Social-Emotional Difference Given Disability, Grade, and School-Wide Positive Behavioral Interventions and Supports

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SOCIAL-EMOTIONAL DIFFERENCE GIVEN DISABILITY, GRADE, AND
SCHOOL-WIDE POSITIVE BEHAVIORAL INTERVENTIONS AND SUPPORTS

by

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ABSTRACT

Students with disabilities as a group remain behind in academic achievement

when compared to students without disabilities. Without the right school-based

interventions, many students with disabilities will experience academic failure,

disciplinary infractions, social isolation, self-doubt, school disengagement, and school

dropout. Additionally, social-emotional intervention helps older students to improve

executive functioning, develop self-regulation skills, and score better on achievement

tests than the students not receiving any social-emotional programming. Moreover,

students enrolled in schools that implement evidence-based educational interventions to

facilitate students' social-emotional competencies demonstrate more positive behaviors

and social-emotional interactions. Students with social-emotional competencies have also

described feeling safer and happier at school.

One example of a school-based behavioral intervention effective for students with

disabilities is School Wide Positive Behavioral Interventions and Supports (SWPBIS). As

a preventative and evidence-based implementation framework, SWPBIS is beneficial to

all students. Specifically SWPBIS improved students' academic, behavioral, and social-

emotional competencies. The primary researcher used the Social Cognitive Theory (SCT)

for this study's theoretical framework.

The purpose of this research was to examine differences in the social-emotional

MESH competencies between fifth- and sixth-grade students with and without disabilities

who attend schools with or without SWPBIS. Results from the factorial ANOVA

analyses revealed a significant interaction effect, $F(2, 126) = 5.58$, $p = .02$, for schools

implementing SWPBIS and grade on the social-emotional MESH competencies students

with and without disabilities. The primary researcher discusses the findings in the context

of SCT and students' personal, behavioral, and environmental factors that play a

reciprocal role in learning and development. Finally, the significant interaction effects

between grade and schools with SWPBIS suggests that the positive behavioral

interventions that improve the school environment provide an ideal model for learning

social-emotional and behavioral competencies.

ACKNOWLEDGMENTS

DEDICATION

I wish to extend my appreciation to my husband, Johnny. Without your support and encouragement, this journey could not have been possible. I would also like to dedicate this accomplishment to the memory of my grandparents, Edith and Jake Smith. Without their love, sacrifice, and character, the strength and determination to continue my education and to meet this life-long goal would have never been achieved.

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LIST OF ABBREVIATIONS

ADHD	Attention Deficit Disorder with Hyperactivity
CEC	Classroom Emotional Climate
ED	Emotional Disturbance
MESH	Mindsets, Essential Skills, and Habits
M-ID	Mild Intellectual Disability
ODR	Office Discipline Referral
OHI	Other Health Impairment
PBIS	Positive Behavior Interventions and Supports
SCT	Social Cognitive Theory
SEL	Social Emotional Learning
SET	School-Wide Evaluation Tool
SLD	Specific Learning Disability
SWPBIS	School Wide Positive Behavior Interventions and Supports

CHAPTER I – INTRODUCTION

In the United States, 6.6 million students between the ages of 3-21 received special education services during the 2015-2016 school year (US Department of Education, National Center for Education Statistics (NCES), 2019). To be eligible for special education services, students must meet the criteria in one of thirteen disability categories found in Part B of the Individuals with Disabilities Education Act (IDEA) (2004). Students with disabilities as a group remain behind in academic achievement when compared to students with disabilities (National Center for Learning Disabilities, 2017). Without the right school-based interventions, many students with disabilities will experience academic failure, disciplinary infractions, social isolation, self-doubt, school disengagement, and school dropout (Croninger & Lee, 2001; Lane et al., 2006; Lehr et al, 2003; Suh, Suh, & Houston, 2007). In fact, students with disabilities are two times more likely to drop out of school (Horowitz, Rawe, & Whittaker, 2017). A dislike of school, negative school relationships, and lower academic achievement are reasons that some students with disabilities dropout of school (Horowitz et al., 2017; Wagner et al., 2005; Lehr et al., 2004).

Academic Achievement

Higher academic achievement increases the likelihood that students with and without disabilities graduate from high school with a regular diploma and leads to a more successful life (Achieve, 2013; Carnevalle, Smith, & Strohl, 2010). Likewise, the U.S. Department of Education (2012) states the primary goal of public school is to, "ensure that all students are on track to graduate from high school prepared to succeed in college and careers" (p. 1). Ensuring that students with disabilities have equal access to general

education and appropriate opportunities to graduate with a regular diploma remains an important, although challenging, expectation (Achieve, 2013). In fact, 85-90% of students receiving special education services should be able to achieve the same academic requirements and graduation standards expected of typically developing students if they receive individually designed instruction and the appropriate access to supports, services, and accommodations (Thurlow & Quenemoen, 2011). Yet, national statistics continue to show a 20% or more graduation gap among students with and without disabilities, and this gap is more than 20% in some states (Diplomas Count, 2015; GradNation, 2016). For example, in Mississippi (MS) 38.4 % of students with disabilities graduated from high school compared to 84% of students without disabilities in the 2017-2018 school year (MS Department Education, 2018).

Along with lower academic achievement, some students with disabilities have behavioral and/or social deficits and poor social-emotional competency development (Bryan, Burstein, & Ergul, 2004; Suh & Suh, 2007). Students with behavioral and social deficits are at-risk for peer rejection, negative interactions with teachers, and punitive school discipline (Dunlap et al., 2006). Behavioral deficits are also associated with lower academic achievement and social deficits (Lane, Wehby, Little, & Cooley, 2005). For some students with behavioral and social deficits, the behavioral and social expectations in schools and classrooms are difficult (Lane & Carter, 2006; Lane et al., 2006). Behavioral and social deficits further interfere with social-emotional competency development (Hamre & Pianta, 2007; Dunlap et al., 2006; Durlak et al., 2015).

Social-Emotional Learning

Social-emotional learning programs teach skills necessary to regulate emotions, set goals, solve problems, manage priorities, engage in conversations, build positive relationships, socialize in different environments, and navigate needs in school settings (Elias, Ferrito, & Morceri, 2016). Schools with quality social-emotional leaning programs report improved social-emotional adjustment and increased academic achievement in students (Zins et al., 2004). For example, social-emotional intervention "interrupts the progression of emotional and behavioral problems" (Webster-Stratton, 2004, p. 97). Thus, higher social-emotional competencies have lower incidences of problematic behaviors and academic failure (Greenberg & Harris, 2012; Zins et al., 2004). Additionally, social-emotional intervention helps older students to improve executive functioning, develop self-regulation skills, (Graziano et al., 2007; Hughes & Ensor, 2011; Rueda, Posner, & Rothbart, 2005) and score better on achievement tests than the students not receiving any social-emotional programming (Durlak et al., 2011). Moreover, students enrolled in schools that implement evidence-based educational interventions to facilitate students' social-emotional competencies demonstrate more positive behaviors (Wilson & Lipsey, 2007) and social-emotional interactions (Durlak et al., 2011). Students with social-emotional competencies have also described feeling safer and happier at school (Zins et al., 2004).

Mindsets, Essential Skills, and Habits (MESH)

Social-emotional skills important for all students include self-control, social competence (Lane, Wehby, & Cooley, 2006), positive mindsets (Dweck & Leggett, 1988; Dweck, 2006; Elliott & Dweck, 2005), and self-efficacy (Bandura, 1997). In this research, these specific social-emotional competencies referred to as MESH are growth mindset, self-efficacy, self-management, and social awareness (Transforming Education, 2016). These four social-emotional MESH competencies (as defined in the Definition of Terms section of this document) were associated with higher academic achievement (GPAs and test scores) and lower school suspensions and absenteeism (Transforming Education, 2016).

Social-emotional competencies in school settings have an influence on the education environment and the classroom emotional climate, defined as positive social-emotional interactions between students and teachers and among students and peers, has a significant impact on students' learning and performance (Daniels & Shumow, 2003; Jia et al., 2009; Pianta, La Paro, & Hamre, 2008; Ryan & Patrick, 2001). Classroom emotional climate impacts students' learning and academic achievement (Elias et al., 2016). Effective educational environments with a safe classroom emotional climate use social-emotional learning approaches, have caring teachers who model social-emotional competencies, and implement positive interventions instead of school discipline to meet students' academic, behavioral, and social-emotional needs (Hamre & Pianta, 2007). Furthermore, Jones, Bouffard, & Weissbound (2013) maintained that schools with a positive classroom emotional climate using social-emotional learning approach provide a strong foundation for developing academic and social-emotional competencies.

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Additionally, Cook et al. (2015) reported that schools and classrooms implementing social-emotional and school-based behavioral interventions simultaneously documented a significant increase in academic achievement, social skills, and mental health in their fourth- and fifth-grade students with behavioral, social, and emotional issues.

School-based behavioral interventions have decreased students' negative behaviors and increased the positive behaviors linked to successful student outcomes like academic perseverance, mental/emotional health, social-emotional skills, self-discipline, and healthy mindsets (Farrington et al., 2012; Sklad et al., 2012). Furthermore, past research supports the benefits of school-based behavioral intervention on students' behavior (Cook et al., 2015; Wilson & Lipsey, 2007). Social-emotional competencies such as social awareness, self-management, and positive mindsets are required for all students to learn new skill sets (Beyer, 2017).

Yet, there is a need for more research exploring the use of school-based behavioral interventions that will increase the social-emotional competency development in all students, including students with disabilities (Greenberg et al., 2017; Reno et al., 2017). Students with disabilities have academic, behavioral, social-emotional needs that may impede their abilities to succeed in school (Hallahan, Kauffman, & Pullen, 2015; Marryat et al, 2014). For example, students with disabilities may have problems with social cues, emotional regulation, and executive functioning (Beyer, 2017).

<center>Positive Behavior Intervention and Supports</center>

One example of a school-based behavioral intervention effective for students with disabilities is Positive Behavioral Interventions and Supports (PBIS; Blanton, Pugach, & Florian, 2011; Hawken & O'Neill, 2006; Lewis et al., 2017; Sugai & Horner, 2009b).

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PBIS is a preventative and evidence-based implementation framework that targets students' behaviors and educational environments at three tiers; school-wide, at-risk groups, and individuals (Horner, Sugai, & Lewis, 2015; U.S Department of Education, 2016). PBIS uses data-based decisions to identify and individualize positive behavioral interventions and supports needed for all students to succeed in the school setting (Lassen, Steele, & Sailor, 2006). For example, PBIS fosters, safe and predictable educational environments, stronger interpersonal relationships between school staff and children, and positive classroom emotional climate (OSEP National Technical Assistance Center on Positive Behavior Interventions and Supports, 2018).

School-wide Positive Behavior Interventions and Supports (SWPBIS)

PBIS implemented at tier one; school-wide and across different school settings (i.e. classroom, cafeteria, playground), is School-wide Positive Behavior Interventions and Supports (SWPBIS; Horner, Sugai, & Fixen, 2017). The seven critical elements of SWPBIS are as follows: (a) defined expectations, (b) behavioral expectations taught, (3) on-going systems for rewarding behavioral expectations, (c) system for responding to behavioral violations, (d) monitoring and decision-making, (e) management, and (f) district level support. To determine the effectiveness of SWPBIS procedures, the researchers and administrators assess seven elements with a research-validated instrument known as the School-Wide Evaluation Tool (SET). A score of 80% or more on the SET indicates effective SWPBIS procedures (PBIS, 2018; REACH-MS, Mississippi's State Personnel Development Grant, 2017).

SWPBIS at Tier I consistently integrates evidence-based interventions and supports across different school settings (Horner, Sugai, & Lewis, 2015; U.S. Department

of Education, 2016). SWPBIS models social-emotional competencies that are associated

with improved academic achievement and behavioral skills (Bradshaw et al., 2009).

Most importantly, SWPBIS successfully improves the academic, behavioral, and social-

emotional deficits of students with and without special needs (Sugai & Horner, 2010;

Gresham, Sugai, & Horner, 2001).The main interest in this study is determining if social-

emotional differences exist in schools that have reached fidelity with implementing

SWPBIS. As in the Bradhsaw et al. (2012) study, the present research examines the

impact of disability, grade, and SWPBIS on students' social-emotional competencies.

<div align="center">Statement of the Problem</div>

A growing number of students with and without disabilities now require social-

emotional learning programs and school-based behavioral interventions to meet their

academic, behavioral, and social-emotional deficits (U.S. Department of Education,

NCES, 2019). Social-emotional deficits are defining characteristics of students with

disabilities (Elias et al., 2016) and occur often for many students with SLD, ADHD, M-

ID, and ED (Gresham, Sugai, & Horner, 2001). For example, students with disabilities

may have limitations in recognizing feelings, using expressive language, and

communicating assertively (Campbell, Hansen, & Nangle, 2010; Whitehouse et al., 2009;

Zins et al., 1998). Poor social-emotional development is more challenging for students

with disabilities when combined with reduced social-cognitive processing (Espelage,

Rose, & Polanin, 2015; Zins et al., 1998), negative self-perceptions, and/or defeating self-

talk (Bromgard, Bromgard, & Trafimow, 2006; Leffert & Siperstein, 1996). Although

abundant literature exists regarding students with disabilities requiring social-emotional

learning opportunities, few research studies have explored factors that interact potentially

with students' social-emotional competency development, especially in students with disabilities (Fenning et al, 2011).

Additionally, research is only beginning to emerge pertaining to social-emotional skill development, and interventions used to improve normal development trajectories common in children with disabilities compared to those without disabilities (Rosenbaum, 2007; 2009). Although we know that students with and without disabilities who attend schools implementing SWPBIS have improved academic, behavioral, and social-emotional competencies (Bloom et al., 2006; Duda et al., 2004), further research needs to explore the interaction between factors (e.g., SWPBIS, grade, disability) that can impact social-emotional development in younger students(Cooper, Masi, & Vick, 2009).

Purpose Statement

A reciprocal relationship exists between students' academic, behavioral, and social-emotional skills. These skills are interdependent and further interact with other factors to create the developmental outcomes in all children (Durlak et al., 2011). Children's social-emotional competency development is influenced not only by existing behavioral and cognitive factors but also by other existing student-and school-related factors (Elias et al., 1997; Epstein et al., 2008; Jimerson & Furlong, 2006; Payton et al., 2000; Rumberger & Palardy, 2004). Personal and biological factors along with environmental forces interact and over time create the developmental changes in children. Many different factors that interact and create children's developmental competencies. However, the impact of a disability on a combination of these different factors is rarely studied (Brofenbrenner, 1992; Cooper et al., 2009; Rosenbaum, 2007b; Thelan, 1995). Therefore, the purpose of this research was to examine the overall differences in the

social-emotional MESH competencies between fifth- and sixth-grade students with disabilities (e.g., SLD, ADHD, M-ID ED) and without disabilities, who attend schools with or without SWPBIS. Specifically, to examine the impact of disability and grade on the social-emotional MESH competencies between fifth- and sixth-grade students with and without disabilities.

Research Question

The primary researcher examined the following research question in this study. Is there a difference in the social-emotional MESH competencies between fifth- and sixth-grade students with and without disabilities who attend schools with or without SWPBIS?

Research Hypothesis

There is a statistically significant relationship between the social-emotional MESH competencies of fifth- and sixth-grade students with and without disabilities who attend schools with or without SWPBIS. A student's grade, disability, and enrollment in a school implementing SWPBIS has an effect on their MESH competencies.

Definition of Terms

Below the key terms are presented. These terms are defined using definitions common to the field and in some cases definitions unique to this study.

Absences

Absences are the number of times in a school year that a student was absent.

Academic Achievement

Academic achievement measured as grades (i.e., A, B, C, D, or below D).

Age

Age is defined as an age range (i.e., younger than ten years-old, ten years-old, 11 years-old, 12 years-old, or older than 12 years-old).

Attention Deficit Disorder with Hyperactivity (ADHD)

Attention deficit disorder with hyperactivity (ADHD) is a neurological condition causing difficulty with inattention and self-control. Problems with social skills, social interactions, and social-emotional competencies are common for many students. ADHD defined as three types: (a) attention issues, (b) hyperactive/impulse issues, and (c) a combination of attention and hyperactivity/impulse issues (U.S. Department of Education, 2006). Past research further indicates that approximately 30-50% of children with ADHD also have SLD (National Center for Education Statistics, 2016).

Classroom Emotional Climate

Classroom emotional climate is the positive social-emotional interactions between teachers and students, and among students and peers (Daniels & Shumow, 2003; Jia et al., 2009; Pianta, La Paro, & Hamre, 2008; Ryan & Patrick, 2001).

Disability

Disability in this research was a Specific learning disability (SLD), Attention deficit disorder with hyperactivity (ADHD), Mild-intellectual disability (M-ID), and/or Emotional Disturbance (ED).

Effective Educational Environments

Effective educational environments are the school settings that promote the learning and development of academic, behavioral, and social-emotional competencies. In this study, evidence-based school interventions (i.e. SWPBIS), and safe classroom

emotional climates are important components for the most effective school settings (i.e. educational environments) (Guardino & Fullerton, 2010).

Emotional Disturbance (ED)

An Emotional Disturbance (ED) is a condition exhibiting one or more of the following characteristics over time and adversely affects a child's educational performance. An inability to learn that can't be explained by intellectual, sensory, or health factors, an inability to build or maintain satisfactory social and interpersonal relationships with peers and teachers, inappropriate types of behavior or feelings under normal circumstance, a pervasive mood of unhappiness or depression, and the development of physical symptoms or fears associated with personal or school issues. An ED includes children with schizophrenia but not children considered socially maladjusted, unless they also have a ruling of ED (Individuals with Disabilities Education Act, 2004).

Gender

Gender included male or female.

Grade

Grade was fifth- and sixth-grades and is one of the three factors investigated in this study for their impact on students' social-emotional competencies.

Growth Mindset

Growth Mindset in this study is the first of four social-emotional MESH skill sets. Growth Mindset competencies are the mental beliefs including abilities to try, to improve, and to increase efforts regardless of difficulties. Other skills are the personal beliefs on the relevance of practice, perseverance, and progress. An ability to look at

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one's mistakes as learning opportunities and to continue to persist regardless of setbacks (Blackwell, Trzeniewski, & Dweck, 2007; Dweck, Walten, & Cohen, 2011; Transforming Education, 2016). For this study growth mindset measures students' negative beliefs that (a) intelligence is something one cannot change, (b) challenging oneself will not make one any smarter, (c) there are some things one is not ever capable of learning, and (d) if not naturally smart in a subject, one will not do well regardless of effort (Farrington, Levenstein, & Nagaoka, 2013; Transforming Education., 2016).

Mild Intellectual Disability (M-ID)

A Mild Intellectual Disability (M-ID) is defined as having a sub-average general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance (Individuals with Disabilities Education Act, 2004).

Office Discipline Referrals (ODRs)

Office Discipline Referrals (ODRs) are disciplinary infractions resulting in office referrals. This study defined ODRs as the number of times staff sent students to the office or suspended students in a school year.

Other Health Impairment (OHI)

Other Health Impairment (OHI) was defined as having limited strength or vitality, including a heightened alertness to environmental stimuli resulting in limited alertness to the educational environment due to chronic or acute health problems (i.e. asthma, ADHD, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome) that adversely affects educational performance (Individuals with Disabilities Education Act, 2004).

Positive Behavioral Interventions and Supports (PBIS)

As a preventative and evidence-based implementation framework, PBIS is beneficial to all students (Lassen, Steele, & Sailor, 2006). PBIS uses data-based decisions to identify and individualize the best level of positive behavior interventions and supports needed for every student to succeed in the school setting. Schools implemented PBIS school-wide and across the school district. PBIS or School-wide Behavior Interventions and Supports (SWPBIS) further apply a continuous improvement model (Horner, Sugai, & Fixen, 2017).

Race

The researcher defined race in the following categories: American Indian, Alaska Native, Asian, African American, Hawaiian, Hispanic/Latino, Multiracial, Caucasian, or Other.

School-Wide Evaluation Tool (SET)

The SET is a school-wide evaluation tool designed to assess and evaluate the effectiveness of PBIS at Tier 1 (SWPBIS) across seven critical features. Data gathered for the scoring of the SET includes measures across the following SWPBIS components: (1) Expectations defined (2) Behavioral Expectations taught, (3) Systems for rewarding behavioral expectations, (4) System for responding to behavior violations, (5) Monitoring and decision making, (6) Management, and (7) District level support. Scoring for the SET involves multiple sources including observations, products, and student and school staff interviews. A SET score of 80% or more indicates effective SWPBIS procedures (Todd, Lewis-Palmer, Horner, Sugai, Sampson, & Phillips, 2012; OSEP National Technical Assistance Center on Positive Behavior Interventions and Supports, 2018).

School-Wide Positive Behavior Interventions and Supports

Although the generic terms PBIS and SWPBIS are used interchangeably, SWPBIS is the main term used in this study. School-Wide PBIS at Tier I (SWPBIS) consistently integrate preventative and evidence-based interventions and supports across different school settings (i.e. classroom, cafeteria, playground) (Horner, Sugai, & Lewis, 2015; U.S. Department of Education, 2016). SWPBIS target the behaviors of students and school staff and the social-emotional interactions between them.

Self-Efficacy

Self-Efficacy in this study is the second of four social-emotional MESH skill sets. Self-efficacy competencies include self-confidence, thinking habits, and cognitive processes that lead to desired goals and outcomes. For this study, self-efficacy is related to self-confidence in one's ability to (a) earn As' in classes, (b) do well on test even when tests are more difficult, (c) master the hardest class topics, and (d) meet all the learning goals set by teachers (Bandura, 1997; Transforming Education, 2016; Zimmerman, 2000; Zimmerman, Bandura, & Martinez-Pons, 1992; Zimmerman & Martinez-Pons, 1986).

Self-Management

Self-Management in this study is the third of four social-emotional MESH skill sets. Self-Management relates to skills required to regulate emotions, behaviors, and thoughts and to focus in different situations and settings (CASEL, 2010; Transforming Education, 2016). For this study, self-management refers to how students: (a) prepare for class, (b) remember and following directions, (c) complete work and not waiting until the last minute, (d) pay attention even with distractions, and work independently and with focus, (e) stay calm even when bothered or criticized by others, (f) allow others to speak

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without interruption, (g) interact politely with adults and peers, and (h) keep one's temper in check (Transforming Education, 2016).

Social Awareness

Social awareness in this study is the last of the four social-emotional MESH skill sets identified as necessary for fifth-and sixth-grade students' social-emotional, behavioral, and academic competencies. For this study, social awareness refers to how students: (a) listen to people's point of view, (b) care about people's feelings, (c) compliment other's accomplishments, (d) get along with students who are different than you, (e) describe feelings, (f) respect other's point of view when they disagree with you, (g) stand up for self without putting others down, and (h) disagree with others without starting an argument (Transforming Education, 2016).

Social-Emotional MESH Competencies

Social-Emotional MESH Competencies are the Mindsets, Essential Skills, and Habits that are associated with higher social-emotional, behavioral, and academic skills required for success in different environments and social settings. These four social-emotional competencies or skill sets are measured in growth mindset; self-efficacy, self-management, and social awareness for a total score (Transforming Education, 2016).

Specific Learning Disability (SLD)

Specific learning disability (SLD) is a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. Perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia can be included. Not included as

a SLD are learning problems primarily the result of visual, hearing, or motor disabilities, an intellectual disability, an emotional disturbance, or an environmental, cultural, or economic disadvantage. (Individuals with Disabilities Education Act, 2004).

Delimitations

A limitation in this research is the utilization of data taken from students' self-reported measures. As occurs with self-reported data, bias may exist in a population of interest and in the testing conditions. However, the researcher carefully addressed all necessary precautions for internal validity, criterion-related validity, and internal consistency reliability. A notation regarding delimitations is that the present research is specific to the participating fifth-and sixth-grade students with SLD, ADHD, M-ID, ED, and typically developing students attending public schools in a southern state.

Assumptions

This study assumed that survey administrators followed the prescribed survey protocol. In addition, it assumed that all respondents chose to participate, answered honestly to the best of their ability, and there were no attempts to control students' responses.

Significance

This study extended the literature on both social-emotional learning and SWPBIS, but also sought to support the literature suggesting a potential link between these two research areas. Furthermore, this research expanded research showing improved social-emotional competencies in fourth-, fifth-, and sixth-grade students with and without disabilities (Bradshaw, Waasdorp, & Leaf, 2012).

Summary

This study explored possible interaction effects between personal, behavioral, and environmental factors to determine if differences in the social-emotional MESH skills exist between fifth- and sixth-grade students with and without disabilities who attended schools with or without SWPBIS. Thus, the purpose of the present research is to examine for any social-emotional change between the three comparison groups.

Organization of Study

This study consists of five chapters. Chapter I served as an introduction to the this research study (e.g., key topics, statement of the problem, purpose statement, research questions, hypothesis, definitions of terms, assumptions, delimitations, significance, and summary). Chapter II is a comprehensive literature review including the theoretical model and key topics related to the study. Chapter III outlines the methodology used in the study. Chapter IV includes the study results, and Chapter V presents the findings using the theoretical framework as a guide and further describes limitations, implications for practice and future research.

CHAPTER II – LITERATURE REVIEW

In chapter two, a literature review of social-emotional competencies of students with (i.e., SLD, ADHD, ED, MI-D) disabilities and without disabilities is presented. This chapter further explains the importance of social-emotional competency development in all students and begins with a more in-depth description of the Social Cognitive Theory (SCT; Bandura, 1986). The researcher provided an overview of SWPBIS and impact on different students' school-related outcomes. Positive student-related outcomes associated with higher social-emotional MESH competencies are detailed. Additionally, Chapter two concluded with a description of the intersection among students' academic, behavioral and social-emotional skills and their outcomes.

Theoretical Framework

This study applied the Social Cognitive Theory (SCT) by Albert Bandura (1986) as a theoretical framework to examine the social-emotional MESH competencies of fifth- and sixth-grade students with and without disabilities, who attended schools with or without SWPBIS. SCT maintains that one's personal factors, behavioral factors, and environmental factors play a reciprocal role in learning and development (Bandura, 1986). Personal factors are cognitive, affective, and biological events unique to each person, while behavioral factors are observable and measurable events or actions (Bandura, 1986). Bandura's SCT (1986) hypothesizes that learning occurs in a social context and emotions, feelings, thoughts, behaviors, observations, and experiences influence learning. Thus, the school environment provides an ideal model for learning social-emotional and behavioral competencies that influences students' future learning, continuous development, and subsequent behaviors (Bandura, 1997; Pajares, 2002).
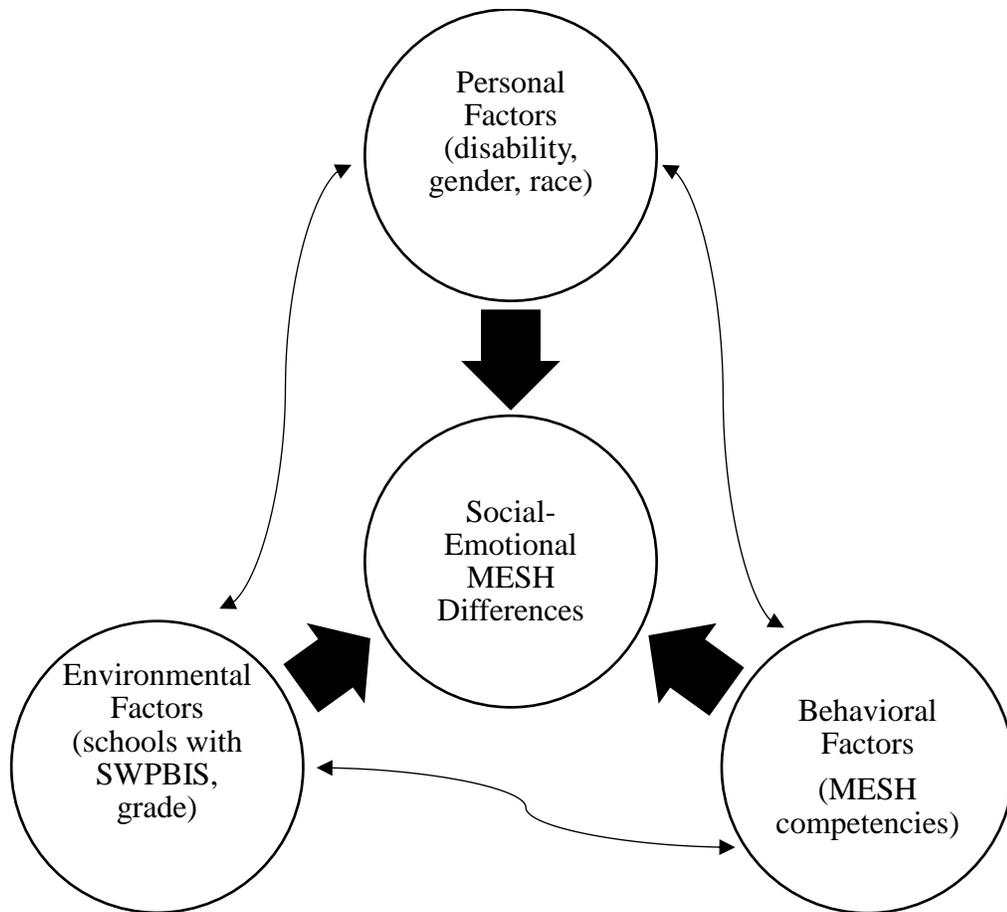
Figure 1. Social Cognitive Theory: A Conceptual Framework

Note. This figure shows the relationship between SCT and the factors being examined in this study.

Specifically, the SCT stresses that social interactions, vicarious processes, natural observations, and reinforcement principles are key to people's ability to learn, adapt, and change. Bandura (1986) called social learning an interactive process occurring in individualized ways, and within social structures that are collectively oriented (p.454). The SCT describes people who are actively engaging in their own learning and who are producers of their competencies, behaviors, and environments. The SCT has influenced many of the positive behavioral interventions that improve cognition and increase the

development of other social-emotional and behavioral competencies (self-efficacy, self-regulation, and self-management). In the SCT, the behavioral strategies that improve behavior, emotion regulation, cognitive, and motivational processes also have an impact on the social learning environment. The SCT provides a strong theoretical model to examine the impact of schools with SWPBIS on fifth- and sixth- grade students' behavioral factors (observable and measurable social-emotional MESH competencies), personal factors (disability and grade), and environmental factors (school settings).

Researchers have identified the bond between social-emotional skills and school behavior on academic outcomes (Bradberry & Gravesteijn, 2005; Elias, 2004). All behavior shapes the context of social-emotional interactions with others in the environment and is an ongoing reciprocal process that may influence one's future personal, behavioral, and environmental influences (Bandura, 1986). Furthermore, social-emotional skills influence students' success during and after school (Elias et al., 2016).

Bandura's publication entitled Social Foundations of Thought and Actions: A Social Cognitive Theory (1986) described how human functioning was not just a reactionary process "driven by inner impulses or shaped only by environmental factors" (p.25). But, instead it was a continuous interaction of "personal, behavioral, and environmental influences" (Pajares, 2002, p. 2). Thus, learning is an interactive relationship between personal, behavioral, and environmental factors within a social context (Bandura, 1986). As an example, the learning of new behaviors is associated with the learner's observations, emotional experiences, and social models specific to the consequences of the behavior in a given environment. In other words, the observing, feeling, modeling and reinforcing of behavioral patterns for the learner effects all

subsequent behaviors and future learning (Pajares, 2002). This interactive process when a person interprets their own behavior, changes personal and environmental factors that then alters subsequent behaviors (Pajares, 2002).

Bandura (1986) called this interplay of factors reciprocal determinism (Pajares, 2002). Reciprocal determinism is personal factors (i.e., cognition, affect and biological events), behaviors, and environmental influences interacting reciprocally (Pajares, 2002). Bandura (1977) identified cognition and later self-efficacy or self-beliefs as key factors highly affecting behavior or personal factors. Bandura (1986) described self-efficacy as having a critical role in influencing one's ability to "construct reality, self-regulate, encode information, and perform behaviors" (Pajares, 2002, p. 2). Self-beliefs according to Bandura (1986) enabled individuals to control their thoughts, feelings, and actions. In other words, "what people think, believe, and feel affects how they behave" (Bandura, 1986, p.25).

<div align="center">SCT and SWPBIS</div>

The SCT framework (Bandura, 1986) has contributed to some of the current educational practices credited with improving learning. For example, SWPBIS that change students' faulty thinking or negative habits can also improve many school-related outcomes such as academic performance, as well as social-emotional, behavioral, and environmental factors that shape students' future outcomes (Bandura, 1986). The overall SCT premise is that learning, adapting, and changing, by formal and vicarious reinforcement, occurs due to psychological needs (emotions). These psychological needs influence one's personal (thoughts) and behavioral factors that alter environmental and social conditions and change subsequent personal and behavioral factors (Pajares, 2002).

As students improve their skill levels, natural reinforcement occurs and these learned

competencies like self-regulation and self-control continue to increase over time.

Students' improved competencies modify the school structures and educational

environments around them that in turn continue to perpetuate more successful school

outcomes (Pajares, 2002).

Social-Emotional Learning

This section of the chapter contains a formal review of the literature that serves as

a foundation for this study. The key terms used were in the search procedures include,

social-emotional competencies, MESH social-emotional skills, social-emotional

development, positive behavior interventions and supports, school-wide positive behavior

interventions and supports, education environments, school relationships, and classroom

emotional climate. Using the search descriptors, *behavior skills,* and *social-emotional*

skills, social-emotional and behavioral skills, and *students with disabilities*, the

researcher located studies on effects of social-emotional programs and/or SWPBIS on

social-emotional, behavioral, and academic skills. ERIC and the Academic Search

Primer were electronic databases used to search for relevant studies.

For the literature searches, six criteria determined inclusion (a) peer-reviewed

journal publications, (b) subjects were explicitly stated, (c) settings were explicitly stated,

(d) intervention procedures were descriptive, (e) conclusions aligned with results and

experimental design, and (f) research was conducted only with upper elementary students

(i.e., fourth-sixth grades). The population of interest in this study was fifth- and sixth-

grade students. Thus, the literature review was limited to studies exploring the social-

emotional competencies in fourth-sixth-grade students, with and without disabilities, who attended schools with or without SWPBIS.

Summary of Two Primary Studies Found

The review of literature revealed two studies exploring the relationship between SWPBIS and social-emotional development, competency, or change in fourth-, fifth-, and sixth-grade students. In the first study, Ross & Horner (2014) investigated the effects of SWPBIS with third-, fourth-, and fifth-grade students' social-emotional and behavioral competencies. These researchers reported an increase in the social-emotional and behavioral skills related to school safety, bullying prevention, and more positive school attitudes (Ross & Horner, 2014).

The second study by Bradshaw, Waasdorp, & Leaf (2012) examined effects from a SWPBIS program on the behavioral deficits and the social-emotional competencies (i.e., prosocial skills) in upper elementary school students (fourth-, fifth-, and sixth-grade students with and without disabilities). In this research, students with disabilities represented almost 13% of the total sample of upper elementary school students. Results from the Bradshaw et al. (2012) study reported improved behavioral and social-emotional adaptive skills and recommended continued research on SWPBIS and the development of social-emotional skills in upper elementary school students. These researchers maintained a need for more studies on the effects of SWPBIS in older elementary school students and with at-risk populations. Although, students with disabilities were not the focus in the Bradshaw et al. study (2012), special education status along with grade, race, and reduced lunch were included as mediating factors. Statistically significant differences across all student-related outcomes over time occurred in this study, with the

exception of suspension rates (Bradshaw et al., 2012). According to Bradshaw et al.

(2012), noted the existence of previous research regarding the impact of SWPBIS on

other positive student-related outcomes, such as higher behavioral and academic

competencies and improved school social climate with elementary school students

(Horner, Sugai, Smolkowski, et al., 2009).

Intersection of Social-Emotional Learning and SWPBIS

Social-emotional learning and SWPBIS intersect on two key concepts: (a)

behaviors influence the education environment, and (b) positive school relationships and

healthy classroom emotional climates affect all school behaviors (Baker et al., 1997; Lehr

& Christenson, 2002). Both of these factors further impact students' social-emotional,

behavioral, and academic competencies (Jimerson, Campos, & Greif, 2003; Fredricks,

Blumfield, & Paris, 2004; Marks, 2000; Ryan & Patrick, 2001; Vega, 2012). SWPBIS

focuses on teaching, modeling, and reinforcing appropriate behaviors to improve

students' social-emotional, behavioral, and academic competencies (Collaborative for

Academic, Social, and Emotional Learning (CASEL), 2010; PBIS, 2014). A person's

developmental state is a product of their behaviors and internal states like emotions,

cognition, feelings, beliefs, expectations, and self-perceptions combined with their

physical, sensory, and neural systems. The environment influences all behaviors and

future learning as well as the future developmental pathways that lead to subsequent

behaviors and behavioral changes (Bandura, 1992).

Importance of Social Emotional Competencies

CASEL (2010) described certain social-emotional competencies as important for

schools to teach and students to master. Competencies across the social-emotional and

behavioral domains include responsible decision-making, social awareness, and character strength (Elias et al., 2016; Tough, 2012). CASEL (2017) reports that building social-emotional competencies increases self-perceptions, self-confidence, self-efficacy, and personal beliefs just as bullying, fighting, and truancy decreases (Brown et al., 2012; Durlak et al., 2015; Elias et al, 2016). In spite of these positive findings, CASEL researchers suggest better definitions and measurements on the specific social-emotional competencies beneficial for all students (Elias et al., 2016). In addition, researchers describe the need for additional studies on the value of social-emotional competencies: (a) across student-related outcomes, (b) on different student populations and ages, and (c) strategies that promote positive development (Elias et al., 2016).

Transform Education: Mindsets, Essential Skills, and Habits (MESH)

Results from longitudinal research (Transforming Education, 2016) provides empirical evidence on the value of students' social-emotional competencies. Transforming Education (2014) researchers in collaboration with other experts (i.e. CASEL, The John W. Gardner Center for Youth at Stanford, The Harvard Center for Education Policy Research, and Nine California Public School Districts) developed, standardized, and measured four skill sets of social-emotional competence were included in the standardized assessment known as MESH. Although these skill sets are not comprehensive of all social-emotional skills that lead to student's success, they have been significantly associated with outcomes that are more successful. These four social-emotional MESH competencies are: (a) growth mindset, (b) self-efficacy, (c) self-management, and (d) social awareness (Transforming Education, 2016).

Growth Mindset

The first set of social-emotional MESH competencies on the MESH Student Survey represent the skills related to one's beliefs about their ability to grow and improve with effort (Transforming Education, 2016). Students with high growth mindset believe in the importance in trying to increase their efforts despite encountered difficulties. This subscale assesses students' beliefs about their efforts and improved competencies. Growth mindset skills are beliefs regarding the relevance of practice, perseverance, and progress as well as the ability to view one's mistakes as learning opportunities.   Students with lower growth mindset have fixed beliefs about their talents, intelligence, and abilities. Students with low growth mindset believe their intelligence is fixed, and will not change regardless of their effort and perseverance. Additionally, students with a low growth mindset worry about not being smart enough, become upset about their mistakes, and give up much sooner when tasks become difficult. Longitudinal research substantiates an association between growth mindset and higher school motivation, grades, and test scores (Blackwell et al., 2007; Transforming Education, 2016). Students receiving school-based interventions targeting growth mindset competencies have shown an increase in classroom effort and interest. Growth mindset skills are very important with new challenges and transition times like from elementary to middle school (Dweck et al., 2011; Transforming Education, 2016).

Self-Efficacy

The second set of social-emotional MESH competencies on the MESH Student Survey are the skills related to thinking habits, and cognitive processes that lead to desired goals (Transforming Education, 2016). Self-efficacy skills are one's confidence in their self-control over their behaviors, motivation, and environment. Effective self-

advocacy and assertiveness are further examples of self-efficacy competencies (Bandura, 1997; Transforming Education, 2016). One's belief in the ability to stay motivated, encouraged, and maintain self-control regardless of feelings, challenges, and negative emotions are included in self-efficacy skills. Past research supports self-efficacy as predictive of motivation, learning, and achievement. Compared to students with low self-efficacy, students with high self-efficacy participate in class, work harder, persist longer, and have fewer negative emotions (Bandura, 1997; Transforming Education, 2016; Zimmerman, 2000). Furthermore, self-efficacy increases the use of learning strategies and self-directed learning techniques (Zimmerman et al., 1992; Zimmerman et al., 1986).

Self-Management

The third set of social-emotional MESH competencies on the MESH Student Survey are the skills related to one's ability to regulate emotions, behaviors, and thoughts and in different situations and settings (Transforming Education, 2016). Self-Management includes stress management, delayed gratification, and self-control. Other examples include having the ability to: plan, prepare, focus, listen, follow directions, work independently, set and meet goals, and not interrupt others (CASEL, 2010; Transforming Education, 2016). Research shows that self-management in children has been linked to various positive adult outcomes including high school and college completion, as well as physical health and financial stability (CASEL, 2010; Transforming Education, 2016). Students with high self-management skills are less likely to have depression, obesity, or engage in substance abuse (Knudson et al., 2006; McClelland & Cameron, 2011; Moffitt et al., 2011; Transforming Education, 2016).

Social Awareness

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The fourth set of social-emotional MESH competencies on the MESH Student Survey relate to social awareness skills required to get along with other people (Transforming Education, 2016). These skills include having the ability to: (a) empathize and identify with others' perspectives; (b) understand and navigate social systems and environments; (c) follow societal norms; (d) make ethical decisions; and develop positive relationships. Social Awareness skills are associated with better physical, mental, and emotional health. Social awareness means students are able to communicate with others, resolve conflicts, and recognize the value in relationships between family, peers, and school staff (CASEL, 2010).

The Transforming Education research (2016) placed an emphasis on the schools' role in building educational capacity, increasing accountability, and improving the educational environment instead of focusing on the students' deficits. Positive school behavioral interventions (i.e., PBIS) instead of punitive school discipline leads to increased social-emotional MESH competencies (Transforming Education, 2016). Schools with PBIS programs who have students with higher social-emotional MESH competencies reported positive student-related outcomes such as improved academic achievement (GPA), test scores, and attendance.

Differences in Students' Social-Emotional Competencies

The literature review ascertained a relationship between academic deficits, social deficits, problem behaviors, and emotional disorders (Wehby et al., 2003). An important educational goal is to reduce and prevent behavior problems and to mitigate social, emotional, academic, and learning deficits common in students with disabilities. Improving academic, behavioral, and social-emotional competence in students already

requiring more supports can change the negative projections of future skill development. If students' deficits are not remediated, many students develop more frustration and negative self-perceptions leading to bad feelings on school, continued behavior problems, and in some cases academic failure (Bowen, Jenson, & Clark, 2004).

Social-emotional and behavioral deficits in younger students with disabilities are especially problematic as these deficits result in more misbehavior, social alienation, and negative school discipline. Elementary school children without needed social-emotional and behavioral interventions have a probability of negative future outcomes like school suspensions, student disengagement, academic failure, and school dropout (Lee et al., 2011). SWPBIS procedures target students' problematic behaviors and increase the likelihood of social-emotional skill development within a social-emotional school context and an emotionally safe learning climate (Lewis & Sugai, 1999; Mrazek, & Haggerty, 1994). A reciprocal and interdependent relationship exists between students' academic, behavioral, and social-emotional competencies (Durlak et al., 2011).

<div align="center">Summary</div>

An important focus in educational research is to identify the behavioral, social-emotional, and environmental factors that promote successful outcomes for all students, especially younger students with disabilities (Lane et al., 2006a; Lane, 2006b). The psychological dynamics that make SWPBIS an effective behavioral intervention, link cognition, emotions, and social-emotional learning to behavioral and environmental factors that impact the development of all future skills (Sprague, et al., 2001). Without evidence-based preventative school-wide positive behavioral interventions and supports,

younger students with disabilities may have negative school-related outcomes (Elias et

al., 1997; Kamps et al., 2002; Kellam et al. 1998).

CHAPTER III - METHODOLOGY

In chapter three, the researcher presents this study's design along with information about recruitment efforts, and the selection processes for the desired settings and sample. Furthermore, inclusion and exclusion criteria are covered. Subgroup data and student demographics are reported. Furthermore, the researcher describes the MESH Survey, the procedures, and the research material used. Data collection methods, scoring, and data analysis are explained in this chapter.

Research Design

A causal-comparative research design was utilized in this research. In this type of design, exploring possible causality was the focus of the inquiry. In causal-comparative studies, the researcher observed a condition and theory, and attempted to explain the possible cause of the condition (Patten, 2009). An ex-post facto causal-comparative design, after the fact, research as possible cause-and-effect interactions between two or more variables have already occurred. Furthermore, causal-comparative studies begin with differences (effects) on a given variable between at least two groups and the researcher explores the possibility that one variable has had an impact on another variable. Then, based on SCT, the researcher provides an explanation for observed differences between groups (Johnson & Christensen, 2000; Gay et al., 2006). For example, in this study social-emotional MESH competency (behavioral factors) between fifth- and sixth-grade students with and without disabilities (personal factors) who attend schools with or without SWPBIS (environmental factors) was compared.

Hypothesis

In this study, the researcher examined differences in the social-emotional MESH competencies (Transforming Education, 2016) between a sample of fifth- and sixth-grade with and without disabilities who attended intervention schools with SWPBIS and control schools without SWPBIS. A three way factorial analysis of variance (ANOVA) with a 2 x 2 x 2 design was conducted. Interaction effects of SWPBIS and disability was further measured at every combination of the independent factors. As the focus of inquiry in this study, the null hypothesis was tested at a 0.05 significance level. The null hypothesis; there was not a significant overall difference in the social-emotional MESH competencies between fifth- and sixth-grade students with and without disabilities who attend schools with or without SWPBIS.

Recruitment Efforts

First, the researcher began informal recruitment efforts with the potential districts that included a phone call to the potential districts' main office. In the call, the researcher explained the call's purpose, gauged interest in participation, and confirmed the presence or absence of SWPBIS procedures across the district. The researcher further explained that formal recruitment efforts would begin after the University's Institutional Review Board (IRB) had granted official approval. At the call's conclusion, the researcher verified the name and email address for the Districts' Superintendent. As part of a University awarded federal initiative, model site status was awarded to schools with an 80% or higher score on Tier I of the School-Wide Evaluation Tool (SET), (Todd et. al, 2012). Informal efforts with these schools further included a power point presentation and follow-up emails.

District Level Formal Recruitment

Once the University granted IRB approval, the researcher proceeded with the

formal recruitment efforts. First, the researcher sent an introductory email to the

potential Districts' Superintendent. The introductory email included an overview of the

study and the researcher's contact information. In this email, the researcher requested

approval to mail (or email) the written request for participation and the research

materials. If necessary, the researcher sent another email, made phone calls and/or

offered a face-to-face meeting regarding the study. After the district gave approval, the

researcher mailed the official written request for participation and accompanying research

materials. The official written request for participation included a copy of the

University's IRB approval, a standard University letter, a memorandum of understanding

(MOU; already signed by the researcher with space for the superintendents' signature),

and a participating schools packet (PSP). In the formal letter, the researcher gave

districts an overview and a timeline for the study. Additionally, in the formal letter, the

researcher shared their contact information and requested an official contact name from

the participating districts. The MOU included a list of the researcher's responsibilities

and a statement from the researcher on the confidentiality for this study. The PSP, as the

last of the accompanying materials, contained the MESH Survey (Transforming

Education, 2016) and instructions for survey administration. The PSP further contained

directions on the protocol for informed consent and assent as well as the university's

official informed consent and assent forms.

Finally, the researcher called the districts' main office to confirm receipt of the

official request for participation and the research materials. If necessary, the researcher

made several follow-up phone calls to the districts' main office regarding the mail-out

and/or the official approval from the districts for their participation in the study. The

follow-up phone calls occurred as necessary until official approval or denial was granted.

School Level Formal Recruitment

When official permission for participation in this study was granted at the district

level and a district contact person was assigned, the formal school level recruitment

efforts began. These recruitment efforts included emails, phone calls, and face-to-face

visits with the districts' contact person. Beginning with an email to the districts' contact

person, the researcher offered an introduction and request for an appropriate time for a

phone call. During the telephone conversation, the researcher answered questions and

offered a face-to-face visit. The researcher sought clarification during the phone calls

and face-to-face visits regarding how research materials would be disseminated to

individual schools and classrooms. Additionally, the researcher obtained guidance from

the districts' contact person about visiting participating schools and administering the

MESH Survey after Informed Consent and Assent Forms were signed. The researcher

continued making phone calls, emails, and setting up face-to-face meetings to provide

support to districts, schools, and the fifth-and sixth-grade classrooms in the formal

recruitment efforts and the research process.

As is required by the University, the protocol for Informed Consent and the

Informed Consent Request (ICR) was included in the present study as part of the research

materials. Additionally, the instructions for the ICR protocol and a statement on

confidentiality from the researcher was included along with a formal ICR cover sheet.

Furthermore, during the formal recruitment efforts with the potential districts, the

researcher clarified with the district contact person the preference on the dissemination of the ICR and the ICR protocol. After the review and approval by the districts, the appropriate family member/guardian of the fifth and sixth grade students choosing to participate in this research signed the ICR. Once signed, the researcher filed the original ICRs in a secure location locked cabinet to maintain confidentiality.

<div align="center">Settings and Sample Selection Processes</div>

The next two sections describe the districts and the sample selection processes. In addition, the researcher provided, the inclusion and exclusion criteria for the districts and classroom settings.

Settings Selection Process

In the settings selection process, the inclusion criteria included only public school districts from a southern state. Other inclusion criteria was that potential districts be in good standing with the State and with updated District Level Data (2017). Additionally, for schools with SWPBIS, only a score of 80% or more on the School-Wide Evaluation Tool (SET) were recruited for participation. The exclusion criteria for districts were districts that were unresponsive to initial communication and/or districts who claimed to be SWPBIS schools but did not meet model status at Tier I.

After verification of the inclusion and exclusion criteria, the researcher selected nine districts. Out of the nine districts, four districts reported to be SWPBIS. These four districts had twelve possible intervention schools containing fifth- and sixth-grade classrooms. The remaining five districts did not have SWPBIS. These five districts had twelve control schools containing fifth- and sixth-grade classrooms. Thus, there were

twenty-four schools containing fifth- and sixth-grade classrooms from nine public school districts in the northeastern part of a southern state for possible recruitment.

District Demographics

In the present study, there were four districts with SWPBIS and five total intervention schools containing fifth- and sixth-grade classrooms (see Table 1 for more detail about the participants by district, school and grade). In addition, there was one school district without SWPBIS that had two schools participate in this study (see Table 2 for more detail about these participants).

Table 1

SWPBIS: District, School, Grade Compared to Total Possible Sample

Districts	Schools (N)	Grade Level	School Settings	Participant (N)	Population (N)	Participant %
A	**2**	5th	Elem 1	15	42	35.70
		5th	Elem 2	20	61	32.75
		6th	Elem 2	13	80	16.25
B	**1**	6th	Middle	31	223	13.46
C	**1**	5th	Elem	16	64	25.00
D	**1**	5th	Altern	11	35	34.29

Note. Adapted from MS Department of Education District Data (2018); Altern=Alternative; Elem=Elementary; N=Number; %=Percentage

Table 2

Non-SWPBIS: District, School, Grade Compared to Total Possible Sample

Districts	Schools (N)	Grade Level	School Setting	Participant (N)	Population (N)	Participant %
E	**1**	5th	Elem	8	37	21.62
		6th	Middle	12	39	30.77

Note. Adapted from MS Department of Education District Data (2018); Altern=Alternative; Elem=Elementary; N=Number; %=Percentage

During the sample selection process, the number of fifth- and sixth-grade students available for a possible sample from intervention and control schools was estimated. The population (N) estimate for fifth and sixth grade students in districts with SWPBIS for Intervention Schools was 500 with a 1% (n=25) population of students with disabilities. A sample (n) = at least 500 is recommended in sample populations > or = to 2,400; 331-335 is recommended for sample populations < or = to 2,600 (Krejcie & Morgan, 1970). Therefore, the researcher estimated the sample population to be 2,895 or a total of a population of almost 6,000 students from public school districts in a southern state. However, it was anticipated that 15% of the possible sample were not to be included due to attrition and/or a choice not to participate (85% of 2,895 = 2,460). Thus, the estimate of 2,460 fifth-and sixth-grade students from intervention schools and control schools came to almost 5,000 students. A sample this large was only used to account for an appropriate number of students with disabilities for sample inclusion. Out of the possible sample of fifth- and sixth-grade students, it was estimated that the number of students with disabilities is 1% or 25 students per grade (Mississippi Department of Education, State Level Data, 2018). Therefore, it was estimated that 50 students with disabilities

from the fifth- and sixth- grade from the intervention and control schools, or 100 fifth-

and sixth-grade students with disabilities might be part of the possible sample.

Participant Demographics

Only the fifth- and sixth-grade students whose parents/guardians chose to sign the

IRB approved parent/guardian informed consent forms and who further assented to

survey participation were included in the present research (N=129). However, with a

visual inspection data, three outliers were excluded from the study resulting in 126 total

participants (more detail about these outliers and the decision is provided in chapter four).

Table 3 shows demographic information for school, grade, gender, race, and

abilities. The grouping variable for race was collapsed from seven categories as

classified on the demographic questions from the MESH Survey into three categories

(i.e., African American, Caucasian, and Other) because the other categories for race

represented less than 5% of the entire student sample. Additionally, the students with

disabilities (n=14) represented various disability categories such as, SLD (n=8; 57%),

ADHD (n=3; 21%), ED (n=2; 14%), and M-ID (n=1; 7%).Similarly, the grouping

variable for disability was collapsed from the previously mentioned four categories to

two categories (i.e., with disability and without disability) due to a small sample size.

Table 3

Schools, Grade, Gender, Race, Ability Percentages (N=126)

FACTORS	N	%
Schools		
With SWPBIS	106	84.1
Without SWPBIS	20	15.9
Grade		
Fifth	71	56.3
Sixth	55	43.7
Gender		
Female	72	57.1
Male	54	42.9
Race		
Caucasian	66	52.3
African American	40	31.7
Other	20	15.8
Abilities		
With Disabilities	14	11.1
Without Disabilities	112	88.9

Research Instrumentation

According to previous research, the technical value of a measure includes the reliability and the validity of the assessment (Kane, 2006; Transforming Education, 2016). Thus, a reliable, valid, and evidence-based assessment that accurately measures the social-emotional competencies of fifth- and sixth-grade students was the goal of this researcher. Therefore, the MESH Survey (Transforming Education, 2016) was selected as an appropriate, reliable, and valid instrument for measuring the social-emotional MESH competencies of fifth- and sixth-grade students in this study.

The MESH Survey (2016) was developed as a component of the School Quality Improvement Index (SQII) (2016). The SQII (2016) and the social-emotional MESH Survey were designed through a partnership between five school districts in California and the Transforming Education Collaborative (2016). These researchers created a school quality and accountability index that further assessed social-emotional MESH competencies along with other school-related outcomes like academic achievement.

MESH Survey Elements

As a result of the past longitudinal research (Transforming Education, 2016), four different social-emotional MESH competencies were identified and credited with increasing skills associated with more successful outcomes in school, career, and life. These four social-emotional MESH competencies make up the MESH Survey: (1) growth mindset, (2) self-efficacy, (3) self-management, and (4) social awareness (Transforming Education, 2016). The MESH Survey is a valid instrument for use with 5th- 12th grade students with and without disabilities.

The MESH Survey (Transforming Education, 2016) contains twenty-five questions or items. Furthermore, a 5-point Likert Scale is used for a rating on how much a student perceives that a given behavior or competency is present or how much a student agrees or believes that a given statement is true. Scoring on each survey item ranges from one to five with a value of five representing the highest value or the best response with the exception of the values on the growth mindset scale. On the Growth Mindset scale, responses are reverse coded so a value of one not five represents the best response. For the growth mindset scale, the possible responses are the following: not at all true (1), a little true (2), somewhat true (3), mostly true (4), and completely true (5). For the self-

efficacy, self-management, and social awareness scales, examples of possible responses are as follows: almost never (1), once in a while (2), sometimes (3), often (4), and almost all the time (5). For the purposes of this study, the MESH Survey (Transforming Education, 2016) shall be represented on Part II: Sections 1-4, Questions 14-38 of an adapted MESH Survey. Part I: Section 1, Questions 1-13 of the MESH Survey as adapted by the researcher will be a questionnaire designed to obtain student demographics and school-related data.

Growth mindset. The first scale on the MESH Survey (Transforming Education, 2016) has four questions (Part II: Section 1, Questions 14-17) that assess the social-emotional MESH competencies related to a student's belief that their abilities can improve with effort. Examples of growth mindset competencies are that practice increases skill level and perseverance yields positive results (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, Walton, & Cohen, 2011; Farrington et al., 2013; Transforming Education, 2016).

Self-efficacy. The second scale on the MESH Survey (Transforming Education, 2016) has four questions (Part II: Section 2, Questions 18-21) that assess the social-emotional MESH competencies related to the thinking habits and cognitive processes leading to goals. Self-confidence is one examples of self-efficacy (Bandura, 1997; Farrington et. al., 2013; Transforming Education, 2016; Zimmerman, 2000; Zimmerman, Bandura, & Martinez-Pons, 1990; Zimmerman & Martinez-Pons, 1986).

Self-management. The third scale on the MESH Survey has eight questions (Part II: Section 3, Questions 22-30) that assess social-emotional MESH competencies needed for regulating emotions and thoughts. One example of a self-management skill is

planning (CASEL, 2010; Knudson et al., 2006; McClelland & Cameron, 2011; Moffitt et al., 2011; Patrick & Duckworth 2013; Transforming Education, 2016).

Social awareness. The fourth scale on the MESH Survey has eight questions (Part II: Section 4, Questions 31-38) that assess the social-emotional MESH competencies related to getting along with others. Two examples of social awareness are respecting others' points of view and caring about others' feelings (CASEL, 2010; Jones, Greenberg, & Crowley, 2015; Transforming Education, 2016).

MESH Survey Pilot Study

The pilot study for the MESH Survey was conducted over a series of pilot tests beginning in the spring of 2014 and across public school districts in the state of California. Along with the previously reported validating of the four MESH scales, additional efforts for evidence of validity were made by piloting alternate forms of the MESH Survey. Other efforts were made to address forms of potential bias common in self-report measures. Forms of potential bias addressed in the pilot testing has included reference bias, social desirability bias, and stereotype threat. Reference bias is interpreting survey items based on one's personal frame of reference (Spencer, Steale, & Quinn, 1999). To decrease this type of bias, anchoring vignettes and teacher ratings of the self-management and social awareness MESH scales were used for interrater reliability correlations. Social desirability bias or answering items based on social influences (Podsakoff et al., 2003) was decreased by reminding students of the anonymity of the survey and asking authority figures to stand at the back of the room during test-taking. The third type of bias, stereotype threat or the tendency to answer items like one

thinks their social group would do (Spencer et al., 1999) was addressed by putting

demographic questions at the end of the survey (Transforming Education, 2016).

During the development of the social-emotional MESH instrument, a criteria

MESH was established for a set of skills that were "meaningful, measurable, and

malleable" (Transforming Education, 2016, p.4).   The meaningful criteria were social-

emotional skills that correlated with academic achievement and other success factors.

The term social-emotional measurable was reliable and valid survey that was easily

administered in a school setting. Additionally, the word malleable was a set of social-

emotional skills that could be further developed and improved by already established

evidence-based school interventions such as PBIS programs (Transforming Education,

2016).

Participants and settings. Participants for the spring 2013-2014 pilot testing of the

MESH Survey were approximately 9,000 students in 3rd-12th grade and over 300

teachers. Participants for the spring 2014-2015 pilot testing was more than 450, 000

students in 5th-12th grades students. The series of pilot testing included students with

disabilities. Settings were public schools in California (Transforming Education, 2016).

Instrumentation reliability. Evidence on the validity of the MESH Survey

includes the reliability of an assessment. An assessment is reliable if results (student

scores) are consistent (Patten, 2009). Two forms of validity on the MESH Survey have

been demonstrated. Evidence for the validity of the MESH assessment are supported by

survey readability, internal consistency reliability, internal consistency reliability across

student subgroups, and interrater reliability between student and teacher ratings.

For the reliability of the MESH Survey (Transforming Education, 2016), survey readability was examined using the online Readability Analyzer (2018). From these analyses, an estimation of the appropriate grade readability was from the third- through the twelfth- grades. Additionally, a word difficulty calculation from the Readability Analyzer (2018) yielded a 17.24% score for the MESH Survey. The internal consistency reliability was estimated using the statistic Cronbach's alpha's (ranges in values of 0 to 1) and with the results from field tests with more than 350, 000 students (grades 3-12). The MESH Survey demonstrated internal consistency with reliability coefficients of .70 and above on the MESH scales. Thus, the survey readability is appropriate for fifth- and sixth-grade students and scores across items are internally consistent. Although, internal consistency reliability estimates of .70 or higher are appropriate with low stakes testing, reliability estimates of .80 are required with high stakes testing (Patten, 2009; Transforming Education, 2016).

The MESH Survey demonstrated the highest reliability with an internal consistency estimate of .88. The Self-efficacy scale showed the highest reliability out of the four MESH scales with an internal consistency estimate of .87. The Social awareness and the Self-management subscales further indicated acceptable reliability with internal consistency estimates of more than .80 for each MESH scale. The Growth Mindset scale indicated acceptable but lower reliability with an internal consistency estimate of .70. Lower reliability for this subscale may have resulted from the survey's administration with third- and fourth-grade students. Thus, the administration of the MESH Survey is not recommended for the students younger than the average age of fifth-graders (Transforming Education, 2016).

For internal consistency reliability with student subgroups, including students with disabilities, high internal consistency estimates ranging from .70 to above .80 were indicated for three of the four MESH scales with all subgroups. The Growth Mindset scale however showed the lowest reliability with an internal consistency estimate right below .70 on all subgroups with the exception of the student subgroup from Asian descent with an internal consistency estimate only right above .70 (Transforming Education, 2016).

The additional evidence for reliability of the MESH Survey was examined with interrater reliability. Evidence for interrater reliability was provided by comparing student scores on the self-management and the social awareness MESH scales with teacher scores on the corresponding self-management and social awareness checklists from the MESH Teacher Survey (Transforming Education, 2016). Using the statistic Cronbach's alpha, estimations on the internal consistency between student and teacher ratings or on the amount of convergence among different ratings of the same competency showed moderate to high reliability estimates for both MESH scales (student survey) but only at the middle schools and high schools' levels. The interrater reliability rating between student and teacher ratings on the Self-management scale was .74 at both middle schools and high schools and .40 at elementary schools. The interrater reliability between student and teacher ratings on the Social awareness scale was .73 for high schools, .64 for middle schools, and .35 for elementary schools (Transforming Education, 2016).

Instrumentation validity. An instrument is considered valid if it measures the construct(s) that it sets out to measure (Field, 2009). For the validity of the MESH Survey (Transforming Education, 2016), two forms of validity, convergent validity and

criterion-related validity, shall be explained. Convergent validity is defined as the degree

to which a scale is measuring the construct that it set out to measure (Patten, 2009;

Transforming Education, 2016). Criterion-related validity can be one of two types of

validity. As the first type of criterion-related validity, predictive validity was statistically

significant correlations between student scores on a given scale. The second type of

criterion-related validity, concurrent validity occurred when criterion-related scores and

scores from the given scale were gathered at about the same time. For predictive validity,

criterion-related scores are gathered after students have had an opportunity to achieve the

expected or predicted outcomes from the given scale (Patten, 2009; Transforming

Education, 2016).

On the MESH Survey, evidence for convergent validity (concurrent) on the

MESH Survey is shown by high correlations with between student ratings on the three of

the four MESH scales and student ratings on validating scales that assess similar skills.

For the self-efficacy scale, with a validating survey on classroom specific self-efficacy,

convergent validity evidence is strong with a correlation of .62. For the Self-

management scale, with a validating measure of emotional regulation, convergent

validity evidence is also strong with a correlation of .64. For the Social awareness scale,

with a validating measure of social perspective, convergent validity evidence is strong as

well with a correlation of .62. For the Growth mindset scale, with a validating measure

of classroom effort, however, convergent validity evidence is weak with a correlation of

.27. Although, past evidence for the convergent validity of the Growth mindset scale has

been reported with other validating scales (Farrington, Levenstein, & Nagaoka, 2013;

Transforming Education, 2016).

The evidence on test-criterion validity of the MESH Survey is demonstrated by strong correlations between student scores from the MESH scales and predicted or expected outcomes from those scores. For example, a higher GPA and improved standardized test scores have been positively correlated with the MESH scales and suspensions and absenteeism are predicted to be negatively correlated. On the MESH Survey, all correlations between student scores and outcomes were statistically significant (at .001 level) and correlated in the expected direction. For scores on the MESH Teacher Surveys, teacher ratings were also found to be statistically significant with expected student outcomes (higher GPA, better standardized test scores and lower suspensions and absents) and with correlations in the expected direction (Transforming Education, 2016).

Results of pilot testing, by the Transforming Education researchers (2016), provided evidence for reliability and validity of the MESH scales and for use with 5th-12th grade students with disabilities. Based on this pilot study, the MESH Survey is a reliable and valid measurement of 5th - 12th grade students' social-emotional MESH competencies and is appropriate for use with student subgroups (i.e. Students with disabilities and English language learners) (Transforming Education, 2016). The technical value of an instrument depends on the reliability and the validity of the measure (Kane, 2006; Transforming Education, 2016). Therefore, the MESH Survey was chosen as an appropriate tool in this study due to the evidence for validity and for the internal consistency reliability with subgroups of students (i.e. students with disabilities).

Data Collection Procedures

The protocol for administering the MESH Survey (Transforming Education, 2016) is explained in this section. For example, recommendations were to: (a) administer in the spring; (b) only administer in the fall after the first 30 days of the semester have passed; (c) use scripted written and verbal instructions with students; (d) allow 15-20 minutes or more to complete the survey; and (e) provide accommodations, for students with disabilities, such as reading the survey aloud and/or having a scribe fill out the survey based a student's verbal answers (Transforming Education, 2016).

The learning environment for taking the MESH Survey was the natural learning environment (fifth- and sixth-grade students' classrooms). Transforming Education (2016) recommended that while students are completing the survey, the teacher(s) and other classroom personnel should monitor students from the rear of the classroom. Another consideration given was to keep the conditions in the learning environment orderly and quiet while the students were taking the MESH Survey. Survey protocol recommended that students finishing early be asked to remain at their desk with a quiet activity until all students finished. Although, taking the test in the most familiar classroom setting was suggested, there were no specific directions about the difference in taking the test in a self-contained classroom versus an inclusive classroom. However, an emphasis was placed on the most familiar school setting for test taking, as familiarity of the setting from the student's perspective is key.

In this study, fifth- and sixth-grade students were not randomly assigned to the intervention or control conditions. Instead of random assignment methods, different students were tested from comparison groups already formed by naturally occurring

conditions. The two main comparison groups were the fifth- and sixth-grade students

who attend schools with or without SWPBIS (.i.e. Intervention and Control Schools). The

subgroups comparisons were formed by naturally occurring student-related

characteristics such as grade level and ability.

MESH Scoring Procedures

Scoring of the MESH Survey (Transforming Education, 2016) included a total

score derived from the values for each individual response ranging from one to five.

Thus, out of twenty-five total items on the MESH Survey, the highest possible score was

125, if all items were answered. For the purpose of this study, a total score on the MESH

Survey was representative of a student's social-emotional MESH competencies. It was

not recommended that a subset of items from the four scales be administered and reported

as a separate measure (Transforming Education, 2016). In this study, students' social-

emotional MESH competencies was defined as a MESH score from the growth mindset,

self-efficacy, self-management, and social awareness scales (Transforming Education,

2016).

Analysis of the Data

In the present study, the variables of interest were reviewed. The outcome

variable was a social-emotional MESH competencies score on the MESH Survey

(Transforming Education, 2016). Additionally, the two independent or grouping

variables were measured at two defined level. The differences in the social-emotional

MESH competencies between different fifth- and sixth-grade students who attend schools

with or without SWPBIS may be indicative of a possible interaction between social-

emotional MESH skills and schools with SWPBIS. In this study, the researcher used

preliminary efforts to improve the similarities between comparison groups from the potential districts prior to beginning the research. Potential extraneous variables for examining in the present study was students' gender and race.

The two main groups for comparison were between fifth- and sixth-grade students with and without disabilities who attend schools with SWPBIS (intervention group) and schools without SWPBIS (control group). Although the sample of students in this study was not randomly assigned to an intervention group, comparison groups served as an appropriate method for comparing the differences (effects) on an outcome variable using a between groups comparison methodology. The researcher conducted a descriptive analysis and a factorial analysis of variance (ANOVA) with a (2 x 2 x 2 design) to examine differences in the means between the different scores from the two main comparison groups and to test for the means in a greater population of interest. The researcher conducted a series of t-test analyses to examine differences between the means at each level of the main comparison groups. Additionally, a Chi-Square analysis examined scoring patterns for an association between the two main comparison groups.

CHAPTER IV – RESULTS

In chapter four, results from this causal-comparative study are explained. The main purpose of the present study was to investigate the overall differences in the social-emotional competencies between fifth-and sixth-grade students with disabilities (SLD, ADHD, ED, M-ID) and without disabilities who attend schools with or without SWPBIS. A second focus in this study is to examine the effects of gender and race on students' social-emotional MESH competencies. Student demographics and data results for the two main comparison groups and the sub-group comparisons are also explained along with the descriptive and inferential statistics. The results of the main analyses and the hypothesis testing are further reviewed. The conclusion section of this chapter also covers the overall findings and the additional summary information

Descriptive Statistics

The primary researcher conducted descriptive analyses to examine the data derived from the social-emotional scores on the MESH Survey. First, the researcher completed simple box plots in SPSS to inspect the data for outliers on the MESH Survey and for the four different social-emotional scales (growth mindset, self-efficacy, self-management, and social awareness) that comprise this instrument. Scores on the overall MESH Survey and across the factors of schools with or without SWPBIS, grade, and disability status were further checked.

The researcher found three outliers for demographic characteristics of gender and race in the initial analysis. The outliers noted were cases 13, 48, and 50 on the main groups and the subgroup comparisons. Additionally, Case 13 was identified on one level of Factor A (schools without SWPBIS) and on one level of Factor B (sixth-grade) and on

one level of Factor C (typically developing students). Case 13 was also an outlier on one level of the variable for gender (female) and on one of the three levels for the grouping variable for race (Caucasian). Furthermore, cases 48 and 50 were identified as outliers for the other level of the comparison groups in Factor A (schools with SWPBIS), Factor C (students without disabilities or typically developing students) and for one level of the variables for gender (female) and race (Caucasian). Out of the four scales in the MESH Survey, cases 13 and 48 were further noted as outliers from the self-efficacy and social awareness scales. After reviewing the data set in SPSS, case 13 was a raw score of 133 on the MESH Survey and was representative of a twelve year-old Caucasian female sixth-grader without a disability who attended a school with SWPBIS, made mostly A's, had one or less school suspensions, and was absent between 2-4 times within a school year. Case 48 was a raw score of 54 and was representative of a twelve year-old Caucasian male sixth-grader without a disability who attended a school with SWPBIS, made mostly C's, had one or less school suspensions, and was absent one to two times in a school year. The last outlier, case 50, was a raw score of 65 and was representative of a female sixth-grader without a disability, who attended a school with SWPBIS, made mostly B's, had one or less school suspensions, and was absent eight or more times in a school year.

After a decision was made to remove the three outliers from the data set, the remaining data (N=126) was visually inspected for the normal distribution. First, the social-emotional MESH scores were converted to z-scores using SPSS. With normally distributed data, approximately 5% of the scores should have values above 1.96 (2.00) and 1% of the scores should have values above 2.58. Additionally, no scores in a normal

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distribution should have values above 3.29 (Field, 2009). After the 126 raw scores were converted to z-scores, the percentage of scores with values above 1.96 or 2.00 was 4.7% and the percentage of scores above a value of 2.58 was near 1% at .8%. Additionally, there were no scores above 3.28 on this z-score distribution. Therefore, based on the results from the z-score calculations, there is evidence that the data was normally distributed.

Results from the MESH Survey administration verified that the minimum sample size of 30 participants at every level of the comparison groups as used with a causal-comparative design was not met (Fraenkel, Wallen & Hyun, 2015). In this study, the sample size for two comparison groups (i.e., Factor A, schools with or without SWPBIS; Factor C, students with and without disabilities) did not meet the standard of 30 participants. For the first comparison group, the treatment variable (Factor A), was schools with SWPBIS (level 1; n=106) and schools without SWPBIS (level 2; n=20). The sample size standard of 30 participants was met for the second comparison group (fifth- and sixth-grade) (Factor B). Specifically, fifth grade (level 1; n=71) and sixth grade (level 2; n=55). The third comparison group, ability variable (Factor C), students with disabilities (n=14; 11%) representing various disability categories [SLD (n=8; 57%), ADHD (n=3; 21%), ED (n=2; 14%), M-ID (n=1; 7%)] and students without disabilities students (n=112; 89%). Therefore, 126 fifth- and sixth- grade students with and without disabilities from schools with or without SWPBIS represented the sample in this study.

For quantifying normality, frequency statistics for the comparison groups were further determined (Table 8). The mean score for the model was 93.72 (SD= 14.21). Although, the sub-group comparison (Factor C) did not contain adequate sample sizes for

four of the five levels, the mean was calculated between each of the five subgroups SLD (M=81.88; SD=14.60), ADHD (M=79.33; SD=14.01), and ED (M=8; SD=8.49), and for typically developing students (M=93.38; SD=13.83). The sub-group for the one M-ID score could not be calculated as it only had one case for comparison. Additionally, the frequency statistics for gender and race as other factors for consideration were also calculated. The mean score with gender for males was 89.50 (SD=15.11) and the mean score for females was 93.81 (SD=13.31). For race, the mean score for each of the three categories was African American (M=91; SD=13.52), Caucasian (M=93.46; SD=14.56), and Other (M=87.86; SD=14.63). The four separate scales on the MESH Survey was analyzed and the mean and standard deviation scores are depicted in tables below.

Table 4

Factorial Analysis: Total MESH score (maximum score of 125)

Factor	M	SD
A: School Type		
Schools with SWPBIS	92.13	11.17
Schools without SWPBIS	91.05	14.75
B: Grade		
Fifth-grade	93.72	13.90
Sixth-grade	89.69	14.42
C: Ability		
Disability	80.64	12.40
No Disability	93.38	13.83

Table 5

Factorial Analysis-Subscale: Growth Mindset (maximum score of 20)

Factor	M	SD
A: Schools		
Schools with SWPBIS	15.16	3.23
Schools without SWPBIS	15.30	3.33
B: Grade		
Fifth-grade	15.69	3.21
Sixth-grade	14.53	3.32
C: Ability		
Disability	14.29	3.31
No Disability	15.29	3.12

Table 6

Factorial Analysis-Subscale: Self-Efficacy (maximum score of 20)

Factor	M	SD
A: School Type		
Schools with SWPBIS	14.77	3.83
Schools without SWPBIS	13.00	3.72
B: Grade		
Fifth-grade	14.75	3.90
Sixth-grade	14.16	3.81
C: Ability		
Disability	11.79	4.12
No Disability	14.83	3.70

Table 7

Factorial Analysis-Subscale: Self-Management (maximum score of 45)

Factor	M	SD
A: School Type		
Schools with SWPBIS	33.53	6.84
Schools without SWPBIS	33.40	6.13
B: Grade		
Fifth-grade	33.97	6.91
Sixth-grade	32.91	6.46
C: Ability		
Disability	29.21	7.03
No Disability	34.04	6.51

Table 8

Factorial Analysis-Subscale: Social Awareness (maximum score of 40)

Factor	M	SD
A: School Type		
Schools with SWPBIS	33.53	6.84
Schools without SWPBIS	33.40	6.13
B: Grade		
Fifth-grade	33.97	6.91
Sixth-grade	32.91	6.50
C: Ability		
Disability	29.21	7.01
No Disability	34.04	6.51

Assumption Testing

The first assumption testing, required by all hypothesis testing, involved investigating scores for a normally distribution (Field, 2009). Therefore, if the data is not normally distributed then the hypothesis testing will not be valid. In the present study, the unequal sample sizes and the unequal variance between groups influences any further analyses. However, to document the number of violated assumptions in this study, a determination of normally distributed data occurred. To test for normally distributed data across the two main comparison groups and the subgroup comparisons, p-p plots (probability-probability plots; see Figure 2) and histograms (see Figure 3) with a normal distribution curve were used to inspect the data for normality. The values of skewness and kurtosis of the model were determined and revealed a normal distribution for the scores from the social-emotional MESH survey. Values for the skewness and the kurtosis of -.285 and -.113 indicated a normal distribution as both values are close to zero. The skewness value further represented a distribution where the majority of the scores are clustered to the right of the distribution. A negative value for the kurtosis also indicated a flatter curve and light-tailed distribution.
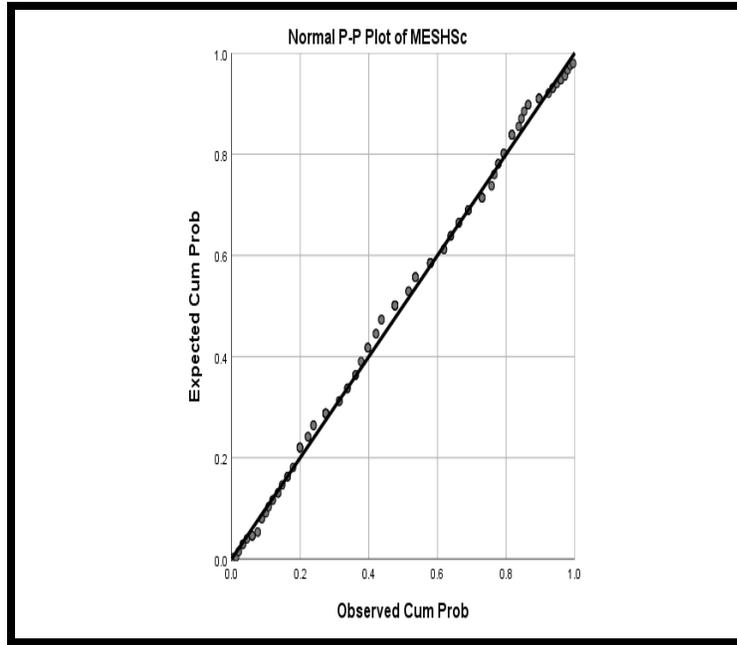
Figure 2. Normal Probability-Probability Plots (P-P Plots)

Note. This figure shows the p-p plots for the MESH scores are normal
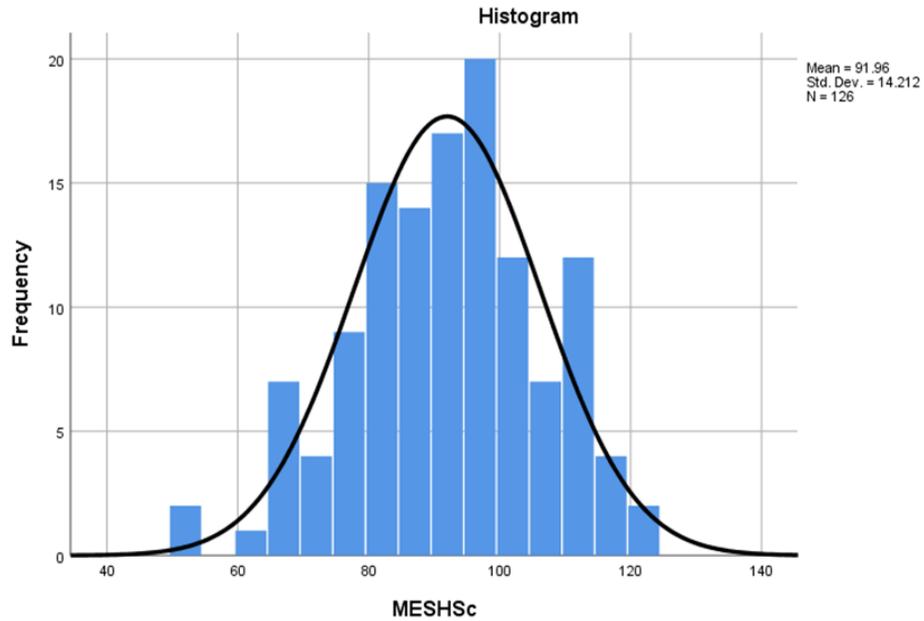
Figure 3. Histogram

Note. This figure shows the distribution of MESH scores is a normal distribution.

Going beyond visual data inspections, the Kolmogorov-Smirnov (K-S test) that examines if a distribution deviates or is different from a model of a normal distribution. Results of the K-S for the social-emotional MESH scores across the first level of Factor A (schools with SWPBIS) was, $D(106) = .053$, $p = .20$ and the results for the scores on the second level of Factor A (schools without SWPBIS), was $D(20) = .138$ $p = .20$ that suggested normality. For Factor B, the test statistic for MESH scores for level 1 (Fifth-Grade) was, $D(71) = .077$, $p = .20$ and results for scores on level 2 (Sixth-Grade) was, $D(55) = .109$, $p = .152$ denoting a normal distribution as the p values are all $>$ than .05.

For the next assumption in parametric data, the variance between groups should be equal within the data or the spread of the scores and thus, the variance should be the same (Field, 2009). The assumption of Homogeneity of Variance (HoV) was examined using the Levene's test. Calculations in this test calculate to see if the variance between groups of data are truly equal (Field, 2009). The results of the Levene's test for Factor A was, $F(1, 124) = 1.45$, $p = .23$ that indicated that variance between groups (schools with or without SWPBIS) was not significantly different. For Factor B, the results of the Levene's test was, $F(1, 124) = .037$, $p = .85$ indicated that the differences in the variance between the comparison group (Fifth- and Sixth-Grades) was not significant.

The last two assumptions for inferential tests are the assumption that the data set is taken from the raw scores that must be measured on at least an interval scale and that the set of scores derived from the subjects in the sample also came from different groups of people. Both of these assumptions were met and verified when examining the outcome variable and by the nature of a 3-Way Factorial ANOVA with a 2x2x2 design.

Three Way Factorial Analysis of Variance (ANOVA)

This section presents the results of the hypothesis testing. A three-way ANOVA was conducted on a sample of 126 participants to examine the effect of SWPIS, grade, and disability on social-emotional competencies. There was a significant interaction effect for school type and grade on social-emotional MESH competencies F(2, 126) = 5.58, p = .02. The results of the Factorial ANOVA analysis appears in Table 9.

Table 9

Three-Way Factorial ANOVA: Social-Emotional (MESH) Competencies

Factor	SS	Df	MS	F	P
A: School Type		1	3.42	.021	.889
B: Grade		1	54.91	3.32	.071
C: Disability		1	67.00	4.05	.046*
A: School Type x B: Grade		1	92.33	5.58	.020*
A: School Type x C: Disability		1	70.78	.428	.514
B: Grade x C: Disability		1	52.84	3.19	.076
A: School Type x B: Grade x C: Disability	NR	1	20.83	.126	.723

Note: NR=defined as not reportable due to small sample size; * = Statistically Significant

For the Three-Way Factorial ANOVA, there was a non-significant three-way main effect for school type, grade, and disability on social-emotional MESH skills, F(2, 126) = .126, p=.723. There was also a non-significant interaction effect for school type and disability, F(1, 126) =.428 , p = .514. Additionally, after conducting a series of t-test analysis for school type and grade, there were non-significant simple effects for school

type on grade, F(1, 125)= .097, p = .756, and for grade on school type, F(1, 125) = .097, p = .756. A Chi-Square analysis was conducted to examine the scoring patterns across the two different comparison groups where an interaction effect occurred. However, no association was found between school type and grade, (X2/2) = 2.58, p = .001. Therefore, with the p value less than .05, the null hypothesis was rejected, as interaction effects existed between school type and grade.
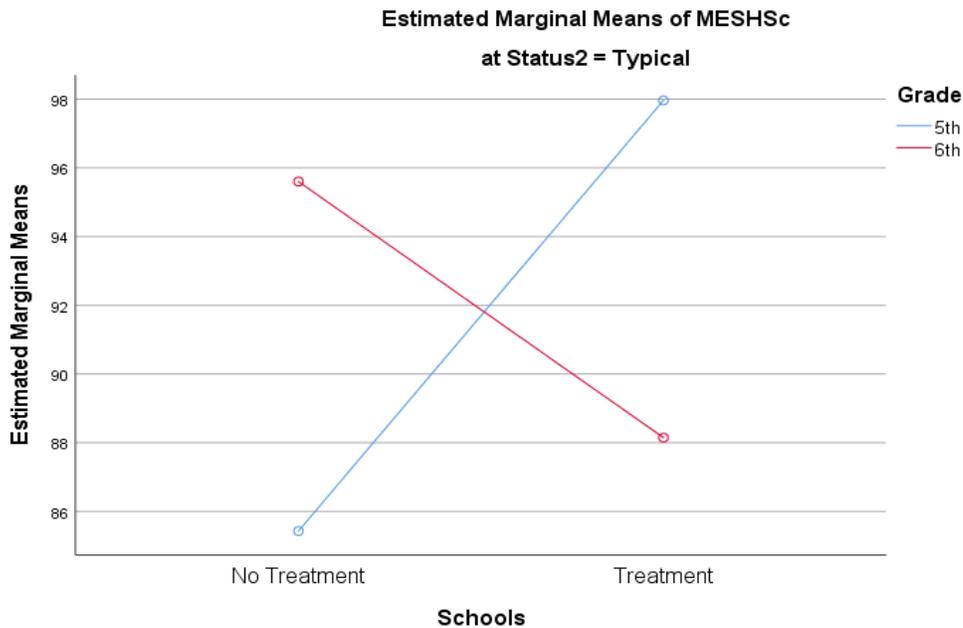
Figure 4. Estimated Marginal Means of MESH

Note. This figure shows the visual interaction effect between grade levels

Two additional three-way factorial analysis completed. First, a 2 x 2 x 2 analysis examined the interaction effect for grade, ability, and gender. This yielded a statistically significant interaction, F(2, 126) = 7.37, p= . 008. Second, a 2x3x2 analysis examined the interaction effect for grade, race, and gender. This yielded a statistically significant interaction, F(2, 126) = 4.98, p = .008.

CHAPTER V – DISCUSSION

Chapter five provides a summary of the relevant research using this study's conceptual framework (Figure 1; previously described in chapter 2). Additionally, the statistical results and the hypothesis testing are explained. The relevance and significance of this study as applicable to educational practices is further included in this chapter along with present limitations and future recommendation. The research conclusions are also contained in chapter five.

The Social Cognitive Theory

In this study, the researcher examined differences in the MESH competencies (behavioral factors) of fifth- and sixth-grade students (environmental factors) with and without disabilities (personal factors) who attended schools with or without SWPBIS (behavior intervention framework). The impact of environmental and personal factors on behavioral factors and the possible interaction effects between factors within a social context was further examined in this study (see previously discussed conceptual framework in Figure 1). The effects of gender and race as other possible extraneous personal factors was also explored. As the theoretical foundation for this research, the Social Cognitive Theory (SCT) by Bandura (1986) was used to explain and interpret the findings and the implications in this study. Learning was explained by the SCT, as a continuous interactive relationship between many different behavioral, environmental, and personal factors (Bandura, 1986). Additionally, the learning of new behaviors was associated with the learner's observations, emotional experiences, and the social models specific to the consequences of the behavior within a given social context. In other

words, the observing, feeling, modeling, and reinforcing of behavioral patterns for the learner effects all subsequent behaviors and future learning (Pajares, 2002)

Environmental Factors

Two environmental factors were considered in this study. First, the researcher considered schools with or without SWPBIS (behavior intervention framework) to be an environmental factor. Second, the researcher considered grade level as an environmental factor since most fifth-grade student participants attended elementary schools and most sixth-grade student participants attended a middle school.

Schools with or without SWPBIS. There was a statistically significant interaction effect between schools with or without SWPBIS and grade on social-emotional MESH competencies, $F(2, 126) = 5.58$, $p = .02$. Additionally, the mean score (92.13; SD=14.75) for the students who attended schools with SWPBIS was higher than the mean score (91.05; SD=11.66) for the students who attended schools without SWPBIS. The comparison of mean scores on the four separate MESH subscales also revealed that mean scores were higher on the self-efficacy, self-management, and the social awareness subscales for the students who attended schools with SWPBIS than for students who attended schools without SWPBIS. However, this was not the case for the Growth Mindset subscale, as the students who attended schools with SWPBIS had a lower mean score (15.16; SD=3.23) than the mean score (15.30; SD=3.33) of the students who attended schools without SWPBIS. However, reverse coding or the construct of the Growth Mindset subscale may explain the inconsistency of this finding.

The results from this study support the SCT belief that social-emotional and behavioral strategies, such as the evidence-based practices used within the SWPBIS

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framework for tier one intervention, an environmental factor; may improve behavior, emotion regulation, cognitive, and motivational processes (Bohanon et al., 2006; Duda et al., 2004; Horner et al., 2005; Horner et al., 2015). Additionally, there may be significant interaction effects for the environmental factors of SWPBIS and grade on social-emotional competencies. Although inferences should not be drawn from mean scores alone, the mean score comparisons for the students who attend schools with or without SWPBIS in this study further suggest SWPBIS as an effective intervention on social-emotional competencies. These findings expand previous research stating that students attending schools with SWPBIS have improved behaviors and social-emotional skills (Bradshaw et al., 2012).

Grade level. In this study, there may be significant interaction effects for the environmental factors of SWPBIS and grade on social-emotional competencies. Additionally, there were statistically significant differences in mean scores on social-emotional competencies scores between the fifth- and sixth-grade students. The mean score (93.72; SD=13.90) was higher for fifth-grade students than the mean score (89.69; SD=14.42) for sixth-grade students. On the four MESH scales, the fifth-grade students also consistently had higher mean scores compared to the mean scores for the sixth-grade students.

The results in this study indicate that there may be significant interaction effects for the environmental factors of grade and SWPBIS on social-emotional competencies. Additionally, when cautiously interpreted, mean score comparisons may further provide plausible evidence for differences in MESH scores between the samples of fifth- and sixth-grade students. As explained in chapter three, the fifth- and sixth-grade students

attended schools in various school settings (i.e., elementary, middle, and alternative) in this study. Therefore, the differences in mean scores could be indicative of the different school settings as possible extraneous environmental factors. However, the observed differences in the mean scores between the fifth- and sixth-grade students on the MESH survey and on the four MESH subscales may also be the result of true developmental differences between fifth- and sixth-grade students. Developmental changes as were hypothesized in the SCT (Bandura, 1986) are the result of many different behavioral, environmental, and personal factors within a social context.

Personal Factors

Personal factors of disability, gender, and race were also considered in this study. The researcher first considered disability (ability) as the primary personal factor of interest in this study. Second, the researcher examined gender and race as potential extraneous personal factors that may possibly impact social-emotional skills.

Students with or without disabilities. In the present research, the results of a second Three-Way Factorial ANOVA with a (2 x 2 x 2) design for Grade, Ability, and Gender was conducted. The results of this analysis indicated a significant interaction effect between Disability and Grade on social-emotional (MESH) competencies, $F(2, 126) = 7.37$, $p = .008$, $p < .05$. An additional observation was made on mean score comparisons. The mean scores for the sample of students with or without disabilities consistently indicated that students with disabilities had lower mean scores than students without disabilities. For the MESH survey, students with disabilities had a lower mean score of 80.64 (SD=12.90) than the mean score 93.38 (SD=13.83) for the students without disabilities. Furthermore, mean score comparisons across the four MESH scales,

were consistently higher for students without disabilities than for the students with disabilities. The largest mean score differences were on the self-management, social awareness, and self-efficacy scales. The Growth Mindset scale had the smallest mean score difference compared to the other three MESH scales.

Results of the second analysis indicate a significant interaction effect between Disability and Grade although due to the lower sample size for students with disabilities, there cannot be any conclusive interpretations on these findings. Regardless of the lower sample size for the students with disabilities, grade as an environmental factor (as in the previous analysis) may have significant effects on social-emotional competencies with or without the behavioral intervention framework of SWPBIS. Additionally, lower mean score comparisons between students with and without disabilities reported in this study appear to support past research on social-emotional deficits as consistent characteristics for many students with disabilities (Elias et al., 2016; Gresham et al., 2001).

Gender and race. In this study, another Three-Way Factorial ANOVA with a (2 x 3 x 2) design was conducted for the variables of Grade, Race, and Gender. Results from the third analysis revealed a significant interaction effect between Race and Grade on social-emotional competencies, $F(2, 126) = 4.98$, $p = . 008$, $p < .05$. An additional observation was the comparison of mean scores on the MESH survey for the potential personal factors of gender and race. For gender, males had a mean score (89.50, SD=15.11) and females had a mean score (93.81, SD=13.30). The mean score comparisons for the race categories on the MESH survey was (91, SD=13.52) for the other category, (93.46, SD=14.56) for the Caucasian category, and (87.86, SD=14.62) for the African American category. Regarding gender and the four MESH scales, females

scored higher than males on growth mindset, self-management, and social awareness scales but males scored higher than females on the self-efficacy scale. For race, the mean scores on the growth mindset and self-efficacy scales were highest for the African American categories for race. Regarding the self-management and social awareness scales, the mean scores were highest for the Caucasian and then African American categories for race.

Results of the third analysis indicate a significant interaction effect between Race and Grade. Thus, the factor of grade as an environmental factor (as in the two other analysis) may have possible significant effects on social-emotional competencies with or without the behavioral intervention framework of SWPBIS. Additionally, the mean score comparisons between gender and across the three categories of race suggest that there are significant differences in the social-emotional competencies between grade as a second environmental factor and between the personal factors of race and gender. However, mean score comparisons should not be used alone to interpret findings.

Limitations

One limitation in this research is that the data was derived from students' self-reported measures. As occurs with self-reported measures, reference bias may affect how respondents answer survey questions. A second limitation is in the comparability for the seven schools from the five participating districts. There were differences between the intervention and control schools in this study. Inconsistencies also existed between the testing conditions and the different people who administered the MESH survey. Another limitation is the lower sample size for the fifth- and sixth-grade students who attended schools without SWPBIS and for the fifth- and sixth-grade students with documented

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disabilities. Additionally, the length of the survey after demographic questions were added and the time necessary to read the scripted test instructions are limitations. In spite of these limitations, the present study extends the previous research and can be used to improve future research and research design.

Implications for Practice

Results from this research indicate that there were significant overall differences in the social-emotional competencies between fifth- or sixth-grade students with and without disabilities who attend schools with or without SWPBIS. These findings indicate that SWPBIS as an environmental factor may be an effective school-based behavior intervention framework for promoting the social-emotional competencies of fifth- and sixth-grade students with and without disabilities. Therefore, as explained in the SCT (Bandura, 1986), environmental factors may have significant effects on the development of behavioral and social-emotional competencies of children. Therefore, educators and school staff should continue to implement SWPBIS with fidelity to promote the social-emotional and behavioral competencies that can lead to higher academic achievement and better life-course outcomes for students with and without disabilities. Additionally, administrators and policy-makers should determine effects of other environmental factors (i.e., grade) that can increase or decrease social-emotional competencies in all students.

Another implication in this study is that the behavioral intervention (i.e. SWPBIS) as an environmental factor may have even more significant effects at the fifth-grade level in comparison to the sixth-grade level. Behavioral and social-emotional competencies in past research correlated with the fidelity implementation of SWPBIS for fourth- through sixth-grade students with and without disabilities and in different school settings. As

documented in past studies, with the fidelity implementation of SWPBIS, social-emotional gains are more significant in younger students (Bradshaw et al., 2012). Therefore, educators and school staff working with older children possibly attending middle schools or alternative schools should investigate how their implementation of SWPBIS compares to elementary schools implementing SWPBIS.

Furthermore, grade as an environmental factor and disability as a personal factor may have significant interaction effects on social-emotional competencies. Grade as an environmental factor and race as a personal factor may also have significant interaction effects on social-emotional competencies. Therefore, in the present study, grade as an environmental factor may have been a mediator for the personal factors of disability and race. Therefore, educators and school staff already implementing SWPBIS as a positive and preventative strategy should also identify grade-level factors within a social context to better meet the academic, behavioral, and social-emotional needs of at-risk students.

Recommendations for Future Research

Based on results from the Three-Way Factorial ANOVA as the main analysis in the present study, the primary recommendation is a continued need for more research on SWPBIS and on the school-based interventions that can potentially increase the social-emotional competencies of all students. Although no inferences can be drawn on mean scores alone, the observed means scores on the MESH survey and the MESH scales between the different comparison groups in this study should serve as a future interest for other studies. An additional area for possible inquiry is for future studies to look at the scoring patterns for each question on all four of the MESH scales to reveal further insight on where some students with and without disabilities across different gender and race are

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in the most need of social-emotional intervention. Future research design should also include larger sample sizes for students with disabilities and for students who attend schools without SWPBIS. Final considerations for future studies include exploring at what ages, grade levels, and in what school settings have the most significant impact on SWPBIS implementation fidelity.

Summary

In retrospect, the present study design and the SCT, as the foundational basis for this study, were appropriate in the context of the academic, behavioral, and social-emotional needs of students with and without disabilities in a southern state. In this research, overall effects of SWPBIS, grade, and disability, on social-emotional (MESH) competencies were examined for possible inferences on observed differences. Social-emotional (MESH) competencies as the behavioral factor in this study were measured to document the observed differences between comparison groups for the environmental factors of SWPBIS and grade and the personal factors of disability, gender, and race.

This results of this research were that significant differences exists in the social-emotional (MESH) competencies between fifth- and sixth-grade students with and without disabilities who attend schools with or without SWPBIS. This study extends past research measuring social-emotional (MESH) competencies and can be used to design future studies investigating other grade levels and influential environmental and personal factors. The decision to reject the null hypothesis was based on the findings from the Three-way Factorial ANOVA analysis with a (2 x 2 x 2) design.

APPENDIX A

MESH SURVEY

Part I: Demographic and School-Related Questions
Section 1: Demographic Questions

Student Directions: The *Student (MESH) Survey* shall only be used as a part of this research and your name/identity will not be used or connected to your grades in any way. Results of this survey will help the researcher learn more about school-based behavioral   interventions, so please respond honestly. There are no wrong answers, and no one can identify your responses, your student number, and/or your classroom, school, or district.

On the following survey questions, please circle the answer that best describes you, your behavior, experiences, or attitudes. On some questions, you will be asked about specific times (such as the past 30 days). Thank you for taking this survey!

1. Mark which gender you are: Boy_____   Girl_____

2. Mark your Race: American Indian or Alaska Native_____

Asian_____   Black_____   Hawaiian_____   Hispanic/Latino_____

Multiracial_____   White_____   Other_____

3. Mark your Age: Younger than ten years old _____

Ten years old _____   11 years old _____   12 years old_____

Older than 12 years old _____

4. Mark your Grade: Fifth-Grade_____   Sixth-Grade_____

Part I: Demographic and School-Related Questions
Section 2: School-Related Questions

5. Mark the number of years at your school: One Year _____

Two Years _____   Three years _____   Four Years _____

More than five Years _____

6. Mark the number of times in this school year (since last August) that your

teacher has sent you to the principal's office: One time _____

Two times _____   Three times _____   Four times _____

More than four times _____

7. Mark the number of times this school year (since last August) that you have

been suspended from school: One time _____   Two times _____

Three times _____   Four times _____   More than four times _____

8. Mark the number of times this school year that you have been absent from

school: One to two times _____   Two to four times _____

Four to six times _____   Six to eight times _____

More than eight times _____

9. I make mostly A's in all my classes

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

10. I make mostly B's in all my classes

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

11. I make mostly C's in all my classes

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

12. I make mostly D's in all my classes

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

13. I make mostly below D's in all my classes

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

Part II: Social-Emotional (MESH) Competencies Questions
Section 1: Growth Mindset

Directions: In this section, please think about your learning in general. Please circle how true each of the following statements is for you.

14. My intelligence is something that I can't change very much.

Not At All True

A Little True

Somewhat True

Mostly True

Completely True

15. Challenging myself won't make me any smarter.

Not At All True

A Little True

Somewhat True

Mostly True

Completely True

16. There are some things I am not capable of learning.

Not At All True

A Little True

Somewhat True

Mostly True

Completely True

17. If I am not naturally smart in a subject, I will never do it well.

Not At All True

A Little True

Somewhat True

Mostly True

Completely True

Part II: Social-Emotional (MESH) Competencies Questions
Section 2: Self-Efficacy

Directions: How confident are you about the following at school?

18. I can earn an A in my classes.

Not At All Confident

A Little Confident

Somewhat Confident

Mostly Confident

Completely Confident

19. I can do well on all my tests, even when they're difficult.

Not At All Confident

A Little Confident

Somewhat Confident

Mostly Confident

Completely Confident

20. I can master the hardest topics in my classes.

Not At All Confident

A Little Confident

Somewhat Confident

Mostly Confident

Completely Confident

21. I can meet all the learning goals my teachers set.

Not At All Confident

A Little Confident

Somewhat Confident

Mostly Confident

Completely Confident

Part II: Social-Emotional (MESH) Competencies Questions
Section 3: Self-Management

Directions: In this section and in order to learn more about your behavior, experiences, and attitudes related to school, please circle how often you did the following during the past 30 days. During the past 30 days…

22. I came to class prepared.

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

23. I remembered and followed direction.

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

24. I got my work done right away instead of waiting until the last minute.

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

25. I paid attention, even when there were distractions.

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

26. I worked independently with focus.

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

27. I stayed calm even when others bothered or criticized me.

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

28. I allowed others to speak with (out) interruption.

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

29. I was polite to adults and peers.

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

30. I kept my temper in check.

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

Part II: Social-Emotional (MESH) Competencies Questions
Section 4: Social Awareness

Directions: In this section, please help us better understand your thoughts and actions when you are with other people. Please circle how often you did the following in the past 30 days. During the past 30 days…

31. How carefully did you listen to other people's point of view?

Not Carefully At All

Slightly Carefully

Somewhat Carefully

Quite Carefully

Extremely Carefully

32. How much did you care about other people's feelings?

Did Not Care At All

Cared A Little Bit

Cared Somewhat

Cared Quite A Bit

Cared a Tremendous Amount

33. How often did you compliment other's accomplishments?

Almost Never

Once In A While

Sometimes

Often

Almost All the Time

34. How well did you get along with students who are different than you?

Did Not Get Along At All

Got Along A Little Bit

Got Along Somewhat

Got Along Pretty Well

Got Along Extremely Well

35. How clearly were you able to describe your feelings?

Not At All Clearly

Slightly Clearly

Somewhat Clearly

Quite Clearly

Extremely Clearly

36. When others disagreed with you, how respectful were you of their views?

Not At All Respectful

Slightly Respectful

Somewhat Respectful

Quite Respectful

Extremely Respectful

37. What extent were you able to stand up for yourself without putting others down?

Not At All

A Little Bit

Somewhat

Quite a Bit

A Tremendous Amount

38. To what extent were you able to disagree with others without starting an argument?

Not At All

A Little Bit

Somewhat

Quite a Bit

A Tremendous Amount

Source: Adapted from Transforming Education (2016)

APPENDIX B

SAMPLE LETTER TO SUPERINTENDENTS

To: District Superintendent
Date: February 1, 2019
Re: Formal request for research participation in research

Dear Superintendent,
      I am a doctoral student at the University of Southern Mississippi (USM) conducting research on the impact of disability status and Positive Behavioral Interventions and Supports (PBIS) on fifth-and sixth-grade students' social-emotional competencies. <u>As a district rated by *REACH MS* to have Model Site Status for Tier I PBIS, I am formally requesting consideration for your district's participation.</u>

      The University of Southern Mississippi's Institutional Review Board (IRB) has approved this research and the documented approval from IRB along with a *Participating Schools Packet* (PSP) will be mailed (or emailed if you prefer) to your district within two days of receiving confirmation that your district agrees to participation. The PSP will include the standard University letter and the official participation form already signed by me and to be signed by the District's Superintendent. The required informed consent and assent forms and a Memorandum of Understanding (MOU) shall also be included in the PSP along with the student survey and survey instructions. <u>Additionally, as a way to show my appreciation to the schools which agree to participate in my research, I am offering pizza delivery to all the students and teachers from the fifth-and sixth-grade classrooms with a 20% or more survey participation rate.</u>

      Please feel free to contact me, the Principal Investigator (PI) with any questions and/or concerns through email at (edith.hayles@usm.edu) or phone at 662-801-8325. If you prefer that I call your district to discuss this request or schedule a face-to-face meeting with you or with another district contact person please let me know. Thank you so much for your consideration and/or your district's participation and assistance with this research.

Sincerely,

Edith M. Hayles
(Edith M. Hayles, Principal Investigator)

APPENDIX C

SAMPLE LETTER TO SUPERINTENDENTS

To: District Superintendent
Date: February 1, 2019
Re: Formal request for research participation in research

Dear Superintendent,

I am a doctoral student at the University of Southern Mississippi (USM) conducting research on the impact of disability status and Positive Behavioral Interventions and Supports (PBIS) on fifth-and sixth-grade students' social-emotional competencies. As a school district in Mississippi, I am formally requesting consideration for your district's participation.

The University of Southern Mississippi's Institutional Review Board (IRB) has approved this research and the documented approval from IRB along with a *Participating Schools Packet* (PSP) will be mailed (or emailed if you prefer) to your district within two days of receiving confirmation that your district agrees to participation. The PSP will include the standard University letter and the official participation form already signed by me and to be signed by the District's Superintendent. The required informed consent and assent forms and a Memorandum of Understanding (MOU) shall also be included in the PSP along with the student survey and survey instructions. Additionally, as a way to show my appreciation to the schools which agree to participate in my research, I am offering a pizza party to all the students and teachers from the fifth-and sixth-grade classrooms with a 20% or more survey participation rate.

Please feel free to contact me, the Principal Investigator (PI) with any questions and/or concerns through email at (edith.hayles@usm.edu) or phone at 662-801-8325. If you prefer that I call your district to discuss this request or schedule a face-to-face meeting with you or with another district contact person please let me know. Thank you so much for your consideration and/or your district's participation and assistance with this research.

Sincerely,

Edith M. Hayles

(Edith M. Hayles, Principal Investigator)

SAMPLE LETTER TO PRINCIPALS

To: School Principal

Date: February 4, 2019

Re: Formal request for research participation in research

Dear School Principal,

I am a doctoral student at the University of Southern Mississippi (USM) conducting research on the impact of disability status and Positive Behavioral Interventions and Supports (PBIS) on fifth-and sixth-grade students' social-emotional competencies. As a district rated by *REACH MS* to have Model Site Status for Tier I PBIS, I am formally requesting consideration for your school's participation.

The University of Southern Mississippi's Institutional Review Board (IRB) has approved this research and the documented approval from IRB along with a *Participating Schools Packet* (PSP) is being emailed (and mailed too if you request) to your school. The PSP includes the standard University letter and the required informed consent and assent forms. A copy of the Memorandum of Understanding (MOU) is also included in the PSP along with the student survey and survey instructions. Additionally, as a way to show my appreciation to the schools which agree to participate in my research, I am offering pizza delivery to all the students and teachers from the fifth-and sixth-grade classrooms with a 20% or more survey participation rate.

Please feel free to contact me, the Principal Investigator (PI) with any questions and/or concerns through email at (edith.hayles@usm.edu) or phone at 662-801-8325. If you prefer that I call your school to discuss this request and/or schedule a face-to-face meeting with you or with another school contact person please let me know. Thank you so much for your consideration and/or your district's participation and assistance with this research.

Sincerely,

Edith M. Hayles

(Edith M. Hayles, Principal Investigator)

SAMPLE LETTER TO PRINCIPALS

To: School Principal

Date: February 1, 2019

Re: Formal request for research participation in research

Dear School Principal,

      I am a doctoral student at the University of Southern Mississippi (USM) conducting research on the impact of disability status and Positive Behavioral Interventions and Supports (PBIS) on fifth-and sixth-grade students' social-emotional competencies. As a school district in Mississippi, I am formally requesting consideration for your district's participation.

      The University of Southern Mississippi's Institutional Review Board (IRB) has approved this research and the documented approval from IRB along with a *Participating Schools Packet* (PSP) will be mailed (or emailed if you prefer) to your district within two days of receiving confirmation that your district agrees to participation. The PSP will include the standard University letter and the official participation form already signed by Consent forms and a Memorandum of Understanding (MOU) shall also be included in the PSP along with the student survey and survey instructions. <u>Additionally, as a way to show my appreciation to the schools which agree to participate in my research, I am offering a pizza party to all the students and teachers from the fifth-and sixth-grade classrooms with a 20% or more survey participation rate.</u>

      Please feel free to contact me, the Principal Investigator (PI) with any questions and/or concerns through email at (edith.hayles@usm.edu) or phone at 662-801-8325. If you prefer that I call your district to discuss this request or schedule a face-to-face meeting with you or with another district contact person please let me know. Thank you so much for your consideration and/or your district's participation and assistance with this research.

Sincerely,

Edith M. Hayles

(Edith M. Hayles, Principal Investigator)

APPENDIX F

IRB APPROVAL

ORI | Office *of* **Research Integrity**

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NOTICE OF COMMITTEE ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately, but not later than 10 days following the event. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: IRB 18052102

PROJECT TITLE: The impact of disability status and School Wide Positive Behavioral Interventions and Supports (SWPBIS) on students� social-emotional competencies

RESEARCHER(S): Edith Hayles

SCHOOL/PROGRAM: School of Education

IRB COMMITTEE ACTION: Modification - Approved - Expedited
PERIOD OF APPROVAL: December 11, 2018 to December 11, 2019

Edward L. Goshorn, Ph.D.
Institutional Review Board Chairperson

INFORMED CONSENT LETTER

February 1, 2019

Dear Parent or Legal Guardian,

As the principal investigator (main researcher) in this study, I am contacting you because your child's school (insert school name) is participating in my research on disability status, School Wide Positive Behavioral Interventions and Supports (SWPBIS), and social-emotional competencies.

The purpose of this research study is to add further knowledge to the field of Special Education regarding the development of fifth- and sixth-grade students' social-emotional competencies.
Additionally, the main goal of this study is to investigate the impact of disability status and School Wide Positive Behavioral Interventions and Supports (SWPBIS) on the social-emotional competencies between fifth-and sixth-grade students with Specific Learning Disabilities (SLD), Attention Deficit Disorder with Hyperactivity (ADHD), Mild Intellectual Disabilities (M-ID), Emotional Disturbances (ED), and typically developing students.

To determine the impact of disability status and SWPBIS. I will be gathering data from participating fifth-and sixth-grade students' anonymous responses on a survey that measures students' social-emotional competencies (TransformEd, 2016). No identifying information is necessary for the purposes of this research study and the time for assenting students to complete the survey is on average, 15-20 minutes although more time is allowable. Additionally, as a way to show my appreciation to the schools which agree to participate in my research, I am offering a pizza party to all the students and teachers from the fifth-and sixth-grade classrooms with a 20% or more survey participation rate.

For a more detailed explanation of my study, please review the University's official consent and assent forms attached with this letter. Also, if you have any questions and/or concerns, please feel free to call my cell number (662-801-8325) or email me at edith.hayles@usm.edu.

Participation in this study is voluntary and even if you give consent for your child to participate, you can also withdraw consent at any time during this research.

Thank you for your time and consideration,

Edith M. Hayles
Edith M. Hayles (Principal Investigator)

APPENDIX H

SURVEY INSRUCTIONS AND SCRIPT

Instruction for *Student (MESH) Survey* Administration

Teacher Directions: The *Student (MESH) Survey* is designed to be completed in

one timeframe but if best for a teacher or a particular student, it can be completed

on several occasions. If a student has a question, please feel free to define a word

and/or explain any of the written directions. It is also appropriate to simply ask

the student to *answer the best way you can and/or you can leave the question*

blank. For the students with special needs: Please offer any appropriate

accommodations consistent with their IEP.

Student (MESH) Survey Script:

Today, you will be taking a survey about your behavior at school and you own

opinions or perceptions about school. For some questions on today's survey,

please think back to at least the last 30 days. For other questions, just carefully

read the instructions. There are no wrong answers so please respond honestly.

Each survey has a number instead of your name. No one will know your name or

how you have answered these questions and your responses will not have an

impact on your grades at all. Thank you for taking this survey!

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