in some missing data. The missing data was

calculated by taking the average score of that construct for that specific person. I also noted the reverse coded items during my calculation. Upon beginning the data analysis a Cronbach's Alpha test was used to test the reliability of each construct. Based on the Cronbach Alpha test several survey questions were not reliable and were therefore taken out of the construct. Then, descriptive statistics and a multiple regression analysis followed to better understand all three constructs. Using descriptive statistics, this study examined the mean and standard deviation for each research question and each question within each construct. In addition, each research question used a multiple regression analysis to show how much variation was explained by each set of independent variables. The next part of this section outlines each research question and the data analysis methods that were used.

***Research Question 1 (Construct 1)***

How much training in the contact approach theory for mitigating in-group biases in the classroom, if any, did early childhood education teachers receive, and to what extent, if any, do early childhood teachers have knowledge in the contact approach theory, and does this differ by select teacher demographics?

Using descriptive statistics, this study identified how much training and knowledge each teacher had in the contract approach method. Based on the survey responses, the analysis looked for gaps in training and trends on current knowledge of the contact approach theory. In the search to address research question 1, the first construct was divided into two sub constructs: (1) training sub construct, (2) knowledge sub construct. First, for each question under the construct an average score and standard deviation was calculated. Second, for each sub construct the average score and standard deviation was calculated. Next, the average score and standard deviation was calculated for the entire construct. Finally, the last part of the research question

used a multiple regression analysis to explain to what extent this can be explained through select teacher demographics. In conducting the analysis, *t*-statistics were used to determine the significance of individual variables (at the $p \leq .05$ level), and $R^2$ used to measure the amount of deviation explained by the models.

***Research Question 2 (Construct 2)***

How often do early childhood teachers use the contact approach theory for mitigating in-group biases by keeping the children apart or together, and does this differ by select teacher demographics?

The first part of research question #2 was addressed by presenting descriptive statistics to describe how often teachers use the contact approach theory, and was then followed by the use of multiple regression analysis to explain the extent to which variation in teacher's usage of the contact approach can be correlated to teacher demographics. Similarly to research question #1, the teacher demographics collected were used as the independent variables, and their *t*-statistics used to determine their level of statistical significance.

***Research Question 3 (Construct 3)***

To what extent were the teachers successful in using the contact approach strategy to mitigate biases, and to what extent, can variation in this success be explained by training and knowledge and select teacher demographics?

Construct 3 also used multiple regression analysis to seek to understand participants' perspectives on why some participants were believed to be successful and others were not. The independent variables were the same as in the second research question, which included teacher demographics. In addition, sub construct 1: training and sub construct 2: knowledge were also used as independent variables to understand teacher's training and knowledge in using the

contact approach theory. By adding these additional independent variables, this third research question focused on the participants' perceptions of success. Similar to the first two research questions, *t*-statistics were used to determine the significance of individual variables (at the $p \leq .05$ level), and $R^2$ used to measure the amount of deviation explained by the models.

**Positionality**

As an advocate for reducing prejudice in our society and an early childhood, executive administrator, I recognize the possible biases and projections I present within myself when conducting this research. Three potential biases have been identified:

1. Social desirability bias: This can occur when participants respond based on what they believe the researcher wants to hear. Social desirability bias happens often when the researcher is an authority figure. For example, I have been in senior leadership roles at Pacific Beach Presbyterian Preschool, the Del Mar Union School District, and the Boys and Girls Club of Vista. Participants may know my positions and may answer the questions based on what they believe I want to hear.
2. Acquiescence bias: This can occur when participants give a response that will satisfy a high valued personal request or inquiry, based on their prior knowledge about the high valued person. For example, if a participant knows my stance on biases, they may want to satisfy me as the researcher, or if a participant knows the stance of their superintendent, they may want to satisfy their superintendent by answering the questions in a certain way.
3. Leading questions and wording bias: Leading questions and wording bias involve asking questions in a specific manner that both drives and exacerbates the response.

For example, ensuring the research questions do not project levels of opinions, but rather seek out information.

A strategic plan to manage and mitigate the above bias has been built into this study and contains four different elements. First, it was made clear that the participants' responses are anonymous, as compared to merely providing confidentiality, making it more likely for the respondents to give truthful responses. Second, the survey process sought the truth from the participants by asking clear, concise 5-point Likert scale questions. For instance, each question measures a specific construct that should be easy for the participant to understand. Third, the survey asked non-leading questions that do not suggest a specific viewpoint or desired answer. Non-leading questions imply that questions do not have a "right" or "wrong" answer. Finally, the fourth component in managing bias included understanding my personal viewpoints and seeking out more objective responses. This method in mitigating implicit biases included needing to truly understand the participant's responses, rather than project my own viewpoints onto their responses.

## Summary

The purpose of this study was to seek a better understanding and identify to what extent, if any, prekindergarten through third grade teachers had training and knowledge on the contact approach theory, how often the contact approach theory was being used, teachers' perceptions of their overall success, and the extent to which teacher demographics were able to explain variation in these three constructs. Using descriptive and inferential statistics to better understand the complexities of in-group biases by applying the contact approach theory, this study hopes to build a foundational support for early childhood and elementary education to reduce in-group biases. Three research questions were developed to better understand the relationship between

in-group biases and the three main constructs: training and knowledge, applied practice, and perceptions of success. Using descriptive and inferential statistics and multiple regression analysis, this study identifies correlations among the dependent variables (as measured by the three constructs) and the independent variables as largely measure by the teacher demographics. This chapter also discussed the three methodological procedures, (a) participant selection procedures, (b) data collection methods, (c) data analysis and positionality in this study.

# CHAPTER FOUR

# RESULTS

## Purpose of the Chapter

This chapter explains the results of the quantitative research study that attempted to better understand whether the contact approach theory is being applied for children aged four to eight years old, and to what extent, if any, early childhood teachers use the contact approach theory in the classroom to address biases. In particular, this study addressed three research questions:

1. How much training in the contact approach theory for mitigating in-group biases in the classroom, if any, did early childhood education teachers receive, and to what extent, if any, do early childhood teachers have knowledge in the contact approach theory, and does this differ by select teacher demographics?
2. How often do early childhood teachers use the contact approach theory for mitigating in-group biases by keeping the children apart or together, and does this differ by select teacher demographics?
3. To what extent were the teachers successful in using the contact approach strategy to mitigate biases, and to what extent, can variation in this success be explained by training and knowledge and select teacher demographics?

This chapter is divided into five different sections: Demographics, Research Question 1, Research Question 2, Research Question 3, and the Summary. The first section provides an overview of the descriptive statistics for participant demographics, including gender, age, ethnicity, entity, grade level and years of experience. The second section presents an analysis of the first research question describing how much training in the contact approach theory the teachers received, and gaps in bias training and trends on current knowledge of the contact

approach theory. The third section includes an analysis of the second research question regarding how often teachers are using the contact approach and whether the applied application differs by teacher demographics. The fourth section includes an analysis of the third research question regarding participants' self-reported success rates and the amount of explained variation between demographics, training, and knowledge. The final section summarizes the three constructs and reports their means and standard deviations.

## Descriptive Demographics Results

In this section, descriptive statistics are provided for the teachers that responded to the survey. However, before describing the final sample size, it is important to note that within eight hours from when the data collection began, I received 2,587 completed responses. Given the extremely high number of participants in such a short period of time, it was highly unlikely that these participants were indeed eligible to take the survey. Instead, it was more likely that my survey was hacked by artificial intelligence due to offering an incentive of $5 Amazon gift card for each survey answered. Therefore, the 2,587 survey responses were completely eliminated from this study, and as a result, the study had a final sample size of 77 San Diego teachers. All 77 participants were verified of their prekindergarten through third grade employment with educational entities in San Diego. I verified participants were eligible to take the survey in four different ways: (a) provide a work related email address that would not be linked with any responses (b) having a password protected survey where only teachers who I see on an employment website can take the survey, (c) personally knowing these participants currently teach prekindergarten, first, second, or third grade, (d) tracking where the survey was being completed to ensure it was in San Diego County.

Basic demographics for these 77 teachers are shown in the next three tables, beginning with Table 3 where the gender and ethnicity that the participants most identified with are displayed. As shown in Table 3, there were significantly more females than males who participated in the study, and Caucasian and Hispanic/Latino were the top two ethnicities represented. Table 4 summarizes the data on the current entity the participants work for, which entity the participants had the most experience with, and the current grade level the participants are teaching. As shown in Table 4, there were significantly more public school participants and participants who taught Prekindergarten. Table 5 summarizes the continuous variables, age and years of experience, of the participants.

**Table 3**

*Gender and Ethnicity of Participants*

| **Characteristic** | ***n*** | **%** |
|---|---|---|
| *Gender* | | |
| Female | 74 | 96.10% |
| Male | 3 | 3.90% |
| | | |
| *Ethnicity* | | |
| Caucasian | 34 | 44.16% |
| Hispanic or Latino | 26 | 33.77% |
| Asian | 8 | 10.39% |
| Black or African American | 3 | 3.89% |
| Other | 6 | 7.79% |

**Table 4**

*Participants Current Work Place, Most Experience, Grade Level Taught, and Years of Experience*

| **Demographics** | ***n*** | **%** |
|---|---|---|
| *Current Work Place* | | |
| Nonprofit | 19 | 24.68% |
| Public School | 40 | 51.95% |
| Private School | 18 | 23.38% |
| | | |
| *Most Experience* | | |
| Nonprofits | 20 | 25.97% |
| Public School Districts | 39 | 50.65% |
| Private Schools | 18 | 23.38% |
| | | |
| *Grade Level Taught* | | |
| Prekindergarten | 41 | 53.25% |
| Kindergarten | 10 | 12.99% |
| First Grade | 5 | 6.49% |
| Second Grade | 9 | 11.69% |
| Third Grade | 7 | 9.09% |
| Mixed grades | 5 | 6.49% |

**Table 5**

*Participants Age and Years of Experience: Minimum, Maximum and Mean*

| **Continuous Variable** | ***N*** | **Minimum** | **Maximum** | **Mean** |
|---|---|---|---|---|
| *Age* | 77 | 21 | 69 | 43.56 |
| *Years of Experience* | 77 | 0 | 35 | 14.97 |

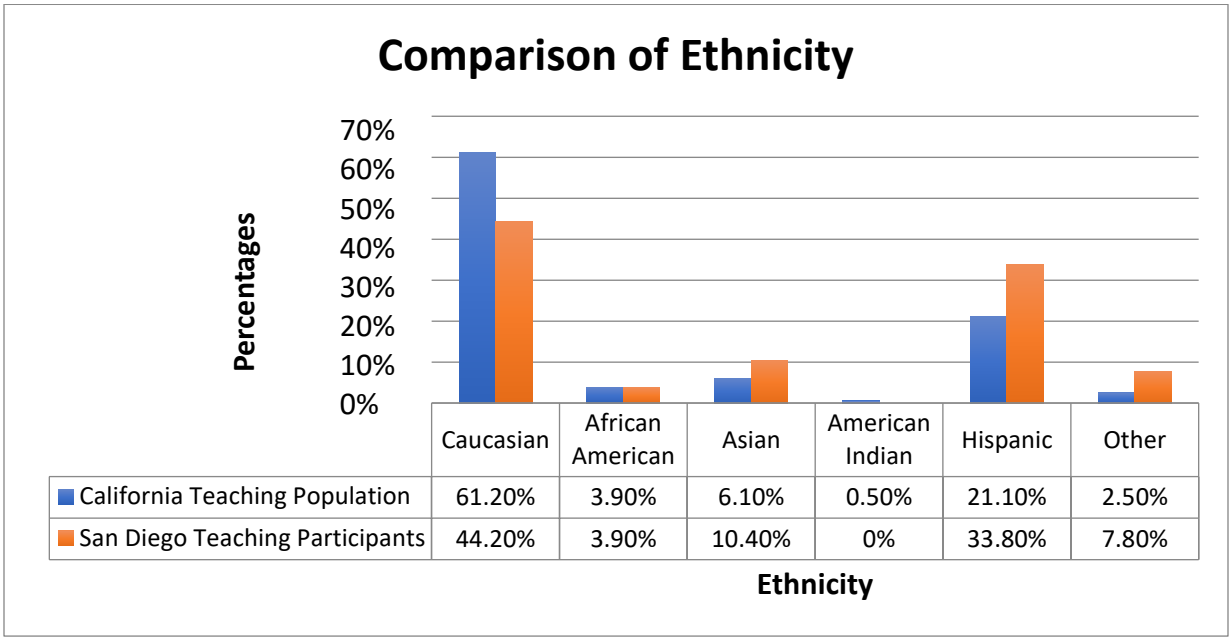
## Comparison of Demographics

A comparison of the demographics of this research sample and the general teaching population in California was conducted. The general teaching population results were taken from the California Department of Education staff data report section showing the race/ethnicity, age, and experience of certificated teaching staff in California. In contrast, the results of this study

were taken from 77 San Diego, California teacher participants who only teach grade levels prekindergarten to third grade. The California teacher's population information was taken from the 2020-2021 school year. Figure 7 captures a comparison between this studies participants' to the California certificated teaching population. While the percentages of many of the ethnicities were close to comparison, the two ethnicities that were significantly different were Caucasian and Hispanic. In this study, the Caucasian ethnicity was under-represented and the Hispanic ethnicity was over represented.

**Figure 7**

*Comparison of Ethnicity: San Diego Research Participants to California Teaching Population*




| | Caucasian | African American | Asian | American Indian | Hispanic | Other |
|---|---|---|---|---|---|---|
| California Teaching Population | 61.20% | 3.90% | 6.10% | 0.50% | 21.10% | 2.50% |
| San Diego Teaching Participants | 44.20% | 3.90% | 10.40% | 0% | 33.80% | 7.80% |

In terms of years of experience, according to the California Department of Education certificated teachers had 14 years of experience, while participants in this study had 14.97 years of experience, revealing that the San Diego research participants and the California teaching population had similar years of teaching experience.

## Cronbach's Alpha Test

Before beginning the analysis on the three research questions, I needed to make sure the constructs were reliable because the researcher designed the survey and it had never been used in the field. As such, a Cronbach's Alpha test was conducted to test the reliability of each of the three constructs; in doing so, values greater than .7 were considered reliable. Initially, Construct 1 had a Cronbach's Alpha test of .61 for all 10 questions in the construct. In order to make Construct 1 more reliable the following two Likert scale questions were eliminated: "I have difficulty understanding the complexities of in-group and outgroup biases" and "If asked to generally explain the contact approach theory, I do not feel confident in my explanation." With this change, construct 1 now has a total of eight questions, and an overall reliability of .72. Construct 2 did not have any questions removed, as the construct was already reliable (.86). Construct 3 had a Cronbach's Alpha of .66 when using all 20 questions. In order to make construct 3 reliable, three questions were eliminated, resulting in a total of 17 questions and an overall reliability of .73. The following three questions were eliminated: "the administration is not supportive in shaping our school culture to ensure diversity, inclusion and equality", "I am not confident in my ability to use my 'toolbox' to alter bias behavior in my classroom", and "At the district level, I feel incapable of changing biased behavior among children." Table 6 shows the Cronbach Alpha values confirming the reliability of the three constructs, and as such, only the questions used in the final version of the constructs will be used in the analysis.

**Table 6**

*Cronbach Alpha Test for Reliability of Constructs*

| Construct | Cronbach's Alpha Test | # of Questions in Each Construct |
|---|---|---|
| *Construct 1*<br>Training and Knowledge | .72 | 8 |
| *Construct 2*<br>Applied Practice | .86 | 25 |
| *Construct 3*<br>Perception of Success | .73 | 17 |

## Research Question 1

In this section, the first research question will be addressed through the use of descriptive statistics and multiple regression analysis. Since the first part of research question 1 involves how much training and knowledge teachers received in the contact approach theory for mitigating in-group biases in the classroom, Table 7 presents this information with higher numbers suggesting more training and knowledge and lower numbers less. The table itself is divided into two sub constructs: training and knowledge. The first construct had five questions and the second construct had three questions, making for a total of eight questions. These two sub constructs summarize the participant's training and knowledge in the contact approach theory. All reverse coded items were changed and noted so that the average scores are comparable. Most of the survey questions show that more people have training and knowledge than not. For example, the average score for the entire construct is 3.43, which shows that teachers reported having more training and knowledge than not at all. It is also important to note the two sub constructs mean score of 3.32 and 3.61, which shows that teachers reported having training and knowledge in the contact approach theory. In addition, the standard deviations are between .70 and 1.42, which shows that the data is closer to the mean.

**Table 7**

*Mean and Standard Deviation for Construct 1: Teacher Training and Knowledge in the Contact Approach Theory*

| Survey Question | Average Score (Mean) | Standard Deviation |
|---|---|---|
| **Training Sub Construct** | | |
| 1. I have received a significant amount of training on anti-bias curriculum to implement in the classroom. | 3.56 | 1.29 |
| 2. The training I received to mitigate in-group biases in the classroom felt effective. | 3.34 | 1.24 |
| 3. Overall, I understand the concepts of the contact approach. | 3.35 | 1.22 |
| 4. The administration regularly provides trainings in understanding biases and encountering diversity, inclusion, and equality. | 3.58 | 1.42 |
| [R] 5. I would not feel comfortable teaching a course on strategies to reduce in-group and outgroup biases in the classroom. | 3.25 | 1.23 |
| Mean Score Training Sub Construct | 3.32 | .82 |
| **Knowledge Sub Construct** | | |
| 6. I have easy access to the professional development needed to address in-group biases in my classroom. | 3.36 | 1.42 |
| [R] 7. I have a difficult time identifying my own biases in the classroom. | 2.17 | 1.08 |
| 8. I am not afraid to voice my opinion in challenging in-group and outgroup stereotypes when they are applied. | 3.64 | 1.08 |
| Mean Score Knowledge Sub Construct | 3.61 | .70 |
| **Mean Score Training and Knowledge** | **3.43** | **.69** |

[R] = Reverse Coded Items

To address the second part of research question 1 involving the extent to which select teacher demographics can explain variation in the first construct and its two sub constructs, a series of dummy variables were created to actually run the regressions. These variables and their corresponding coding values are described in Table 8.

**Table 8**

*Specification of Independent Variables in Regression Model*

| Variable | Description and Coding |
|---|---|
| Caucasian | 0 if other, 1 if Caucasian |
| Asian | 0 if other, 1 if Asian |
| Hispanic | 0 if other, 1 if Hispanic |
| Other Ethnicity | 0 if other, 1 if Other Ethnicity |
| Nonprofit Work Place | 0 if other, 1 if nonprofit is current work place |
| Public School Work Place | 0 if other, 1 if public school is current work place |
| Private School Work Place | 0 if other, 1 if private school is current work place |
| Most Experience Nonprofit | 0 if other, 1 if most experience was in the nonprofit sector |
| Most Experience Public School | 0 if other, 1 if most experience was in public schools |
| Most Experience Private School | 0 if other, 1 if most experience was in private schools |
| Prekindergarten | 0 if other, 1 if teaching prekindergarten |
| Kindergarten | 0 if other, 1 if teaching kindergarten |
| First Grade | 0 if other, 1 if teaching first grade |
| Second Grade | 0 if other, 1 if teaching second grade |
| Third Grade | 0 if other, 1 if teaching third grade |
| Mixed Ages | 0 if other, 1 if teaching mixed ages between 4-8 years old |
| Gender | 0 if female, 1 if male |

Using the above variables, three stepwise multiple regression analyses were conducted to better understand research question #1 and explain to what extent training and knowledge can be explained through teacher demographics. The three regressions used different dependent variables, which include: (1) whole construct, (2) sub construct 1: training, (3) sub construct 2: knowledge. All three regressions show the significant variables for each question and include their estimated coefficients, levels of significance, and $R^2$. The $p \leq .05$ was used to identify any statistically significant variables.

The first regression analysis used the average score for the entire construct 1 as the dependent variable and the independent variables were all the teacher demographics. When running the regression analysis on the entire construct, there were two significant variables, (1) work place nonprofit and (2) first grade. Examination of their estimated coefficients reveal that teachers who were currently working at an educational organization were .52 points more likely to have training and knowledge than teachers who were currently working for public and private schools. In addition, first grade teachers were .64 points less likely to have training and knowledge than the other mixed ages, prekindergarten, kindergarten, second, and third grade teachers.

The second regression analysis used the average score for the first sub construct (training) as the dependent variable and there were four statistically significant demographic variables: work place non-profit, first grade, third grade, and age. Examination of their estimated coefficients for sub construct 1 reveals that teachers who were working at a nonprofit were .74 points more likely to have training in the contact approach theory than those working for a public or private school. In addition, first grade teachers and third grade teachers were less likely to have training than other prekindergarten and second grade teachers.

The third regression analysis used the average score for the second sub construct (knowledge) as the dependent variable and there was only one significant variable: most experience public school, and it's estimated coefficient of -.34 suggests that those most experienced in public schools were slightly more than one third of a point less than for other types of experience. Table 9 summarizes the results of these three regressions and also provides the amount of explained variation in each of the three regressions.

**Table 9**

*Regression Results: Overall Construct and Sub constructs on Training and Knowledge Based on Demographics*

| Construct | Significant Variable(s) | $\beta$ | $R^2$ |
|---|---|---|---|
| Construct 1: Training and Knowledge | Work Place Nonprofit (+) | .52** | |
| | First Grade (-) | -.64* | .20 |
| Sub construct 1: Training | Work Place Nonprofit (+) | .74** | |
| | First Grade (-) | -.92** | |
| | Third Grade (-) | -.78** | |
| | Age (-) | -.01* | .33 |
| Sub construct 2: Knowledge | Most Experience Public School (-) | -.34* | .06 |

*significant at $\leq$.05
**significant at $\leq$.01

In an effort to better understand the nuances of the questions that were used to form the constructs, multiple regression analysis was again used with each individual question serving as the dependent variable and teacher demographics as the independent variables. Table 10 displays the significant variables for each question and includes their estimated coefficient, levels of significance and the overall $R^2$. For example, as shown in Table 10, prekindergarten teachers were a little more than a point (1.06) more likely than their teacher counterparts to have easy access to the professional development needed to address in-group biases in the classroom. In addition, first grade teachers were more than a point (1.26) less likely to understand the concepts of the contact approach theory, as compared to their teaching counterparts in prekindergarten to third grade. Also, teachers who were currently working in the public school system were .59 points less likely than teachers who work in private schools or educational nonprofits to have effective training to mitigate in-group biases.

**Table 10**

*Regression Results: Each Question in the Training and Knowledge Construct Based on Demographics*

| Survey Question | Significant Variable(s) | $\beta$ | $R^2$ |
|---|---|---|---|
| 1. I have received a significant amount of training on anti-bias curriculum to implement in the classroom. | Most Experience Nonprofit (+)<br>Gender (-)<br>Other Ethnicity (+)<br>Kindergarten (+) | 1.07**<br>-2.09**<br>.99*<br>.88* | .29 |
| 2. The training I received to mitigate in-group biases in the classroom felt effective. | Prekindergarten (+)<br>Work Place Public School (-) | .67*<br>-.59* | .18 |
| 3. Overall, I understand the concepts of the contact approach. | Most Experience Public School (-)<br>First Grade (-)<br>Age (-) | -.88**<br>-1.26*<br>-.02* | .24 |
| 4. The administration regularly provides trainings in understanding biases and encouraging diversity, inclusion, and equality. | Prekindergarten (+)<br>Work Place Public School (-) | .80*<br>-.69* | .19 |
| [R]5. I would not feel comfortable teaching a course on strategies to reduce in-group and outgroup biases in the classroom. | None | | |
| 6. I have easy access to the professional development needed to address in-group biases in my classroom. | Prekindergarten (+)<br>Asian (+) | 1.06**<br>1.14* | .23 |
| [R]7. I have a difficult time identifying my own biases in the classroom. | None | | |
| 8. I am not afraid to voice my opinion in challenging in-group and outgroup stereotypes when they are applied. | None | . | |

*significant at $\leq$ .05
**significant at $\leq$ .01
[R] = Reverse Coded Items

How often each of these demographic variables was significant in explaining training and knowledge is shown in Table 11. The variable that appeared the most was prekindergarten, as prekindergarten showed up three times. The frequency shows that prekindergarten teachers were more likely to receive effective trainings that encouraged diversity, equity, and inclusion than the

other kindergarten through third grade teachers. It is also important to note that no variables showed up as significant too, which is labeled in Table 11 as 'None'.

**Table 11**

*How Often Each Independent Variable Showed to be Significant in Training and Knowledge*

| Significant Variable | How Often Variable was Significant |
|---|---|
| Prekindergarten | 3 |
| None | 3 |
| Work Place Public School | 2 |
| Age | 1 |
| Most Experience Public School | 1 |
| First Grade | 1 |
| Kindergarten | 1 |
| Other Ethnicity | 1 |
| Gender | 1 |
| Most Experience Nonprofit | 1 |

## Research Question 2

Research question 2 asks how often early childhood teachers use the contact approach theory for mitigating in-group biases by keeping the children apart or together, and whether or not this applied application differs by select teacher demographics. Table 12 below presents the results for the first part of the research question, showing the means and standard deviations for each of the 25 questions as well as the overall average score for the construct. Recall that for these questions, the scale used ranged from 1 (*never*) to 5 (*always*) and N/A meant not applicable. Most people reported applying the contact approach theory more frequently than sometimes. It is interesting to note that the lowest average score is for question #7, showing teachers sometimes shared ideas about mitigating biases to the school administration. In addition, the highest average score is for question #3, showing that teachers more frequently have children from different ethnic backgrounds play together than only sometimes. The largest standard

deviation is 1.51 for question #12, meaning that there were less consensus among teachers on asking children to speak English in class. In addition, the standard deviation for question #25 also has a large standard deviation of 1.40, showing that there were also less consensus among teachers on having a specific anti-bias curriculum that is implemented.

**Table 12**

*Mean and Standard Deviation for Construct 2: How Often Participants use the Contact Approach Theory/ Applied Practice*

| Survey Question | Average Score (Mean) | Standard Deviation |
|---|---|---|
| 1. I speak up to colleagues when I see in-group and outgroup biases not being addressed in our education system. | 3.21 | .94 |
| 2. I intermingle boys and girls in my classroom. | 4.61 | .79 |
| 3. I have children from different ethnic backgrounds play together. | 4.75 | .50 |
| [R] 4. I allow children to sit next to their friends. | 3.90 | .93 |
| 5. I use a variety of strategies to help children understand the identities of others | 4.14 | .90 |
| 6. I have spoken to my students' families about my anti-bias curriculum. | 2.53 | 1.32 |
| 7. I shared my ideas about mitigating biases to the school administration. | 2.50 | 1.32 |
| 8. When lesson planning, I practice self-reflection. | 4.18 | .76 |
| 9. I speak to my students about our differences. | 4.06 | .80 |
| 10. I have students provide an explanation for their opinion. | 4.09 | .84 |
| 11. I provide self-reflection time for my students to understand their behavior. | 4.06 | .89 |
| [R] 12. I ask children to speak English in class. | 2.54 | 1.51 |
| [R] 13. I allow students to choose their own groups. | 3.70 | 1.00 |
| 14. I notice students who do not share their opinions. | 3.99 | .91 |
| 15. I provide opportunities in class for each student to share with others. | 4.58 | .60 |
| 16. I make sure everyone in the group participates. | 4.49 | .61 |
| 17. I take the opportunity to learn more about my students' culture. | 4.42 | .62 |
| 18. I observe students asking questions about race and gender. | 3.28 | 1.02 |
| 19. I notice whom each child interacts with. | 4.40 | .71 |

| | | |
|---|---|---|
| 20. I challenge my students to dive deeper into understanding themselves. | 3.80<br>4.64 | .93<br>.60 |
| 21. I arrange my classroom to utilize spaces that encourage collaboration and contact (Pre-COVID). | 3.66 | 1.07 |
| 22. I think about ways to mitigate in-group and outgroup biases in my classroom. | 4.40 | .69 |
| 23. I create a curriculum that encourages students to share their opinions. | | |
| 24. I ask all my students to share their perspectives. | 4.44 | .66 |
| 25. I have a specific anti-bias curriculum that I implement. | 3.03 | 1.40 |
| **Mean Score Applied Practice** | **3.80** | **.37** |

[R] = Reverse Coded Items

When comparing the mean and standard deviation for construct 1 versus construct 2, the results show that teachers are better able to apply the contact approach theory than their training and knowledge in the contact approach theory. This is shown in Table 7 where the average score for construct 1 is 3.48 and in Table 12 where the average score for construct 2 is 3.80. Not surprisingly, participants did not feel comfortable sharing ideas or strategies with families or school administration as show in Table 12 research questions 6 and 7. Teachers did report their curriculum intermingling children from different backgrounds (e.g. gender, race).

To address the second part of research question 2, a multiple regression analysis was used to explain the extent to which variation in participant's usage of the contact approach might be explained by teacher demographics. The dependent variable was the average score for this construct (applied practice) and the independent variables were all the teacher demographics. Interestingly, when running the regression analysis there were no significant demographic variables that explained variation in the applied practice construct.

Then as was done with the first research question, multiple regression analysis was used with each of the 25 questions that make up the construct. Not surprisingly, many of the individual questions produced significant demographic variables. Table 13 shows the significant

variables for each question and includes their estimated coefficients, levels of significance, and $R^2$. The $p \leq .05$ was again used to show significance. Examination of Table 13 shows, for example, that prekindergarten teachers scored .49 points higher than non-prekindergarten teachers in speaking up to colleagues when in-group and outgroup biases are not being addressed. Survey question #2 found two variables to be significant: years of experience and most experience in nonprofit sector. Their estimated coefficients reveal that every additional year of experience is associated with a .02 points higher score regarding their intermingling of boys and girls in the classroom. In other words, the longer you have been teaching, the more likely you are to intermingle boys and girls in the classroom. In addition, the nonprofit sector scored .53 lower than every other sectors, such as public and private schools.

There was three significant findings in these regression results for each survey question in construct 2: applied practice. First, prekindergarten teachers are more likely to share ideas about mitigating biases to the school administration than teachers who taught kindergarten, first, second or third grade. Second, first grade teachers are 1.26 less likely to have spoken to the students' families about their anti-bias curriculum than teachers who taught prekindergarten, kindergarten, second, and third grade. Third, when lesson planning, men were 1.23 less likely to practice self- reflection than women.

**Table 13**

*Regression Results: Each Question in the Contact Approach Theory Applied Practice Construct Based on Demographics*

| Survey Question | Significant Variable(s) | $\beta$ | $R^2$ |
|---|---|---|---|
| 1. I speak up to colleagues when I see in-group and outgroup biases not being addressed in our education system. | Prekindergarten (+) | .49* | .07 |
| 2. I intermingle boys and girls in my classroom. | Years of Experience (+)<br>Most Experience Nonprofit (-) | .02**<br>-.53** | .16 |

| | | | |
|---|---|---|---|
| 3. I have children from different ethnic backgrounds play together. | Third Grade (-)<br>Asian (+) | -.52**<br>.37* | .11 |
| [R] 4. I allow children to sit next to their friends. | Prekindergarten (-)<br>Second Grade (+)<br>Most Experience Public School (+) | -.46*<br>.96**<br>.55** | .39 |
| 5. I use a variety of strategies to help children understand the identities of others | Most Experience Nonprofit (+) | .62** | .09 |
| 6. I have spoken to my students' families about my anti-bias curriculum. | Prekindergarten (+)<br>First Grade (-) | .68*<br>-1.26* | .16 |
| 7. I shared my ideas about mitigating biases to the school administration. | Prekindergarten (+) | 1.06** | .16 |
| 8. When lesson planning, I practice self-reflection. | Gender (-) | -1.23** | .10 |
| 9. I speak to my students about our differences. | Most Experience Nonprofit (+)<br>Hispanic (+) | .46*<br>.42* | .16 |
| 10. I have students provide an explanation for their opinion. | Years of Experience (-) | -.02* | .07 |
| 11. I provide self-reflection time for my students to understand their behavior. | None | | |
| [R] 12. I ask children to speak English in class. | Hispanic (+)<br>Second Grade (+) | .93**<br>1.11* | .13 |
| [R] 13. I allow students to choose their own groups. | Most Experience Public School (+)<br>Prekindergarten (-) | .73**<br>-.60** | .34 |
| 14. I notice students who do not share their opinions. | Prekindergarten (-)<br>Asian (-) | -.48*<br>-.70* | .15 |
| 15. I provide opportunities in class for each student to share with others. | None | | |
| 16. I make sure everyone in the group participates. | White (-) | -.29* | .56 |
| 17. I take the opportunity to learn more about my students' culture. | White (-) | -.36* | .08 |
| 18. I observe students asking questions about race and gender. | Years of Experience (-)<br>First Grade (-) | -.03**<br>-.96* | .16 |
| 19. I notice whom each child interacts with. | Asian (-) | -.73** | .10 |
| 20. I challenge my students to dive deeper into understanding themselves. | None | | |
| 21. I arrange my classroom to utilize spaces that encourage collaboration and contact (Pre-COVID). | Third Grade (-) | -.61** | .09 |
| 22. I think about ways to mitigate in-group and outgroup biases in my classroom. | None | | |

| | | | |
|---|---|---|---|
| 23. I create a curriculum that encourages students to share their opinions. | None | | |
| 24. I ask all my students to share their perspectives. | Private School Work Place (+) | .37* | .06 |
| 25. I have a specific anti-bias curriculum that I implement. | Prekindergarten (+) | .79* | .08 |

*significant at $\leq$ .05
**significant at $\leq$ .01
$^{R}$ = Reverse Coded Items

In an effort to understand which variables statistically explained variation in the applied practice construct, Table 14 shows how often the independent variables were significant. Examination of Table 14 reveals that prekindergarten was the most significant independent variable, as it showed up 7 times, although not always with the same sign. Interestingly, prekindergarten teachers were more likely to speak up to colleagues, families, and school administration and have a specific anti-bias curriculum; however, prekindergarten teachers were less likely to allow students to choose their own group and to allow students to sit next to their friends. There were many independent variables that never were significant. For example, ethnicity, age, and public school work place were never significant, revealing their lack of association with this construct

**Table 14**

*How Often Each Independent Variable Showed to be Significant in the Applied Practice*

| Significant Variable | How Often Variable was Significant |
|---|---|
| Prekindergarten | 7 |
| None | 4 |
| Years of Experience | 3 |
| Most Experience Nonprofit | 3 |
| Asian | 3 |
| Third Grade | 2 |
| White | 2 |
| First Grade | 2 |
| Most Experience Public School | 2 |
| Second Grade | 2 |
| Hispanic | 2 |
| Private School Work Place | 1 |
| Gender | 1 |

## Research Question 3

Research question 3 states: To what extent were the teachers successful in using the contact approach strategy to mitigate biases, and to what extent, can variation in this success be explained by training and knowledge and select teacher demographics? Table 15 presents a summary on the extent to which teachers viewed successes in using the contact approach theory. More participants reported success in using the contact approach theory than not.

Examination of Table 15 reveals that teachers are better prepared to execute and apply the contact approach theory than obtaining training and knowledge, and have a positive perception of success in using the contact approach theory. In particular, teachers reported that they understand the importance of having these anti-bias conversations with their young learners and felt it was an appropriate time to introduce these conversations to build positive relationships. Teachers also reported being interested in gaining more training and knowledge to reduce biases in the classroom. From a consensus standpoint, teachers had the least consensus on

reporting how the administration effectively communicates in sharing strategies for reducing biases (*SD* = 1.31), and the most consensuses on noticing the students building positive relationships with each other (*SD* = .64).

**Table 15**

*Mean and Standard Deviation for Construct 3: Perception on Success*

| Survey Question | Average Score (Mean) | Standard Deviation |
|---|---|---|
| 1. I play a role in mitigating in-group and outgroup biases in the classroom. | 3.82 | .97 |
| 2. I believe there are age-appropriate strategies to mitigate biases other than the contact approach theory. | 3.88 | .87 |
| 3. I am likely to recommend the contact approach theory to other teachers. | 3.45 | .92 |
| [R] 4. The contact approach theory is not better than other strategies in mitigating biases in the classroom. | 3.21 | .78 |
| 5. I had a positive experience in reducing biases in my classroom. | 3.91 | .78 |
| [R] 6. I believe the contact approach theory is ineffective. | 2.70 | .91 |
| 7. I am able to come up with my own ideas to reduce biases in my classroom. | 3.87 | .81 |
| 8. The administration communicates effectively in sharing strategies for reducing biases. | 3.44 | 1.31 |
| [R] 9. I am not comfortable communicating to families how my curriculum involves the contact approach theory. | 2.94 | 1.17 |
| 10. Overall, I believe my anti-bias curriculum is effective. | 3.65 | .98 |
| 11. I have enough resources to change the outcome of biased behavior in my classroom. | 3.38 | 1.18 |
| 12. In my classroom, I notice that all students participate. | 3.83 | .93 |
| 13. After using the contact approach theory, I see more harmonious interactions among students. | 3.51 | .71 |
| 14. Using the contact approach theory is simple. | 3.40 | .86 |
| [R] 15. I am not interested in learning more about successful strategies to reduce biases in my classroom. | 2.01 | 1.16 |
| 16. My classroom grade level is an appropriate time to start having these anti-bias conversations. | 4.14 | 1.00 |
| 17. I notice the students building positive relationships with each other. | 4.47 | .64 |
| **Mean Score Perception on Success** | **3.64** | **.42** |

[R] = Reverse Coded Item

The final research question also used multiple regression analysis, in this case to explain variation in the extent to which teachers were successful in using the contact approach strategy to mitigate biases as a function of training, knowledge, and select teacher demographics. The dependent variable used in the analysis was the average score for the perception of success construct (Construct 3), and the independent variables were the teacher demographics and the training and knowledge construct (Construct 1). The results of this regression are shown in Table 16, and suggest that increases in training and knowledge are associated with a slightly greater perceptions of success; in particular, an increase on one point in the training and knowledge construct is associated with a .05 point increase in the perceptions of success construct. In this regression none of the teacher demographic variables were significant.

**Table 16**

*Regression Results: Overall Construct on Perceptions of Success Based on Demographics and Training and Knowledge Construct*

| Construct | Significant Variable(s) | $\beta$ | $R^2$ |
|---|---|---|---|
| Construct 3: Perceptions of Success | Construct 1:Training and Knowledge (+) | .05** | .43 |

*significant at $\leq$.05
**significant at $\leq$.01

After running the multiple regression analysis with the entire training and knowledge construct, the regressions were then rerun using the two sub constructs as independent variables along with the teacher demographics. As shown in Table 17, when running the multiple regression analysis on the sub constructs there were two significant variables – both the training and knowledge sub constructs – but still none of the teacher demographic variables. Specifically, training (sub construct 1) had a lesser impact on perceptions of success than knowledge (sub

construct 2); in fact, the effects was about half as large. It is also important to note that the $R^2$ is .45 when using the sub constructs, as compared to .43 when using the overall construct as the independent variable, revealing the importance of focusing on the two sub constructs rather than just the construct itself.

**Table 17**

*Regression Results: Overall Construct on Perceptions of Success Based on Demographics and Training Sub Construct and Knowledge Sub Construct*

| Construct | Significant Variable(s) | $\beta$ | $R^2$ |
|---|---|---|---|
| Construct 3: Perceptions of Success | Sub construct 1 (+) | .04** | |
| | Sub construct 2 (+) | .08** | .45 |

*significant at $\leq$.05
**significant at $\leq$.01

To complete the analysis, multiple regression analysis was used with each of the 17 questions that make up the construct. These questions served as the dependent variables and the independent variables were all the demographics and the sub constructs in research question #1. The sub constructs were used in this regression analysis because of the lager $R^2$ associated with them as compared to the full construct. Table 18 below shows the significant variables for each question and includes their estimated coefficients, levels of significance ($p \leq .05$), and $R^2$.

Three important results stand out. First, the second question revealed that first grade teachers were 1.17 points less likely than all other grade levels to believe there are age appropriate strategies to mitigate biases other than the contact approach theory. Second, for question #15, Asians and other ethnicities were 1.14 points more likely than Whites and Hispanics to be interested in learning more about successful strategies to reduce biases in my classroom. Third, the more knowledge a teacher had in the contact approach theory, the more

likely they were to have a positive experience in reducing biases in my classroom, notice the students building positive relationships with each other, and believe their classroom grade level was an appropriate time to start having these anti-bias conversations.

**Table 18**

*Regression Results: Each Question in the Contact Approach Theory Perceptions of Success Construct Based on Demographics and Sub Constructs 1 and 2*

| Survey Question | Significant Variable(s) | $\beta$ | $R^2$ |
|---|---|---|---|
| 1. I play a role in mitigating in-group and outgroup biases in the classroom. | Sub Construct 1 (+) | .07* | .08 |
| 2. I believe there are age-appropriate strategies to mitigate biases other than the contact approach theory. | Hispanic (-)<br>First Grade (-) | -.64**<br>-1.17** | .19 |
| 3. I am likely to recommend the contact approach theory to other teachers. | Sub Construct 1 (+)<br>Years of Experience (-) | .09**<br>-.02* | .23 |
| [R] 4. The contact approach theory is not better than other strategies in mitigating biases in the classroom. | Work Place Nonprofit (-) | -.70** | .15 |
| 5. I had a positive experience in reducing biases in my classroom. | Sub Constrict 2 (+)<br>Third Grade (-)<br>Other Ethnicity (+) | .19**<br>-.66*<br>.47* | .35 |
| [R] 6. I believe the contact approach theory is ineffective. | Second Grade (+) | .67* | .06 |
| 7. I am able to come up with my own ideas to reduce biases in my classroom. | Age (+)<br>Sub Construct 2 (+) | .02**<br>.10* | .17 |
| 8. The administration communicates effectively in sharing strategies for reducing biases. | Sub Construct 1 (+)<br>Other Ethnicity (-)<br>Age (+)<br>Sub Construct 2 (+) | .11**<br>-1.03**<br>.03**<br>.15* | .37 |
| [R] 9. I am not comfortable communicating to families how my curriculum involves the contact approach theory. | Sub Construct 1 (+) | .09** | .09 |
| 10. Overall, I believe my anti-bias curriculum is effective. | Sub Construct 1 (+)<br>Years of Experience (+) | .10**<br>.02* | .22 |
| 11. I have enough resources to change the outcome of biased behavior in my classroom. | Sub Construct 1 (+) | .13** | .20 |
| 12. In my classroom, I notice that all students participate. | White (-)<br>Years of Experience (-) | -.69**<br>-.02* | .21 |

| | | | |
|---|---|---|---|
| 13. After using the contact approach theory, I see more harmonious interactions among students. | Sub Construct 1 (+) | .07** | .14 |
| 14. Using the contact approach theory is simple. | Sub Construct 1 (+)<br>Work Place Public School (-)<br>Other Ethnicity (+) | .07**<br>-.51**<br>.68* | .30 |
| [R] 15. I am not interested in learning more about successful strategies to reduce biases in my classroom. | Asian (-)<br>Other Ethnicity (-) | -1.25**<br>-1.14** | .18 |
| 16. My classroom grade level is an appropriate time to start having these anti-bias conversations. | Sub Construct 2 (+)<br>Most Experience Public School (+) | .17**<br>.50* | .14 |
| 17. I notice the students building positive relationships with each other. | Sub Construct 2 (+) | .08* | .07 |

*significant at $\leq$.05
**significant at $\leq$.01
[R] = Reverse Coded Items

The number of times that each of these independent variables were significant for the 17 questions is shown in Table 19. The two variables that showed up most frequently to be were sub construct 1 (training) and sub construct 2 (knowledge). Without surprise, the more training and knowledge teachers had in the contact approach theory the more successful they perceived themselves to be. When looking at how often the sub constructs showed up as significant it is also important to note that these sub constructs had a positive association with the dependent variable, perceptions of success. For example, the results show that teachers who received more training were more likely to believe they play a role in mitigating in-group and outgroup biases in the classroom. In addition, it shows that teachers who believed they were trained were more likely to recommend the contact approach theory to other teachers.

**Table 19**

*How Often Each Independent Variable Showed to be Significant in Perception of Success Rates*

| Significant Variable | How Often Variable was Significant |
|---|---|
| Sub Construct 1 | 8 |
| Sub Construct 2 | 5 |
| Other Ethnicity | 4 |
| Years of Experience | 3 |
| Age | 2 |
| First Grade | 1 |
| Second Grade | 1 |
| Third Grade | 1 |
| Hispanic | 1 |
| Most Experience Public School | 1 |
| Work Place Public School | 1 |
| Asian | 1 |
| White | 1 |
| Work Place Nonprofit | 1 |

## Summary

This quantitative analysis included 77 participants who taught prekindergarten through third grade and attempted to measure three key research questions. The three research questions, each one exploring one of the three constructs, focused on teacher training and knowledge, applied practice, and personal views of success. Table 20 shows the average scores and standard deviations for each construct. These results below show teachers have less training and knowledge than reported applied practice and perception of success rates.

**Table 20**

*Average Scores and Standard Deviations for Each Construct*

| Construct | Average Score (Mean) | Standard Deviation |
|---|---|---|
| *Construct 1* Training and Knowledge | 3.43 | .69 |
| *Construct 2* Applied Practice | 3.80 | .37 |
| *Construct 3* Perception of Success | 3.64 | .42 |

Multiple regression analyses were also conducted for the entire construct and each research question within the construct. While the second construct had no significant demographic variables associated with it that explained any variation in the overall construct, the first and third constructs did have several significant variables. In addition, many of the individual survey questions had independent variables that were significant. Prekindergarten showed up often as a significant variable for each research question in both construct 1 and construct 2.

# CHAPTER FIVE

# DISCUSSION

This study attempted to better understand how the concepts of the contact approach theory are being used to mitigate in-group and outgroup biases in prekindergarten through third grade classrooms in San Diego, California. The goal of this study was to provide early childhood educators with a foundational understanding on implementing an anti-bias curriculum, with participants from diverse backgrounds and organizations, including the public, private, and nonprofit sectors. In this chapter, the significant findings of this study will first be discussed and contextualized within the relevant literature, followed by limitations of the study, implications for future research, recommendations for practice, and conclusions.

## Significant Findings and Existing Literature on Findings

The most significant overall finding from the analysis was that prekindergarten through third grade teachers have less training and knowledge on the contact approach theory than their reported levels of execution and success. Overall, teachers believed they were less successful in the contact approach theory than their reported applied practice (which had the highest mean score). An important detail to note is teachers scored the lowest in the first construct, training and knowledge, but also reported they were open to receiving more training. This finding suggests teachers want to receive more training on diversity, equity, and inclusion initiatives in order to build deeper knowledge and feel more comfortable in sharing their ideas on becoming more inclusive. Through their research, Patterson and Bigler (2006) found when teachers acquire more training and knowledge on mitigating biases, they are able to play a role in producing less outgroup bias.

The existing literature shows that nurturing the environment, understanding how to mitigate biases, and training in different approaches are key components to mitigating biases for young children because children begin to social categorize and label in-group or outgroup members (Gaertner et al., 1999, MacDonald et al., 2013; Patterson & Bigler, 2006, Skinner & Meltzoff, 2019). The field of early childhood education plays a major role in mitigating in-group and outgroups biases because early childhood lays the foundation on social, emotional, physical, and cognitive development in older children, adolescence, and adults (Brewer & Kramer, 1985; Killen et al., 2013). Abound and Amato (2003) showed implementing an effective anti-bias curriculum can mitigate biases and support the development of positive social, emotional interactions. If early childhood educators were able to change the outcomes of negative in-group and outgroup biases to positively shape biases, the field of early childhood education would lead a revolution of mitigating systemic racism for the entire field of education (Bennett, 2014; Gaertner & Dovidio, 2014).

My research study showed prekindergarten through third grade teachers' lacked training and knowledge on the contact approach theory and it is important for our education system to recognize and promote additional anti-bias training. The Master Plan for Early Learning and Care identifies some key areas of improvement, such as affordable childcare, and recognizes existing research showing early childhood playing a major role in mitigating biases (Killen et al., 2013). However, the Master Plan still lacks research based best practices to promote equality. For example, the Master Plan should include trainings for educators to address the issues of inequities, biases, and racism, and should include mitigation strategies, such as the contact approach theory. Educators across California are trying to solve long-standing inequities, such as childcare for low-income families, resources for underserved families, and best practices on an

anti-bias curriculum. My research study on the contact approach theory showed teachers are lacking training and knowledge, but are still able to execute strategies of the contact approach theory. Also, teacher's self-reported they felt successful in implementing the contact approach theory. Therefore, while the teachers did not receive as much training in the contact approach theory specifically, the teachers were still able to successfully apply the contact approach in the classroom.

In order to understand some of the finer-grain details on how the overall constructs varied by teacher demographics, stepwise multiple regression analyses were conducted and some of the results were unexpected. For example, while the training and knowledge construct revealed that teachers who worked in the nonprofit sector had greater training and knowledge than teachers in other sectors, first grade teachers had less training and knowledge than other teachers. Interesting, the second construct had no significant teacher demographic variables. However, the third construct (perceptions of success) had both the training sub construct and knowledge sub construct as significant independent variables. Based on the results of these regressions, one can conclude teachers in the educational nonprofit sector have the most training and knowledge as compared to public and private schools. Unpredictably, there was no existing literature suggesting the teachers in the educational nonprofit sector have more knowledge on the contact approach theory and anti-bias trainings than the public and private sector. Not surprisingly, the more knowledge, training, and preparation in execution a teacher had, the more they believed they were successful.

Overall and as shown in the existing literature, teachers' training and knowledge makes a significant impact on reducing in-group and outgroup biases in the classroom (Skinner & Meltzoff, 2019). Training and knowledge are particularly important to provide quality

interactions that promote positivity, trust, and mutual respect (Skinner & Meltzoff, 2019). Since research has shown that young children develop more trust for members of the in-group and significantly less trust for members of the outgroup, training and knowledge provide the foundational level on mitigating in-group biases (MacDonald et al., 2013). Importantly, teachers are able to have success in mitigating biases when they are trained to implement positive conscious discipline methods (Cameron et al., 2007; Pettigrew & Tropp, 2006; Skinner & Meltzoff, 2019).

When explaining variation in each of the survey questions and the independent variables that were significant in the regression analyses, prekindergarten appeared as the most frequent independent variable. Based on these findings, one can conclude that prekindergarten teachers have more training and knowledge and apply the contact approach theory more than their kindergarten through third grade counterparts. Interestingly, however, prekindergarten teachers did not show up as a significant variable in the third construct (perceptions of success). Perhaps these results suggest that prekindergarten teachers encounter in-group biases more often than other teachers, and therefore prekindergarten teachers are able to better recognize their knowledge, training, and applied practice. This hypothesis is based on some existing research that in-group biases are more prevalent in younger children (Yee and Brown, 1992).

Researchers have shown the affects of *nurture* on in-group and outgroup biases in children as young as three years old (Yee & Brown, 1992). A child's group dynamics and environmental structure affect his or her perspectives (Brewer, & Kramer, 1985). When a child's social structures are built around the child's self-identity, trusting relationships, and viewed transgressions, the child is more likely to feel included and associate these social structures as an in-group (Bennett, 2014; Cameron et al., 2001). In California, prekindergarten teachers are

required to take twelve core units in child development to learn about a child's identity and building trust. For example, these required courses include how to create a secure, safe environment that is age-appropriate and includes a variety of centers throughout the classroom for different interests, building trusting relationships, and engaging in meaningful play. Self-identity and trust are detrimental characteristics for positively impacting in-group and outgroup biases and are significant factors in implementing the contact approach theory (Leithwood & Riehl, 2003). It is my hypothesis that since prekindergarten teachers have more training and knowledge in supporting a child's identity and building trust, this study showed higher training and knowledge in the contact approach theory.

## Limitations of the Study

This quantitative study has four main limitations. First and foremost, it is limited in its scope of participants as the analysis is based on only a total of 77 teachers. By choosing to focus on three types of entities (nonprofit, government and private) in the San Diego area, the reduced sample sizes significantly limited any generalizability towards these different sectors. Second, there were several instances where respondents skipped a question or two, despite my offer of a $5 incentive for participants to complete the entire survey and my attempt to have Qualtrics require answers to all questions before skipping to the next construct. Surprisingly, the only construct that had missing data was the second construct: applied practice. Third, this study was limited to the demographic variables that were actually collected, rather than the innumerable set of variables that might affect in-group biases. Finally, due to the self-reported nature of the data focused only on the measured intrinsic successes in mitigating in-group and outgroup biases, other potential external factors were not considered because of their complexity. These limitations are now discussed in greater detail.

**Limitation #1: Limited Scope in Number of Participants**

This study planned to survey 195 participants who taught prekindergarten through third grade; however, only 77 legitimate responses were received. While much of my time was spent on soliciting educational organizations to allow me to survey interested participants, response rates from the Officers, such as the CEO of the educational nonprofits, superintendents from each of the school districts, and heads/principals of the private schools, were extremely low. After this long quest of seeking participation and still with the limited amount of Officers willing to participate, I made a final attempt to seek out teacher participants through the social media platform known as LinkedIn. To do this, I would first search on Google for the educational entity that I wanted to solicit participation from. Then on the schools website, I was able to gather the names of the prekindergarten through third grade teachers. I would then type their name into LinkedIn to verify they were still with the San Diego educational entity and add them as a connection. Once I was connected to the teacher, I would then send a message. With over 1,000 individual messages sent, I was able to get a total of 77 completed survey responses. With such a limited sample size, there are the associated validity and reliability concerns.

The goal was to have a total of 195 participants, which would have meant 65 participants from each type of sector. Unfortunately, I was limited in the access I had to these organizations, exacerbated by the COVID-19 pandemic and the social justice movement. As such, this study may not be generalizable because of the unique situation surrounding it. Originally, my goal was to focus on sampling size from three different sectors, public, private and nonprofit, but this ultimately resulted in smaller sample sizes and significantly limited any generalizability in these different sectors.

**Limitation #2: Incomplete Data**

The second limitation to this study was that there was missing data. The survey was set up through a system called, Qualtrics, and although I set up Qualtrics to require answers to every question, certain devices, such as a cell phone, did not pick up on this requirement resulting in incomplete data. While the results would be more reliable if I eliminated each participant who had missing data, this study was only able to collect 77 surveys and it was vital to not discard any of the surveys. So in response, I filled in any missing data by calculating the average score of the construct for each person based on the number of questions they answered, and then used that average as their missing score, which meant for anyone missing a single question for a construct, their construct score was based on one fewer question than the others. This process of filling in missing data makes the survey results less reliable and is an important limitation.

**Limitation #3: Limited Independent Variables**

Another significant limitation in this study is that there were a limited amount of independent variables used in the study. As such, this study does not include all potential factors that affect in-group biases, but rather used the limited existing literature to identify significant factors that impact in-group biases in young children. Therefore there could be additional independent variables that were not used in this study and these variables may have altered the results. For example, this study did not include demographics on the children, which vary from organization to organization and classroom by classroom (e.g., mostly boys, mostly Hispanic, children with IEP's).

**Limitation #4: Self- Reported Survey and Intrinsic Measures**

Data were gathered from a self-reported survey that attempted to measure intrinsic emotions, centering on being successful in mitigating in-group and outgroup biases in classrooms for young children. A significant limitation in this study was the inability to measure

the complexities of perceptions on teacher success and the ability to quantitatively measure internal success rates. The scope of this research focused on how teachers perceived their own success, and did not identify how success was to be measured.

## Implications

For nearly 75 years, the United States education system has worked towards diversity, equity, inclusion and belonging initiatives, including the *Brown vs. Board of Education* policy that ended segregation in our education system (Warren, 1954). Since the 1940s, "doll test" study conducted by Mr. and Mrs. Clark, our education system has not come close to ending systemic racism or finding successful strategies to positively shape biases in any major education system (Clark, 1939; Sturdivant & Alanis, 2021). Researchers have consistently showed that our education system has a major influence on biases and it is vital for our education system to create better ways to positively shape biases. Researchers also have shown that the field of early childhood education is the foundation in shaping biases, and children as young as three develop in-group and outgroup biases (Yee & Brown, 1992).

Addressing systemic racism and biases is complex in nature, and therefore requires empirical studies and strategic planning to create desirable outcomes. Throughout the literature, the contact approach theory was a dominant strategy to reduce in-group and outgroup biases (Killen et al., 2013). This implications section is divided into three sections: (1) potential for future research studies, (2) suggestions for future policy changes, (3) leadership for educators. This study addressed gaps in existing literature by identifying to what extent, if any, prekindergarten through third grade teachers had training and knowledge on the contact approach theory, how often the contact approach theory was being used, teachers' perceptions of their overall success, and the extent to which teacher demographics were able to explain variation in

these three constructs. Nevertheless, additional research, policy changes, and hard work from educational leaders are still needed.

**Research**

In-group biases are complex in nature and identifying mitigation strategies to reduce biases can vary. While this study only scratches the surface on the contact approach theory to mitigate in-group and outgroup biases in prekindergarten through third grade classrooms, it is a starting point to hopefully welcome future research on the contact approach theory. This research section discusses three ideas for potential future research: a qualitative analysis, the development on a scale of measurement on participants intrinsic emotions toward perceptions of success, and a deeper dive with different demographics.

This study focused exclusively on a quantitative analysis on teacher perceptions by taking a self-reported survey. Future research studies may include a qualitative analysis on these same three constructs, training and knowledge, applied practice, and desired outcomes on mitigating biases to have a deeper understanding. Such an analysis will hopefully be able to shed more light on the complexities of in-group and outgroup biases and go into greater detail on each participants training and knowledge on the contact approach theory, stories about using the contact approach theory in the classroom, and better understand why, or why not, each participant felt successful.

This study used a 5-point Likert scale to measure each participant's success and better understand why some participants were believed to be successful while others were not. Using the responses on the Likert scale, the average score, standard deviations, and multiple regression analysis were conducted. The findings showed more participants reported success in using the contact approach theory than not. Nevertheless, this study used a self-reported survey to measure

intrinsic emotions and these results have limitations. Future research may include evaluating the notion of success and providing a scale of measurement on participants' intrinsic emotions towards success.

The last suggestion for potential future research includes diving deeper with different demographics and expanding the demographic questions. This study aimed to provide a deeper understanding of biases as it relates to young children in the San Diego, California education systems. The findings of this study are worth investigating in deeper detail and with different regions that have diverse demographics. For instance, larger sample sizes for teachers in the nonprofit sector, private sector, and public sector would have been useful in understanding these three sectors. More male participation would have allowed this study to look at the role of gender in greater detail, but there were only three males in this study. In addition, collecting data on teacher's educational levels would have given more contexts to the training and knowledge construct. Future studies should dive deeper with the demographics section of the survey to better understand to what extent variation in each construct is explained by select teacher demographics. The significance of particular independent variables in explaining variation in the various constructs can either be verified or refuted through future quantitative research. A more robust sample of participants throughout all of California can add more generalizability and nuance in our understanding of the contact approach theory.

**California Policy Changes**

While California has made significant investments in early childhood education over the last several years, there is still a lack of empirically driven studies focusing on social justice issues, such as mitigating biases for young children ages four to eight years old. In order to develop best practices and have real transformational change, policymakers and key stakeholders

need to better understand developmental milestones and methodological factors that contribute to bias thoughts. Since eliminating biased thoughts is so complex in nature and research has shown no one specific strategy works for all, it is important for policymakers to advocate for additional strategic plans that are based on evidence. For example, at a national level, organizations such as the National Association for the Education of Young Children and Institute of Education Sciences have made tremendous progress on better understanding and increasing opportunities for diversity, equity, and inclusion in the early childhood field because national policymakers and other key stakeholders have invested in new studies to provide evidence for teachers impacting biases in their classrooms. Yet, California state policymakers and educational organizations have not followed advocating trainings and increasing knowledge on diversity, equity, and inclusion until more recently. One policy change that California can implement is requiring all educators to take an implicit bias training and participate in professional development reflections on how educators' perspectives influence a child's development. Since there is both limited research and resources in California to decrease bias outcomes for young children, this study contributes to the empirical research and explains the importance of the contact approach theory in the field of early childhood.

Furthermore, decision-makers in California are encouraged to make additional policy changes to better support young children by offering an equity-minded education, where all children have the opportunity to learn. Based on this study, there are three recommendations for Governor Newsome and other policymakers to encourage diversity and a sense of belonging. The first recommendation is to integrate social justice conversations into our education system, which include open discussions on social justice (Aboud & Doyle, 1996). Researchers have shown a reduction in in-group bases in young children when having open conversations about

diversity, equity, and inclusion (Aboud & Doyle, 1996; Skinner & Meltzoff, 2019). The second recommendation is to model overt messaging, and provide trainings to educators to use overt messages, which include positive messages about members of the outgroup (Kang & Inzlicht, 2012). Researchers have shown that a young child who hears positive characteristics about members of the outgroup, will be influenced more by these external factors than the child's personal experience (Kang & Inzlicht, 2012). The third recommendation is to continue to explore empirical evidence that shows a reduction of negative in-group and outgroup bias behaviors, including supporting the development of future research studies on the contact approach theory. While researchers have shown the positive effects when the contact approach theory is applied, this theory does not provide methods to address inequity on a system level. In fact, Dixon et al., (2007) described the contact approach theory as only changing direct attitudes towards in-group and outgroup biases, and a major flaw in the contact approach theory is that it does not have any societal change embedded in it. In fact, researchers showed that despite positive contact with members of the outgroup, there was still an unwillingness to support policies aimed at reducing inequality (Dixon et al., 2007; Jackman & Crane, 1986). The reason this is important is because there are gaps in the literature, which include how much training and knowledge teachers have in anti-bias curriculum, what practices are being implemented in the classroom, and how successful the curriculum is at mitigating biases. This study attempted to better understand these gaps, any yet, a longitudinal study would be important to resolving these gaps. In order to make societal change, we must seek to better understand ideological beliefs and conditions that support the development of equality policies (Dixon et al., 2007).

Lastly, there are three main components to consider when updating the priorities and changing the policy. The first component, and perhaps most important, is funding. In view of the

light shed on the recent COVID-19 pandemic, it has become increasingly apparent that educational entities do not have enough funding. This problem is exacerbated in low-income areas, in part, due to the political issues of California. Policymakers and key stakeholders need to invest additional funding for these low-income public schools and nonprofit entities to become successful. The second component is building a strategic plan that clearly identifies the mission, objectives, timelines, and long-term sustainability on how we are improving the lives of our youngest learners. When changing policy, all stakeholders need to be clear on the parameters of the strategic plan and how to execute the plan. The third, and final component is community organizing. Community organizing is engaging the whole community, including, but not limited to: policymakers, teachers, school administrators, health care workers, and parents, to support and provide opportunities for all children to be successful in a safe, welcoming environment. The proverb, "It takes a village to raise a child" encompasses this notion of community organizing to build relationships and provide opportunities for all children to thrive. The outcome of mitigating biases works best when the entire community forms positive partnerships and provides equity opportunities for every child. Furthermore, when combining additional funding to educational entities, clear strategic plans to improve children's lives, and an increase in community organizing to support these strategic plans, the development of a young child will flourish.

**Leadership for Educators**

"Real leadership demands that the people make adjustments in their values, thinking, and priorities to deal with threats, accommodate new realities, and take advantage of emerging opportunities" (Williams, 2005, p. 5). Educators are called to display real leadership by addressing the educational systemic racism problem and find solutions for this adaptive challenge. As an educator myself, this study sought to better understand the contact approach

theory as a way to reduce biases for young children. This study showed that teachers have a basic understanding of the contact approach theory, but teachers need more training and knowledge, to reduce biases for young children. In some sense, children are partly surrounded by an anti-bias environment and educators who promote being equity-minded. However, if the United States wants to make adjustments to our current systemic racism problem, educators need real leadership to deal with biases and learn new innovative ideas (Williams, 2005). Real leadership needs to include trainings and knowledge on the contact approach theory. This research study showed prekindergarten through third grade teachers reported training and knowledge as their lowest scoring construct. The United States education system currently "uses obsolete educational models to train teachers. Teachers spend far too much time listening to boring lectures on educational theory and far too little time practicing teaching skills" (Wagner & Dintersmith, 2015, p. 231). In California, most preschool and elementary school teachers either have twelve core child development units or a multi-subject teaching credential that is ineffectual because it does not provide modern teaching practices for today's world of prejudice (Wagner & Dintersmith, 2015). Throughout a day in our California school system, a child interacts with a variety of people who influence behavior, thoughts, and opinions. Whether it is the sports coach, tutor, bus driver; children form relationships, positive or negative, with people who they have come into contact with. These people in our education system need to be in a real leadership position to apply anti-bias behaviors, have an equity-minded focus, and create a new reality of positively shaping biases.

One way to positively shape biases is to offer anti-bias trainings, including understanding the psychology of human development, to all educational personnel in the community, especially those who work directly with young children. The professional development trainings to all

educators should focus on self-reflection, needed institutional policy changes, practicing overt messaging and other anti-bias tactics. As discussed in the literature review of this study, trust and positive relationships are key factors in making an impact on reducing in-group biases (Skinner & Meltzoff, 2019). This is especially true when the person's skill level and ability to advocate and teach social justice are prominent. As discussed in this study, these trainings should encourage diversity, peace, and social justice and involve a variety of intervention techniques, including the contact approach theory. Together, educational leaders can build a community that embraces diversity, equity, and inclusion by being proactive and working together to make an impact.

## Summary

This section described three significant implications. The first implication was potential future research studies and included diving deeper with demographics, having a scale of measurement for success, and expanding this study with a qualitative analysis. The second implication was updating priorities to California policies to better support diversity, equity, inclusion, and belonging initiatives across our educational sector. The third implication was providing real leadership to educators. Real leadership involves implementing applied practice trainings for all teachers, school administration, and educational community members to self-reflect and make modifications to our implicit biases to create a more inclusive world. These three implications will hopefully provide a strategic plan to mitigate biases in the United States education system and continue Mr. and Mrs. Clark's mission to diminish racism so all children feel like a sense of belonging.

## Conclusion

Early childhood education is an important factor in making systemic changes because the concepts children learn will become increasingly important as a child grows into an adolescence and adult. Therefore, in order to better understand systemic racism, we must understand the complexities of how our education system is shaping our youngest generation of learners. Researchers have identified a variety of anti-bias trainings used in education, such as *role-playing* and *antiracist teaching*, but there seemed to be little research on anti-bias trainings for early childhood educators. The concept of the contact approach theory was consistently present in the empirically driven methodologies to reduce in-group and outgroup biases (Killen et al., 2013; McKay, 2018). Since 1954, the contact approach theory has become more complex and, at times, both effective and ineffective, and includes some limitations, especially when used with young children (McKay, 2018). More recently, studies found that the contact approach theory, when used under certain conditions, consistently resulted in a reduction in biases (Cameron et al., 2007; Pettigrew & Tropp, 2006; Skinner & Meltzoff, 2019). One very important condition was support from outside resources such as the child's teacher, school administrators, and school culture (Pettigrew & Tropp, 2006). Consequently, this research study sought to better understand and identify to what extent, if any, prekindergarten through third grade teachers had training and knowledge on the contact approach theory, how often the contact approach theory was being used, teachers' perceptions of their overall success, and the extent to which teacher demographics were able to explain variation in these three constructs.

Since early childhood educators have an impact on mitigating biases for children ages four to eight years old, this study looked at a total of 77 teacher participants who taught prekindergarten through third grade in San Diego, California. These teachers took a 63 question survey. Using descriptive and inferential statistics the survey instrument measured three

important constructs, (1) training and knowledge, (2) applied practice, and (3) perceptions of success. Descriptive statistics and a multiple regression analyses were applied to all three constructs to better understand the extent of variation based on select teacher demographics.

The first construct identified how much training and knowledge prekindergarten through third grade teachers had in the contact approach theory, and to what extent variation in this construct could be explained by teacher demographics Overall, the results showed that teachers lacked training and knowledge as compared to applied practice and success rates. In addition, prekindergarten teachers reported to have the most training and knowledge compared to their counterparts. The second construct identified how often these teachers use the contact approach theory and how applied practice differs by teacher demographics; interestingly, there were no teacher demographics that were significant in explaining variation in this construct. The third and final construct sought to better understand the teacher's perceptions of how successful they were in using the contact approach theory, and to what extent teacher demographics and their training and knowledge explained variation in the construct. Overall, teachers reported being successful in using the contact approach theory, but success rates significantly varied based on the teacher's training and knowledge.

While this study had several major limitations, it still may provide the field of early childhood with some insights regarding mitigating in-group and outgroup biases in the classroom. It will be important for California, specifically San Diego, to increase teacher's anti-bias training and knowledge in order to provide higher success rates and allow teachers to feel confident in their abilities.

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# Appendix A

## Survey Questions
## The Mitigation of In-group and Outgroup Biases in Early Childhood
## (63 questions)

By participating in this study, I give my consent and have kept a copy of the consent form for my records.

**Demographics of participant**

1. What is your age? _____Years Old
2. Please select the ethnicity you most identify with
    A. Caucasian
    B. Black or African American
    C. Asian
    D. American Indian or Alaska Native
    E. Hispanic or Latino
    F. Other
3. Please select your gender that you most identify with
    A. Male
    B. Female
    C. Transgender
    D. Gender neutral
    E. Non-binary
    F. Two-spirit
    G. Other
4. Select which entity you currently work for
    A. Nonprofit (e.g. YMCA, Boys & Girls Clubs, etc.)
    B. Public School (e.g. Coronado Unified School District, San Diego Unified School District, etc.)
    C. Private School (e.g. Diocese of San Diego, Francis Parker, etc.)
5. Select the entity you have the most experience in
    A. Nonprofits
    B. Public School Districts
    C. Private Schools (including parochial, faith-based, independent, etc.)
6. What grade level are you currently teaching?
    A. Prekindergarten
    B. Kindergarten
    C. First Grade
    D. Second Grade
    E. Third Grade
    F. Mixed grades between prekindergarten to third grade
6. How many years of experience do you have teaching children 4-8 years old?
    _____Years of Experience

In completing this survey the terms in-group, outgroup, and contact approach theory will be used. Here are the definitions:

1. The term *in-group bias* means 'When a child begins to identify with a specific group of people based on similar behaviors and attitudes towards gender, race, or culture.'

2. The term *outgroup bias* means 'When a child does not identify with the specific group of people based on having different behaviors and attitudes.'

3. The term *contact approach theory* means 'Putting students in direct contact to other children who are in the outgroup.'

Please rate the following questions using this survey scale "highly disagree" to "strongly agree."

| **Questions** | | | | | |
|---|---|---|---|---|---|
| **Training and Knowledge**<br><br>1. I have received a significant amount of training on anti-bias curriculum to implement in the classroom. | 1 | 2 | 3 | 4 | 5 |
| 2. I have difficulty understanding the complexities of in-group and out-group biases. | 1 | 2 | 3 | 4 | 5 |
| 3. I have easy access to the professional development needed to address in-group biases in my classroom. | 1 | 2 | 3 | 4 | 5 |
| 4. The training I received to mitigate in-group biases in the classroom felt effective. | 1 | 2 | 3 | 4 | 5 |
| 5. Overall, I understand the concepts of the contact approach. | 1 | 2 | 3 | 4 | 5 |
| 6. If asked to generally explain the contact approach theory, I do not feel confident in my explanation. | 1 | 2 | 3 | 4 | 5 |
| 7. The administration regularly provides trainings in understanding biases and encouraging diversity, inclusion, and equality. | 1 | 2 | 3 | 4 | 5 |
| 8. I have a difficult time identifying my own biases in the classroom. | 1 | 2 | 3 | 4 | 5 |
| 9. I am not afraid to voice my opinion in challenging in-group and outgroup stereotypes when they are applied. | 1 | 2 | 3 | 4 | 5 |
| 10. I would not feel comfortable teaching a course on strategies to reduce in-group and outgroup biases in the classroom. | 1 | 2 | 3 | 4 | 5 |

Please rate the following questions using this survey scale "never" to "always" and where N/A means not applicable.

| **Applied Practice (25 questions)** | | | | | | |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. I speak up to colleagues when I see in-group and outgroup biases not being addressed in our education system. | 1 | 2 | 3 | 4 | 5 | N/A |
| 2. I intermingle boys and girls in my classroom. | 1 | 2 | 3 | 4 | 5 | N/A |
| 3. I have children from different ethnic backgrounds play together. | 1 | 2 | 3 | 4 | 5 | N/A |
| 4. I allow children to sit next to their friends. | 1 | 2 | 3 | 4 | 5 | N/A |
| 5. I use a variety of strategies to help children understand the identities of others. | 1 | 2 | 3 | 4 | 5 | N/A |
| 6. I have spoken to my students' families about my anti-bias curriculum. | 1 | 2 | 3 | 4 | 5 | N/A |
| 7. I shared my ideas about mitigating biases to the school administration. | 1 | 2 | 3 | 4 | 5 | N/A |
| 8. When lesson planning, I practice self-reflection. | 1 | 2 | 3 | 4 | 5 | N/A |
| 9. I speak to my students about our differences. | 1 | 2 | 3 | 4 | 5 | N/A |
| 10. I have students provide an explanation for their opinion. | 1 | 2 | 3 | 4 | 5 | N/A |
| 11. I provide self-reflection time for my students to understand their behavior. | 1 | 2 | 3 | 4 | 5 | N/A |
| 12. I ask children to speak English in class. | 1 | 2 | 3 | 4 | 5 | N/A |
| 13. I allow students to choose their own groups. | 1 | 2 | 3 | 4 | 5 | N/A |
| 14. I notice students who do not share their opinions. | 1 | 2 | 3 | 4 | 5 | N/A |
| 15. I provide opportunities in class for each student to share with others. | 1 | 2 | 3 | 4 | 5 | N/A |
| 16. I make sure everyone in the group participates. | 1 | 2 | 3 | 4 | 5 | N/A |
| 17. I take the opportunity to learn more about my students' culture. | 1 | 2 | 3 | 4 | 5 | N/A |
| 18. I observe students asking questions about race and gender. | 1 | 2 | 3 | 4 | 5 | N/A |
| 19. I notice whom each child interacts with. | 1 | 2 | 3 | 4 | 5 | N/A |
| 20. I challenge students to dive deeper into understanding themselves. | 1 | 2 | 3 | 4 | 5 | N/A |
| 21. I arrange my classroom to utilize spaces that encourage collaboration and contact (Pre-COVID). | 1 | 2 | 3 | 4 | 5 | N/A |
| 22. I think about ways to mitigate in-group and outgroup biases in my classroom. | 1 | 2 | 3 | 4 | 5 | N/A |
| 23. I create a curriculum that encourages students to share their opinions. | 1 | 2 | 3 | 4 | 5 | N/A |
| 24. I ask all my students to share their perspectives. | 1 | 2 | 3 | 4 | 5 | N/A |
| 25. I have a specific anti-bias curriculum that I implement. | 1 | 2 | 3 | 4 | 5 | N/A |

Please rate the following questions using this survey scale "highly disagree" to "strongly agree."

| **Desired Outcomes on Mitigating Biases** | | | | | |
|---|---|---|---|---|---|
| 1. I play a role in mitigating in-group and outgroup biases in the classroom. | 1 | 2 | 3 | 4 | 5 |
| 2. I believe there are age-appropriate strategies to mitigate biases other than the contact approach theory. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 3. I am likely to recommend the contact approach theory to other teachers. | 1 | 2 | 3 | 4 | 5 |
| 4. The contact approach theory is not better than other strategies in mitigating biases in the classroom. | 1 | 2 | 3 | 4 | 5 |
| 5. I had a positive experience in reducing biases in my classroom. | 1 | 2 | 3 | 4 | 5 |
| 6. I believe the contact approach theory is ineffective. | 1 | 2 | 3 | 4 | 5 |
| 7. I am able to come up with my own ideas to reduce biases in my classroom. | 1 | 2 | 3 | 4 | 5 |
| 8. The administration is not supportive in shaping our school culture to ensure diversity, inclusion, and equality. | 1 | 2 | 3 | 4 | 5 |
| 9. The administration communicates effectively in sharing strategies for reducing biases. | 1 | 2 | 3 | 4 | 5 |
| 10. I am not comfortable communicating to families how my curriculum involves the contact approach theory. | 1 | 2 | 3 | 4 | 5 |
| 11. Overall, I believe my anti-bias curriculum is effective. | 1 | 2 | 3 | 4 | 5 |
| 12. I am not confident in my ability to use my "toolbox" to alter bias behaviors in the classroom. | 1 | 2 | 3 | 4 | 5 |
| 13. I have enough resources to change the outcome of biased behavior in my classroom. | 1 | 2 | 3 | 4 | 5 |
| 14. At the district level, I feel incapable of changing biased behavior among children. | 1 | 2 | 3 | 4 | 5 |
| 15. In my classroom, I notice that all students participate. | 1 | 2 | 3 | 4 | 5 |
| 16. After using the contact approach theory, I see more harmonious interactions among students. | 1 | 2 | 3 | 4 | 5 |
| 17. Using the contact approach theory is simple. | 1 | 2 | 3 | 4 | 5 |
| 18. I am not interested in learning more about successful strategies to reduce biases in my classroom. | 1 | 2 | 3 | 4 | 5 |
| 19. My classroom grade level is an appropriate time to start having these anti-bias conversations. | 1 | 2 | 3 | 4 | 5 |
| 20. I notice the students building positive relationships with each other. | 1 | 2 | 3 | 4 | 5 |

Is there anything else you would like to let us know about your experience with in-group and out-group biases in your classroom? (Circle one: Yes / No)
Provide the additional information below:

_____
_____
_____
_____
_____
_____

## Appendix B

## Adult Consent Form

University of San Diego
Institutional Review Board
Research Participant Adult Consent Form

For the research study entitled:
The Mitigation of In-group and Outgroup Biases in Early Childhood

I. Purpose of the research study
Brigitte Blazys is a Ph.D. student in the School of Leadership and Education Sciences at the University of San Diego. You are invited to participate in a research study that Brigitte is conducting. The purpose of this study is to identify in-group and outgroup bias mitigation factors in classrooms with children ages 4-8 years old. To investigate to what extent, if any, these factors are being used in the field of education and better understand teacher satisfaction in reducing biases.

II. What you will be asked to do
If you decide to be in this study, you will be asked to take a self-reported survey that is available in person or online.
The survey is divided into 4 sections: demographics, training and knowledge, applied practice, and perception of your success on mitigating biases. The survey has 63 questions.

Your participation in this study will take approximately 15- 20 minutes.

III. Foreseeable risks and/or discomforts
This study involves no more risk than the risks you encounter in daily life.
However, sometimes when people are asked to think about their feelings, they feel sad or anxious. If you would like to talk to someone about your feelings at any time, you can call toll-free, 24 hours a day: San Diego Mental Health Hotline at 1-800-479-3339

IV. Benefits
An incentive of a $5 Amazon gift card will be provided to all participants.

In addition, the indirect benefit of participating will be knowing that you helped researchers better understand in-group and outgroup biases in the field of education.

V. Confidentiality
Any information provided and/or identifying records will remain confidential and kept in a locked file and/or password-protected computer file in the researcher's office for a minimum of five years. All data collected from you will be coded with a number or pseudonym (fake name).

Your real name will not be used. The results of this research project may be made public and information quoted in professional journals and meetings, but information from this study will only be reported as a group, and not individually. The information or materials you provide will be cleansed of all identifiers (like your name) and may be used in future research.

VI. Compensation

If you participate in the study, the researcher will give you a $5 Amazon gift card in the following way: either in person, if the survey was completed in person, or electronically, if the survey was completed online. You will receive this compensation even if you decide not to complete the entire survey.

VII. Voluntary Nature of this Research

Participation in this study is entirely voluntary. You do not have to do this, and you can refuse to answer any question or quit at any time. Deciding not to participate or not answering any of the questions will have no effect on any benefits you're entitled to, like your health care, or your employment or grades. You can withdraw from this study at any time without penalty.

VIII. Contact Information

If you have any questions about this study, you may contact either:

Researcher
Brigitte Blazys
bblazys@sandiego.edu

Chair
Fred Galloway
Galloway@sandiego.edu

I have read and understand this form, and consent to the research it describes to me. I have received a copy of this consent form for my records. By participating in this study, I give my consent and have kept a copy of this consent form for my records.

## Appendix C

## Announcement

To: _____(Insert Name of Officer),

(Insert personal connection, if applicable).

My name is Brigitte Blazys, and I am a current Ph.D. student at the University of San Diego. I am seeking participants, who work with children ages 4-8 years old, to participate in my study for my Ph.D. dissertation. My research focuses on mitigating biases in the field of education, specifically looking at how teachers use strategies in their classrooms (Prekindergarten, kindergarten, first grade, second grade and third grade). I would be honored and grateful if your school would be willing to participate in my research study by providing your staff with time to complete my quick survey. The survey is available online or in-person.

Your participation in this study will provide a foundational level of support to educators and advocates to better understand biases and the critical factors that impact biases in the classroom setting. The survey has 63 questions and will take no more than 20 minutes to complete. The survey is quick, easy to understand, and confidential.

As a token of my appreciation, participants will also receive a $5 Amazon gift card. My goal is to have 195 participants in the San Diego area, who teach prekindergarten, kindergarten, first, second, or third grade, to take the survey.

I will absolutely send the written consent form, which includes the purpose of the study, confidentiality agreement, benefits and compensation, and contact information.

Happy to answer any additional questions, so please do not hesitate to contact me. Looking forward to hearing from you and thank you again for your support.

Wishing you well,
Brigitte Blazys
bblazys@sandiego.edu
Ph.D. Student at the University of San Diego

## Appendix D

### On-Site Recruitment

To: _____(Insert Name of Individual),

Thank you in advance for taking the time to support our field of education and everything you have done during this COVID-19 pandemic to ensure your students are receiving the best care possible. (Insert personal connection, if applicable).

My name is Brigitte Blazys, and I am a current Ph.D. student at the University of San Diego. I am seeking participants, who work with children ages 4-8 years old, to participate in my study for my Ph.D. dissertation. I noticed that you are a _____(grade level)_ teacher at _____(name of school)_ and wanted to reach out to see if you would be able and willing to support me in my study.

My research focuses on mitigating biases in the field of education, specifically looking at how teachers use strategies in their classrooms (Prekindergarten, kindergarten, first grade, second grade and third grade). I would be honored and grateful if you would be willing to participate in my research study by taking my quick survey. The survey is available in-person on-site. .

Your participation in this study will provide a foundational level of support to educators and advocates to better understand biases and the critical factors that impact biases in the classroom setting. The survey has 63 questions and will take no more than 20 minutes to complete. The survey is quick, easy to understand, and confidential.

As a token of my appreciation, you will also receive a $5 Amazon gift card. My goal is to have 195 participants in the San Diego area, who teach prekindergarten, kindergarten, first, second, or third grade, to take the survey.

I will discuss with you and give you a copy of the written consent form, which includes the purpose of the study, confidentiality agreement, benefits and compensation, and contact information.

Happy to answer any additional questions, so please do not hesitate to contact me. Looking forward to hearing from you and thank you again for your support.

Wishing you well,
Brigitte Blazys
bblazys@sandiego.edu
Ph.D. student at the University of San Diego

## Appendix E

### Email and Social Media Platform

Hello _____(Insert Name of Individual),

(Insert personal connection, if applicable).

My name is Brigitte Blazys, and I am a current Ph.D. student at the University of San Diego. I am seeking participants, who teach Prekindergarten- Third Grade, to participate in my study for my Ph.D. dissertation. I noticed that you are a _____(grade level)_ teacher at _____(name of school)_ and wanted to reach out to see if you would be able and willing to support me by taking an online survey.

My research focuses on mitigating biases in the field of education, specifically looking at how teachers use strategies in their classrooms.

Your participation in this study will provide a foundational level of support to educators and advocates to better understand biases and the critical factors that impact biases in the classroom setting. The survey has 63 questions, will take no more than 20 minutes to complete, and is available online. The survey is quick, easy to understand, and confidential.

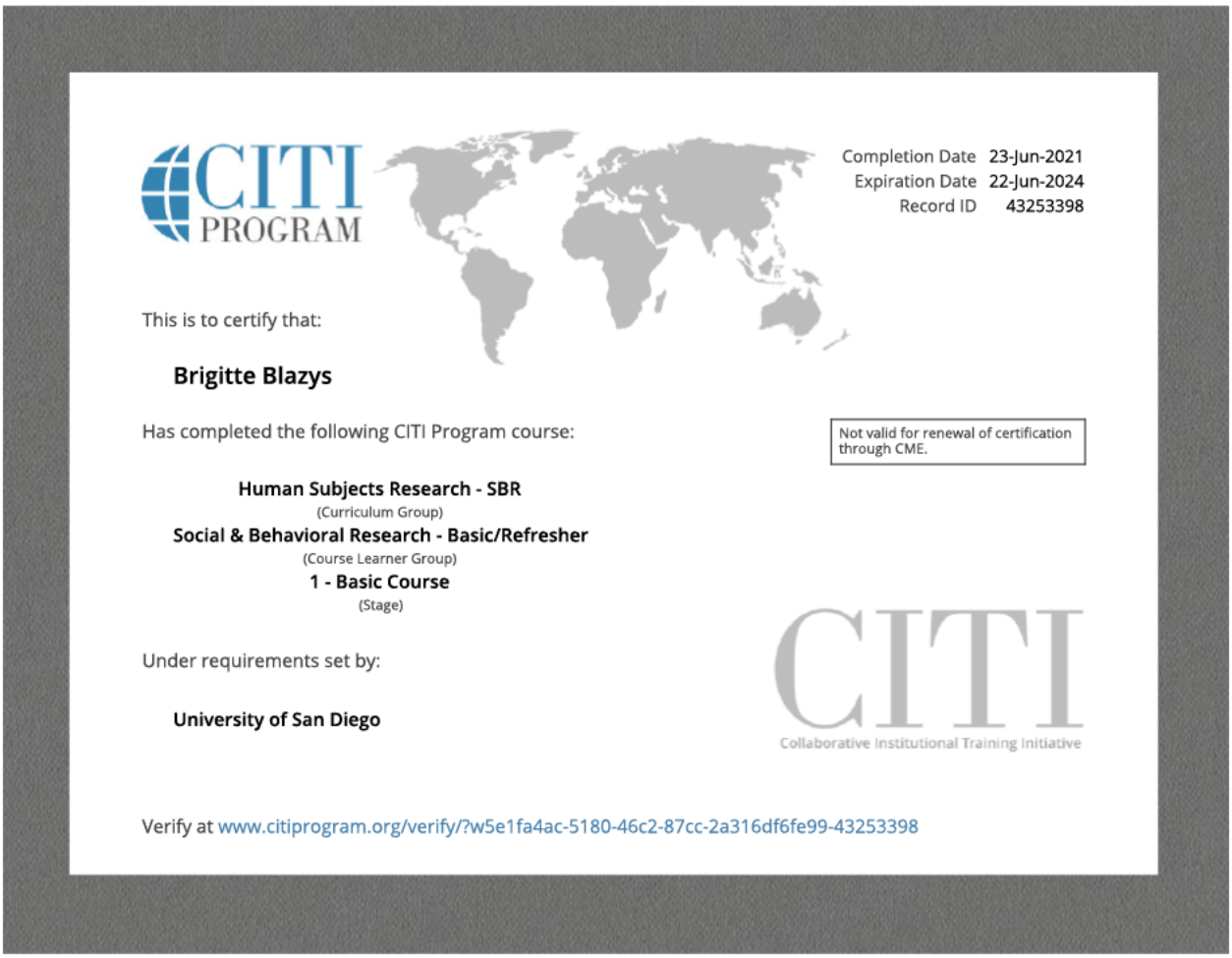
As a token of my appreciation, you will also receive a $5 Amazon gift card.

Please let me know if you are able and willing to take a survey by responding "Yes" to this message. I am happy to answer any additional questions, so please do not hesitate to contact me. Looking forward to hearing from you and thank you again for your support.

Wishing you well,
Brigitte Blazys
bblazys@sandiego.edu
Ph.D. student at the University of San Diego

# Appendix F

## IRB Training Certificate



CITI PROGRAM

Completion Date 23-Jun-2021
Expiration Date 22-Jun-2024
Record ID 43253398

This is to certify that:

**Brigitte Blazys**

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

**Human Subjects Research - SBR**
(Curriculum Group)
**Social & Behavioral Research - Basic/Refresher**
(Course Learner Group)
**1 - Basic Course**
(Stage)

Under requirements set by:

**University of San Diego**

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w5e1fa4ac-5180-46c2-87cc-2a316df6fe99-43253398

# Appendix G

## IRB Advisors Approval Letter

University of San Diego
SCHOOL OF LEADERSHIP AND EDUCATION SCIENCES

DEPARTMENT OF LEADERSHIP STUDIES
5998 Alcalá Park,
San Diego, CA 92110-2492
P: (619) 260-4637
F: (619) 849-8175
www.sandiego.edu

IRB Faculty Approval Letter

Brigitte Blazys is a Ph.D. student conducting research involving human subjects for her dissertation. As the Chair of her dissertation committee, I approve of both her research and her IRB proposal.

Researchers Name: Brigitte Blazys

Faculty Member and Committee Chair: Fred Galloway

Title of the Study: Mitigation of In-group and Outgroup Biases in Early Childhood

Advisors Name: Fred Galloway

Advisors Signature: __

Date: 6/22/21