Effectiveness of Social and Emotional Learning Practices for Middle School Students with ASD as Rated by Educators: A Delphi Study

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EFFECTIVENESS OF SOCIAL AND EMOTIONAL LEARNING PRACTICES FOR MIDDLE SCHOOL STUDENTS WITH ASD AS RATED BY EDUCATORS: A DELPHI STUDY

by

Linda Payne

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Education

Major: Instruction and Curriculum Leadership

The University of Memphis

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Dedication

I would like to dedicate this dissertation with many thanks to my family for their continued, unconditional love and support. I could not have completed my doctoral studies, sanity intact, without them. I also extend my sincerest gratitude to my dissertation chairperson, Dr. Craig Shepherd, as well as to the other members of my committee, Dr. Luann Lee Ley Davis, Dr. Eli Jones, and Dr. Andrew Tawfik, for their guidance and support throughout my dissertation journey. Finally, I thank the participating school for their collaboration and to all those involved in the education of students with ASD and other disabilities, and especially to those exceptional students who face daily challenges, such as social and emotional deficits, every day.
Abstract

This manuscript proposes the use of a Delphi study to gain knowledge from educators of neurodivergent students attending a private, special needs grade school in the southeastern United States that specializes in meeting the Social and Emotional Learning (SEL) needs of neurodivergent students, primarily with diagnoses of Level 1 Autism Spectrum Disorder (ASD). The goal of this proposed Delphi study is to gain insight into the perspectives of educators on the challenges and strategies for helping middle school students with ASD learn social and emotional skills. Data will be collected through several rounds of surveys using the Delphi methodology. Results of this study will serve to address a gap in the literature related to educators’ perspectives on the effectiveness of SEL techniques for middle school students with ASD. Results also may inform the design and development of future research studies to determine best practices teachers can employ to promote positive social and emotional learning outcomes for their students with ASD.

Keywords: Autism Spectrum Disorder (ASD), Social and Emotional Learning (SEL), social and emotional deficits, Delphi study
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List of Abbreviations

American Psychiatric Association (APA)

Autism Spectrum Disorder (ASD)

Centers for Disease Control and Prevention (CDC)

Collaborative for Academic, Emotional, and Social Learning (CASEL)

Diagnostic and Statistical Manual of Mental Disorders (DSM)

Emotional Regulation (ER)

Social Emotional Learning (SEL)

Social and Emotional Reciprocity (SER)

World Health Organization (WHO)
CHAPTER ONE: INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder, and individuals with ASD experience persistent, lifelong effects that include social communication and social interaction difficulties, which are present in those with or without intellectual disabilities (American Psychiatric Association, 2013, 2022; Bellini, 2004; Centers for Disease Control and Prevention, 2020; Dale et al., 2022, Eaves & Ho, 2008; Frye, 2018; Watkins et al., 2017). The presence of restricted and repetitive interests, behaviors, or preferred activities (American Psychiatric Association, 2022; Hodges et al., 2020;) is also required for an ASD diagnosis.

Furthermore, Social and Emotional Reciprocity (SER), which refers to a person’s “ability to engage in social interactions between two or more people” (Schwartz et al., 2021, p. 25), has been a defining deficit in individuals with ASD for the past 15 years (Berard et al., 2017; Schwartz et al., 2021; Ip et al., 2018). More specifically, individuals with ASD may show a lack of response to others’ emotions and have difficulty recognizing and appreciating social-emotional signals (World Health Organization [WHO], 2019). Social responsiveness; complex verbal and nonverbal communication methods (American Psychiatric Association, 2022); and understanding social relationships (Rice & Lee, 2017) are also core challenges of individuals with ASD.

Studies have shown that Social and Emotional Learning (SEL) has a positive impact on academic and psychological welfare of students in school and results in fewer dropouts and problem behaviors (Taylor et al., 2017; Zolkoski et al., 2020). In addition, research supports the argument that students in the early adolescent developmental stage (i.e., middle school or junior high school) are particularly vulnerable to negative outcomes related to the lack of social and emotional skills, which can be attributed to social, neurological, and biological changes that
occur during the shift from the childhood years in elementary school to the adolescent years beginning typically with middle school or junior high school (Green et al., 2021; Steinberg, 2017). As students navigate the transition to middle school, they experience new challenges, including increases in academic rigor and competition; peer pressure and social comparisons; and anxiety, loneliness, and vulnerability (Bauminger et al., 2008; Cappella et al., 2019; Steinberg, 2017). Such difficulties have been linked to abnormal social behaviors and decreases in academic performance (Green et al., 2021; Rockoff & Lockwood, 2010). Individuals with ASD have increased social, emotional, and communication deficits that can exacerbate common obstacles encountered during the adolescent years (Corona, 2016).

While efforts have been made to place children with ASD in classrooms with typical peers to increase social learning, this can be challenging if students with ASD do not know how to engage with peers (Vincent et al., 2018). Students with ASD, like most other students with disabilities, require different and additional educational supports than those of their typical peers (Boujut et al., 2016; Denning & Moody, 2013). While research has shown the benefits of SEL and established frameworks exist to support SEL education, there appears to be a gap in the research pertaining to SEL techniques specifically tailored to the needs of students with ASD. This is important considering the need is arguably greater in students like those with ASD who have a deficit in social competencies (Stichter et al., 2007) and, therefore, are more vulnerable to negative outcomes that can occur during the transition into the adolescent middle school years. This study seeks to address the research gap stated above by surveying educators within a school that specializes in teaching students with Level 1 ASD to gain a consensus regarding the most effective SEL techniques for their middle school students with ASD. Individuals with Level
1 ASD require the lowest level of support of the three levels of ASD. Details regarding the diagnosis criteria and supports needed for a Level 1 ASD will be provided in Chapter 2.

**Problem of Practice Statement**

As outlined previously, students with ASD can have trouble communicating with others in an appropriate or reciprocal manner (Berard et al., 2017; Schwartz et al., 2021), and the social and emotional challenges that students with ASD commonly face can impact academic performance/learning (Cristóvão et al., 2017). Communication, interacting with others, and relationship building can be especially challenging for individuals with ASD (Kolb, 2017). For proper generalization of social skills from one-on-one instruction to real-life scenarios, students with ASD especially need opportunities to practice their social skills in a safe environment alongside peers using pro-social modeling in various contexts (Whitby et al., 2012).

Additional research shows that SEL has a positive impact on academic and psychological welfare of students in school and has resulted in fewer dropouts and problem behaviors (Durlak et al., 2011; Mahoney et al., 2021; Taylor et al., 2017; Zolkoski et al., 2020). However, there is also research indicating that SEL programs, in some cases, have not worked as well with students in the approximately 14- to 17-year age range (Yeager, 2017). Also, while there are some published strategies for neurodivergent learners (American Psychological Association, 2018; Gagnier et al., 2022) there does not appear to be a set of SEL best practices created specifically for middle school students with ASD that are agreed upon by participants in the field of education of neurodiverse students (e.g., teachers, counselors, school administrators), particularly within upper elementary and secondary grade levels. Research posits that there is a need for SEL strategies that are school-wide and an SEL model that extends beyond the classroom (Oberle et al., 2016; Weissberg et al., 2015) which supports extending the participant
pool for the current school-wide study to counselors and school administrators rather than limiting it to classroom teachers.

**Purpose Statement**

The purpose of this formal, in-depth, systematic, mixed-methods Delphi study that has been used by researchers for decades (Dalkey and Helmer, 1963; dell’Ollio et al., 2018; Nasa et al., 2021; Thangaratinam et al., 2005; York & Ertmer, 2011) is to gain a consensus among educators at a southeastern United States special needs school for students in grades fourth through twelfth regarding the most effective Social and Emotional Learning (SEL) techniques used for their students with ASD. The theory guiding this study is Social and Emotional Learning (SEL), which was established as a term in 1994 by the newly formed Collaborative for Academic, Social, and Emotional Learning (2023). CASEL comprises a team of educators, researchers, child advocates, and practitioners who are committed to the development and advancement of SEL for all students. Three years after the birth of CASEL, nine of its collaborators co-authored a book entitled “Promoting Social and Emotional Learning: Guidelines for Educators” (Collaborative for Academic, Social, and Emotional Learning, 2023; Elias et al., 1997).

**Research Questions**

Research questions for this study consist of a primary question (RQ1), followed by five sub-questions related to each of the five core competencies of SEL as follows:

**RQ1:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD?
• **RQ1a:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of *self-awareness*?

• **RQ1b:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of *self-management*?

• **RQ1c:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of *social awareness*?

• **RQ1d:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of *relationship skills*?

• **RQ1e:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of *responsible decision making*?

**Theoretical Framework**

The purpose of this study is to identify the most effective strategies/techniques to increase SEL among students with ASD by gaining a consensus among educators at a fourth through twelfth grade special needs school in the southeastern United States that potentially could be generalized to other academic institutions and social skills practices. While there are various frameworks for teaching SEL, such as the Social Competence Model (Berard et al., 2017), Promoting Social and Emotional Thinking Strategies (PATHS; Conduct Problems Prevention Research Group, 2010), and the FRIEND Playground Program (Vincent et al., 2018),
research shows that one of the most substantiated and commonly referenced frameworks in schools is The Collaborative for Academic, Emotional, and Social Learning (Collaborative for Academic, Social, and Emotional Learning, 2023; Oberle et al., 2016; Payton et al., 2000).

One of the first programs designed to support the “whole child” (e.g., physical, emotional, cognitive) began in 1968 and was spearheaded by James Comer and colleagues at Yale University’s Child Study Center (Yale School of Medicine, 2022). The Yale Child Study Center School Development Program (SDP), also referred to as the Comer Model or the Comer Process, was first implemented at two schools in New Haven, Connecticut: Martin Luther King and Baldwin, because they were the lowest performing schools in the district (Collaborative for Academic, Social, and Emotional Learning, 2023; Comer & Emmons, 2006). The goal of SDP was to build “supportive bonds among children, parents, and school staff to promote a positive school culture” to create a better educational environment for underserved, poor ethnic minority students (Lunenburg, 2011, p.1). After implementing the SDP program, the two schools saw a decrease in challenging behavior and an increase in academic performance results that exceeded the national average (Collaborative for Academic, Social, and Emotional Learning, 2023; Comer & Emmons, 2006). Since its inception in 1968, the SDP model has been used in more than 1150 schools across the nation as a framework for systemic reform (Lunenburg, 2011). In an interest to continue this progress, a group of educators and researchers designed the New Haven Social Developments program from 1987 to 1992, which began a movement for SEL strategies across K-12 (Collaborative for Academic, Social, and Emotional Learning, 2023).

In 1988, Comer wrote about the need to address the social and developmental issues in education in ways such as training teachers, bridging the family-school gap, and gaining support from school boards, school districts, as well as local and state governments. Around this same
time, Weissberg and Elias chaired the W.T. Grant Consortium on the School-Based Promotion of Social Competence, and after numerous meetings, a team of researchers, educators, practitioners, and child advocates formed CASEL and coined the term “social and emotional learning” (Collaborative for Academic, Social, and Emotional Learning, 2023). Today, CASEL defines SEL as:

“The process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions” (Collaborative for Academic, Social, and Emotional Learning, 2023).

Collaborative for Academic, Social, and Emotional Learning (CASEL; 2023) has recently expanded their definition of SEL to promote equity and empowerment “toward young people and adults to co-create thriving schools and contribute to safe, healthy, and just communities.” SEL promotes collaborative school-family-community relationships that foster learning experiences based on trusting partnerships, challenging and worthwhile teachings, and evaluation throughout the learning process (Collaborative for Academic, Social, and Emotional Learning, 2023). This is important in the context of this study because students with ASD deserve a “level playing field” as they prepare to navigate adulthood. SEL is especially crucial for students with ASD who may require a more specialized approach to SEL considering their deficits in social communication and social interaction, as well as problems with rigid behaviors, difficulty transitioning between activities, and poor planning and organizational skills.

As shown in Figure 1, SEL encompasses the following five core competencies: (1) self-awareness (i.e., recognizing one’s own emotions, strengths, shortcomings, and values, (2) self-
management (i.e., regulating one’s own emotions and behaviors), (3) social awareness (i.e., seeing the perspectives of and empathizing with people from different cultures and backgrounds), (4) relationship skills (i.e., creating and maintaining healthy relationships), and (5) responsible decision-making (i.e., making good, constructive choices across a variety of circumstances and situations). The five CASEL competencies are inter-related and color coded. The two competencies shown in orange (i.e., self-awareness and self-management) relate to the self. The two competencies in green (i.e., social awareness and relationship skills) are related to other people. Lastly, responsible decision making, in yellow, is how we bring together aspects of the other competencies to make responsible decisions. (Alexander & Vermette, 2019; Collaborative for Academic, Social, and Emotional Learning, 2023).
SEL Core Competencies

1. **Self-awareness** involves recognizing one’s own emotions, strengths, shortcomings, and values and how they shape behavior in different contexts. It includes the awareness of one’s strengths and limitations with a solid sense of self-assurance and purpose (Collaborative for Academic, Social, and Emotional Learning, 2023). Research extends this definition to
include self-awareness of how one behaves and presents themselves physically in public (Huang et al., 2017; Knoblich & Flach, 2003; Morin, 2004). Because of the wide array of social and emotional learning deficits associated ASD, problems with self-awareness are common for those with ASD (Huggins et al., 2020; Kinnaird et al., 2019) and can manifest differently for each person (Elmore, 2016; Huang et al., 2017). However, it usually includes individuals with ASD having trouble 1) realizing what and how much they need to learn about self-awareness and 2) differentiating between and understanding their own emotions and the emotions of those around them from an individual and societal perspective (Huang et al., 2017; Morin, 2006).

2. **Self-management** refers to regulating one’s own emotions, thoughts, and behaviors in different situations and to achieve goals. This includes the ability to: (a) manage stress, (b) delay gratification, and (c) to feel motivated to and capable of accomplishing personal and group goals (Collaborative for Academic, Social, and Emotional Learning, 2023). In ASD research, emotional regulation has been identified as being related to core symptoms of ASD (Berkovits et al., 2017; Cai et al., 2018). Learning self-management techniques to regulate their own emotions, thoughts, and behaviors, rather than depending on help from parents, teachers, peers, and others (Koegel et al. 2014; Lee et al., 2007; McDougall, 1998) can be a big step toward independence for adolescents with ASD.

3. **Social awareness** is when people see the perspectives of and empathize with people from different cultures and backgrounds. It includes the ability to: (a) recognize and empathize with others’ perspectives from varied backgrounds, cultures, and contexts, (b) feel compassion for others, (c) understand broader historical and social norms for behavior in different settings, and (d) recognize the resources and support systems they have in family,
school, and community (Collaborative for Academic, Social, and Emotional Learning, 2023). These social skills have been taught most often and effectively to children with ASD through “modeling, prompting, and reinforcement” techniques (Quigley et al., 2018; Schrandt et al., 2013, p. 18).

4. **Relationship skills** refers to one’s ability to create and maintain healthy relationships with other people and successfully navigate settings with people of diverse backgrounds, cultures, and contexts. This includes the ability to: (a) communicate clearly, (b) listen actively, (c) cooperate with others, (d) collaborate to solve problems and (e) handle conflict effectively (Collaborative for Academic, Social, and Emotional Learning, 2023). Individuals with ASD of all ages experience relationship challenges. This is particularly prevalent in relationships among students with ASD and their typical peers (Chen et al., 2022; Williams et al., 2019), where individuals with ASD have fewer exchanges and friendships with peers (Chen et al., 2022; Locke et al., 2016) and are more likely to be rejected and bullied by their peers (Chen et al., 2022; Cresswell et al., 2019). Socially, middle school can be a particularly difficult time for adolescents to form relationships, but due to communicative challenges, it can be especially challenging for students with ASD. Non-existent or poor social relationships can contribute to feelings of loneliness, which research has shown contributes to anxiety and depression (Bellini, 2004; Hedley et al., 2018; Whitehouse et al., 2009). Therefore, forming and maintaining positive peer relationships is particularly crucial to an adolescent’s mental health and well-being (Hedley et al., 2018).

5. **Responsible decision-making** involves making good, constructive choices across a variety of circumstances and situations regarding their own behavior and social interactions across varied and diverse settings. This includes the ability to: (a) contemplate ethical standards and
safety issues, and (b) evaluate the negative and positive consequences for different actions for personal, social, and collective welfare. While typical adolescents in their middle and high school years are navigating more difficult situations and making more decisions independently in social settings (Hume et al., 2014), this can be quite difficult for a pre-teen or teen with ASD as the ability to make appropriate, responsible decisions coincides with, among other things, one’s “ability to understand social context and emotions of others” (Khalil, 2018, p. 5). Furthermore, findings from a study by South et al. (2014) indicated that young people with ASD avoid risky situations or uncertain consequences when making decisions.

Definitions

Allistic. Individuals without ASD are referred to as allistic, meaning non-autistic (Brady et al., 2022).

Autism Spectrum Disorder (ASD). According to the most recent Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Autism Spectrum Disorder (ASD) is classified as a neurodevelopmental disorder “characterized by persistent deficits in social communication and social interaction across multiple contexts, including deficits in social reciprocity, non-verbal communicative behaviors used for social interaction and skills in developing, maintaining, and understanding relationships” (American Psychiatric Association, 2022, p. 38). The presence of restricted and repetitive interests, behaviors, or preferred activities (American Psychiatric Association, 2022; Hodges et al., 2020) is also required for an ASD diagnosis. This definition is in line with how the Centers for Disease and Control and Prevention (2020) describe ASD as well.
**Diagnostic and Statistical Manual of Mental Disorders (DSM).** First created by the American Psychiatric Association more than 60 years ago, this manual is a reference for clinicians in the mental health field and others on the classification and diagnostic criteria of mental disorders. The current edition is the DSM-5-TR, short for the fifth edition text revision.

**Neurodevelopmental disorders (NDD).** People with neurodevelopmental disorders have communication, cognition, behavior, and/or motor skills caused by irregular brain development. Autism Spectrum Disorder (ASD), attention deficit hyperactivity disorder (ADHD), and schizophrenia are all neurodevelopmental disorders (Mullin et al., 2013).

**Neurodivergent.** People “whose selective neurocognitive functions/neurodevelopmental differences” diverge from those within common societal norms; neurodivergent individuals may or may not have a neurodevelopmental disorder (Shah et al., 2022, p. 579).

**Neurotypical.** Neurotypical designates those people whose selective neurocognitive functions are within common societal norms (Shah et al., 2022, p. 579).

**Social and Emotional Learning (SEL).** SEL is a method of helping individuals, particularly children, to gain the knowledge and ability to form a healthy identity, manage their own emotions and interactions with others to accomplish personal and group goals, establish and maintain healthy, supportive relationships, and make responsible, thoughtful, and caring decisions to be able to succeed in all aspects of life (e.g., school, work, family, citizenship) (Collaborative for Academic, Social, and Emotional Learning, 2023; Jones & Doolittle, 2017).
CHAPTER TWO: REVIEW OF THE LITERATURE

As mentioned in chapter one, SEL has a positive impact on academic and psychological well-being of students and has been shown to reduce dropouts and problem behaviors (Taylor et al., 2017; Zolkoski et al., 2020). However, for children with ASD, SEL is integral to their well-being, because social responsiveness, complex verbal and nonverbal communication methods (American Psychiatric Association, 2022), and understanding social relationships (Rice & Lee, 2017) are all core challenges that individuals with ASD struggle with daily. Children with ASD are often bullied, ostracized, and lonely due to not “fitting in” with classmates and other same-age or near-age peers (Cappella et al., 2019). In chapter two, the author will provide further background on ASD and SEL within the context of developing a study to gather survey responses from educators at a middle school in the southeast about the SEL techniques that work best for their students with ASD.

Theoretical Context

Due to their deficits in social, emotional, and communication skills (American Psychiatric Association, 2013, Collaborative for Academic, Social, and Emotional Learning, 2023; Factor et al., 2017; Frye, 2018), students with ASD have different learning needs and may require different and additional supports (Boujut et al., 2016; Denning & Moody, 2013; Stichter et al., 2007). While research shows the need for SEL for children with ASD, there is little to no peer-reviewed research to date on ASD techniques tailored to middle school students with Level 1 ASD. The current study seeks to address this topic through the lens of Social and Emotional Learning, which, mentioned earlier, has been shown to have a positive effect on academic and psychological welfare of students (Taylor et al., 2017; Zolkoski et al., 2020). The author will examine the effectiveness of the CASEL techniques, or teaching practices, that educators of
middle school students with ASD use, if any, and which ones they find most effective. The author will employ a more detailed exploration by utilizing the five core SEL competencies within the CASEL framework and draw from existing published examples of teaching practices that utilize the CASEL framework.

**Review of the Literature**

**Brief Evolution of ASD**

**Nascent Autism Research**

Historically, children with traits symptomatic of what is now known as Autism Spectrum Disorder (ASD) were often diagnosed with “childhood schizophrenia” (Sterwald & Baker, 2019; Volkmar & McPartland, 2014). That began to change when a child psychiatrist working with Johns Hopkins Hospital published a seminal research paper in 1943, entitled *Autistic Disturbances of Affective Contact*, detailing his research on what he termed “early infantile autism” (Kanner, 1943; Volkmar & McPartland, 2014). Upon completion of his study, which included 11 children he believed to have been born lacking a social predisposition, Kanner reported observations of symptoms that included the use of peculiar and immensely literal language, echolalic speech, and trouble using pronouns (Volkmar & McPartland, 2014).

While some findings from Kanner’s research might have helped move the study of autism forward to the present-day criteria, some of his postulations about parents of children with autism have been controversial and noteworthy. Specifically, Kanner reported that children with early infantile autism were likely to have parents who were intelligent and successful people (1943). This led to a belief in the 1950s and 1960s that autism was restricted to wealthy and educated families and was a result of abhorrent parenting among the wealthy and highly educated (Bettleheim, 1967; Sterwald & Baker, 2019; Volkmar & McPartland, 2014). However,
later research showed that autism was different from schizophrenia (Folstein & Rutter 1977; Kolvin, 1972; Rutter, 1972) and instead caused by improper brain developmental (Rimland, 1964; Rutter & Thupar, 2013) and genetic factors (Rutter & Thupar, 2013). Additionally, results of Wing’s (1980) research revealed that children with autism were found within all socio-economic classes. These realizations instigated a new focus on unstructured psychotherapy and a movement toward the use of behavioral psychology to guide research and special education programs (Ferster, 1972; Volkmar & McPartland, 2014).

**Diagnostic Criteria Development & Categorization of ASD**

The Diagnostic and Statistical Manual of Mental Disorders (DSM), published by the American Psychiatric Association, is arguably the leading source of official information about ASD used by researchers and clinicians alike and includes criteria for diagnosing ASD (American Psychiatric Association, 2022; Autism Speaks, 2023). Before the release of DSM-III in 1980 with its inclusion of autism as its own diagnosis separate from schizophrenia, early work in autism was hard to understand due to conflicting diagnostic methods being used across studies (Zeldovich, 2018). The DSM’s influence on the progression of the knowledge in the field continued after the release of DSM-III, with the number of peer-reviewed papers on autism growing from around 250 the year before DSM-IV was released to around 1,500 to 2,000 each year just two decades later (Volkmar & McParland, 2014). Among other changes to the official autism description, DSM IV noted impairments in social communication, social interaction, and restricted behavior patterns (Wing et al., 2011).

The release of the DSM-5 in 2013 brought significant changes for autism diagnosis, including a new “Autism Spectrum Disorder (ASD)” label. Asperger’s Syndrome and Pervasive Development Disorder were no longer separate disorders but were now two domains within the
ASD diagnostic criteria: social interaction/communication and restricted/repetitive behaviors (American Psychiatric Association, 2013). Particularly significant to the current study were the updated ASD diagnostic criteria and the addition of ASD levels.

**ASD Diagnostic Criteria.** As shown in Table 1, DSM-5 includes five categories of diagnostic criteria for ASD (American Psychiatric Association, 2022). Categories A and B are most related to the current research, as they pertain to social, emotional, and communication deficits and restrictive, repetitive patterns (American Psychiatry Association, 2022). Table 2 shows severity levels and provide examples of level of support needs. It includes all three severity levels for reference, but the current study focuses on Level 1.
Table 1

Autism Spectrum Disorder – Diagnostic Criteria for Categories A – E

Diagnostic Criteria

A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by all of the following, currently or by history (examples are illustrated; not exhaustive; see text):
   1. Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
   2. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.
   3. Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.

B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):
   1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
   2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day).
   3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
   4. Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifferences to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities or may be masked by learned strategies in later life).

D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.

E. These disturbances are not better explained by intellectual developmental disorder (intellectual disability) or global developmental delay. Intellectual developmental disorder and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual developmental disorder, social communication should be below that expected for general developmental level.
Note: Individuals with a well-established DSM-IV diagnosis of autistic disorder, Asperger’s disorder, or pervasive developmental disorder not otherwise specified should be given the diagnosis of autism spectrum disorder. Individuals who have marked deficits in social communication, but whose symptoms do not otherwise meet criteria for autism spectrum disorder, should be evaluated for social (pragmatic) communication disorder. Specify current severity based on social communication impairments and restricted, repetitive patterns of behavior (see Table 2).

Requiring very substantial support
Requiring substantial support
Requiring support
Specify if:
With or without accompanying intellectual impairment
With or without accompanying language impairment
Specify if:
Associated with a known genetic or other medical condition or environmental factor
(Coding note: Use additional code to identify the associated genetic or other medical condition.)
Associated with a neurodevelopmental, mental, or behavioral problem
Specify if:
With catatonia (refer to the criteria for catatonia associated with another mental disorder, p. 135, for definition) (Coding note: Use additional code F06.1 catatonia associated with autism spectrum disorder to indicate the presence of the comorbid catatonia.)

ASD Levels. Severity of ASD determines the diagnostic level, and severity is measured based on social communication impairments and restricted, repetitive behavior patterns. There are three levels of severity in ASD according to DSM-5: Level 1 requires support; Level 2 requires substantial support; and Level 3 requires very substantial support (American Psychiatric Association, 2022; Centers for Disease Control and Prevention, 2022). See Table 2 for a description of Level 1 ASD for Criteria A – social communication and Criteria B – restricted, repetitive behaviors (American Psychiatric Association, 2022; Autism Speaks, 2023; Gardner et al., 2018). Table 2 also includes severity level descriptions for Levels 2 and 3, but the current study focuses on Level 1 ASD.
### Table 2

**Severity Levels for Autism Spectrum Disorder (Examples of Level of Support Needs)**

<table>
<thead>
<tr>
<th>Severity Level</th>
<th>Social Communication</th>
<th>Restricted, Repetitive Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 3</strong></td>
<td>Severe deficits in verbal and nonverbal communication skills cause severe impairments in functioning, very limited initiation of social interactions, and minimal response to social overtures from others. For example, a person with few words of intelligible speech who rarely initiates interaction and, when he or she does, makes unusual approaches to meet needs only and responds to only very direct social approaches.</td>
<td>Inflexibility of behavior, extreme difficulty coping with change, or other restricted/repetitive behaviors markedly interfere with functioning in all spheres. Great distress/difficulty changing focus or action.</td>
</tr>
<tr>
<td><strong>Level 2</strong></td>
<td>Marked deficits in verbal and nonverbal communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduced or abnormal responses to social overtures from others. For example, a person who speaks simple sentences, whose interaction is limited to narrow special interests, and who has markedly odd nonverbal communication.</td>
<td>Inflexibility of behavior, difficulty coping with change, or other restricted/repetitive behaviors appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress and/or difficulty changing focus or action.</td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
<td>Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful responses to social overtures of others. May appear to have decreased interest in social interactions. For example, a person who is able to speak in full sentences and engages in communication but whose to- and-fro conversation with others fails, and whose attempts to make friends are odd and typically unsuccessful.</td>
<td>Inflexibility of behavior causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning hamper independence.</td>
</tr>
</tbody>
</table>
As mentioned previously, the focus of the current research is on students with Level 1 ASD. These students require support but do not require substantial or very substantial support. Specifically, the current study will concentrate on the social and emotional learning techniques needed to address ASD Level 1 deficits in social and emotional skills, as well as related communication skills, of middle school students with ASD.

**Social and Emotional Learning (SEL)**

As discussed in chapter one, SEL was officially named and established in the 1990s (Collaborative for Academic, Social, and Emotional Learning, 2023; Domitrovich et al., 2022; Ross & Tolan, 2017), and is defined as the process of ensuring that all children and adolescents have the opportunity to learn the social and emotional skills they need, and are expected by society to have, in order to succeed in school and in life (Oberle et al., 2016; Osher et al., 2008; Shriver & Weissberg, 2020). SEL was born from the emotional intelligence literature (e.g., Comer, 1988; Goleman, 1995), which postulates that academic and behavioral success in education and in life was dependent on non-cognitive skills, including social and emotional learning, as much, if not more than, cognitive skills (Durlak et al., 2011; Oberle et al., 2014; Ross & Tolan, 2017; Zins et al, 2007).

**The Importance of Social and Emotional Skills, Particularly in Middle School**

While research suggests that SEL is as important as cognitive learning, research also supports the theory that SEL contributes to academic growth (Durlak et al., 2022; Taylor et al, 2017). While social and emotional skills are crucial to any child’s development (American Psychiatry Association, 2013), the current study focuses on students in middle school. The transitional time in a child’s education from elementary school to middle school is symptomatic
of not only physical changes, but cognitive and social and emotional changes as well (Green, 2021).

The social and emotional obstacles students face approaching and during middle school are numerous, such as academic competition and peer comparisons (Green et al., 2021) that can lead to anxiety and loneliness (Cappella et al., 2019). Without the proper social and emotional skills to handle this challenging period, students can become disengaged (Steinberg, 2017) and exhibit more emotional and behavioral problems. They are also susceptible to a decline in academic performance and a vulnerability to social disorders (Green et al., 2021; Rockoff & Lockwood, 2010).

While positive, supportive interpersonal relationships with parents and peers can help with the challenges of navigating the transition to middle school (Kiuri, 2000), the literature suggests there are fewer evidence-based SEL programs for students in middle school than there are for students in elementary school (Domitrovich, 2022; Ross & Tolan, 2018; Yeager, 2017). However, recent research recognizes the importance of SEL in a students’ academic success and emotional welfare (Ross & Tolan, 2018, Schwartz, 2022) and emphasizes the need for effective, evidence-based SEL programs (Durlak, 2011). Barriers to SEL program success may include professional development inadequacies and insufficient support from administrative staff (Durlak, 2011).

**Unique Social and Emotional Learning Needs of Children with ASD**

While the transition from elementary to middle school and from child to adolescent can be challenging for any student, it can be especially difficult for a student with ASD. As mentioned previously, for students who have been diagnosed with Level 1 ASD, one of the main supports they require is help with social and emotional learning (American Psychiatric Association,
As described in the chapter one, for individuals with ASD, deficits in social, emotional, and communication skills often lead to difficulty making friends and engaging with classmates and teachers (Cheung et al., 2022), making middle school more difficult. Furthermore, studies show that children with ASD tend to both internalize (related to higher rates of anxiety and depression; Kim et al., 2000) and externalize (seen in ODD and ADHD; Reiersen & Todd, 2008) their problems more often than neurotypical children (Factor et al., 2017), increasing the potential for additional anxiety, disengagement, outward negative behaviors, and bullying or ostracism from peers (Ochi et al., 2020).

Why the CASEL Framework?

The CASEL framework is empirically supported and widely known in the field of SEL as the most established framework for teaching SEL (Chaidi et al., 2020; Durlak, 2011; Huggins et al., 2020; Kinnaird et al., 2019; Frye et al., 2022; Oberle et al., 2016; Osher et al., 2016; Ross & Tolan, 2017; Weissberg et al., 2015). Ross and Tolan (2017) tested the use of CASEL framework on adolescents using a normative sample with initial results supporting the use of CASEL’s “Five C’s” (i.e., core competencies) as a robust framework for teaching SEL to adolescents with only slight modifications for the age group (Ross & Tolan, 2017). Ross & Tolan (2017) also noted the need for additional research with child to adult data and larger and more diverse participant pools. The current study will explore which, if any, of the existing CASEL techniques work for middle school students with Level 1 ASD and which ones should be modified or replaced, according to educators at a southeastern school for students with ASD.

CASEL’s Five Core Competencies & Benefits for Students with Autism

While the author introduced the CASEL framework and provided a description of each of its five core SEL competencies in chapter one, it is worth going into more detail here regarding how
CASEL’s five core competencies potentially could benefit students with Level 1 ASD. Schools work with CASEL to implement their own standards based on the following five core competencies.

**Self-awareness.** As mentioned earlier, self-awareness is thought to be a common challenge for students with ASD due to the different social and emotional learning deficits associated with the disorder (Huggins et al., 2020; Kinnaird et al., 2019). Self-awareness includes the ability to a) identify emotions, b) have an accurate self-perception, c) recognize strengths, d) have a sense of self-confidence, and e) have a sense of self-efficacy. Students with ASD may not understand, at least not intuitively, what self-awareness is or how much they need to learn about it. They also tend to have trouble understanding their own emotions and identifying the emotions of people around them (Hobson, 2006; Huang et al., 2017; Huggins et al., 2021; Morin, 2006). Of note are the results of a recent meta-analysis of group differences and development effects of emotional self-awareness in ASD by Huggins et al. (2021), which showed that adults with ASD appeared to have inferior emotional self-awareness than their neurotypical peers, but children 12 years old and younger did not. In fact, the study found that differences in emotional self-awareness between individuals with ASD and their peers only appeared during adolescence and seemed to increase with age. The results imply that emotional self-awareness difficulties may coincide with social and emotional challenges children with ASD face during adolescence as opposed to being inherent in individuals with ASD (Huggins et al., 2021). For this reason, the author seeks to use the current study to help adolescent students with ASD improve their emotional self-awareness, and in turn, their quality of life, through SEL techniques tailored to support their unique challenges and learning needs during middle school.
**Self-management.** In an annual survey of teachers, parents, and students within the District of Columbia’s Public Schools in 2017 and 2018, the SEL competency of self-management was found to be most related to students’ academic outcomes later in life (Kautz et al., 2021), highlighting the importance of programs that focus on self-management. Impulse control, stress management, self-discipline, self-motivation, goal setting, and organizational skills are all part of the self-management core competency (Cai et al., 2018; Berkovits et al., 2017; Collaborative for Academic, Social, and Emotional Learning, 2017, 2023) and key to becoming independent. Learning useful self-management techniques, rather than depending on help from parents, teachers, peers, and others (Koegel et al. 2014; Lee et al., 2007; McDougall, 1998) can be a step in the right direction toward academic success, independence, and a higher quality of life for adolescents with ASD. Self-management skills also have the potential to alleviate some stress and worry that parents of children of ASD may have regarding their child’s future.

**Social awareness.** Perspective-taking, empathy, appreciating diversity, and respect for others are all characteristics of social awareness (Collaborative for Academic, Social, and Emotional Learning, 2017). Symptoms associated with ASD present different challenges wherein some children with ASD avoid social interaction (i.e., touch, eye contact, conversation), while others may desire to interact but have deficits in characteristics of social awareness, social-emotional reciprocity, understanding relationships, etc. (Chaidi et al., 2020). Unfortunately, a lack of social awareness combined with other social deficits that make friendships hard can lead to bullying (Ashburner, 2018). Some children with ASD might not recognize when they are being teased, and some children with a lack of social awareness or desire to socialize with other students may not be as affected mentally by bullying as others might be (Ashburner, 2018). Because of their differences in social awareness compared to neurotypical students, individuals with ASD could
benefit from SEL techniques that are specifically geared toward their challenges with social awareness.

**Relationship skills.** Communication, social engagement, relationship building, and teamwork are all required relationship skills seen in and beyond the classroom. Students with ASD, who are afflicted with social, communication, and motor skills deficits, have trouble interacting with peers in the classroom (Cheung et al., 2022). This makes it harder for those students with ASD to make and keep friends (Kolb; 2017), and as noted earlier, forming relationships with peers can produce positive social support systems, while poor or non-existent relationships can increase the potential for low self-esteem, a decline in academic performance, and anxiety (Chen et al., 2020). Learning the best techniques to help students with ASD work on their relationship skills from their teachers who witness their social interactions in the classroom is crucial to the current study.

**Responsible decision-making.** In middle school, most neurotypical adolescents are beginning to navigate more difficult situations and making more decisions independently in social settings (Hume et al., 2014). However, making responsible decisions is more challenging for most, if not all, students with ASD. As mentioned in chapter one, findings from a study by South et al. (2014) indicated that young people with ASD avoid risky situations or uncertain consequences when making decisions. Other studies found that students with ASD were less likely to take risks (Khemka et al., 2016; Levin et al., 2015) and exhibited less participation in intuitive thinking (Levin et al., 2015). Responsible decision making requires identifying problems, analyzing situations, solving problems, evaluating, reflecting, and ethical responsibility—all skills that are often required in a middle school classroom and all behaviors and skills that can be significant struggles for a student with ASD due to social and emotional deficits.
Recent Studies in SEL

While recent peer-review studies have been done on the need for SEL for high school students (Gardner et al., 2021), middle school students (Green et al., 2021) and students in preschool through elementary (Dale et al., 2021), there does not appear to be any peer-reviewed research on SEL techniques specifically for students with ASD. In the previously mentioned middle school study, Green and colleagues (2021) discussed the challenges that middle school students face with the onset of early adolescence and the increased mental health risks that brand this developmental time.

In related research, Green et al. (2021) performed a randomized control trial to test a pre-teen mentoring curriculum with results showing improvements in many areas including areas of SEL (e.g., decision making, communication, emotional regulation, and resilience). An exploration of mentoring as a technique for advancing SEL will be included in this study, especially since the participating school for the study does include a mentoring program led by the in-house counseling team.

In addition, recent studies were done on educators supporting students with learning disabilities using SEL during COVID 19 (Eveleigh et al., 2022); on SEL, ASD, and robots (Chaidi et al., 2023); on youth mindfulness-based interventions via a systematic review (Monsillion et al., 2023); on barriers to learning for students with ASD that include intellectual disabilities using a Delphi technique’ and finally, on an intervention for teaching SEL to middle school students from a low-resourced school district (Domitrovich, 2022). The latter study was most relevant to the current study in that it applies to middle school students, and they did receive positive results from the test.
Summary/Solution

After much research, there does not appear to be an SEL curriculum modified for or created specifically for middle students with ASD, or even a peer-reviewed article discussing the need for a middle school SEL curriculum designed specifically for students with ASD. The goal for the current study is to find out what SEL techniques, if any, educators at a middle school for students with ASD believe are effective and some reasons why. If the need is determined based on the Delphi survey data received, a future step would be to create an initial set of SEL standards for middle school students with ASD that potentially can be generalized for use by other schools. This could be beneficial to educators who have never taught students with ASD or who are not experienced with using SEL techniques for students with ASD. This would, in turn, benefit the students with ASD by, hopefully, improving their social and emotional skills and relieving some of the negative conditions that come with delays in social and emotional learning. Another contribution to the SEL body of research and practice would be to create a learning intervention using agreed upon techniques from the Delphi study. This could be synchronous, asynchronous, or both, depending on the results of the Delphi study.
CHAPTER THREE: METHODOLOGY

The Investigation Plan

The methodology used for this study employed a mixed methods Delphi technique, which was primarily developed by Dalkey and Helmer (1963) at the Rand Corporation in the 1950s (Habibi et al., 2014; Hsu & Sandford, 2007; Kauko & Palmroos, 2014; Linstone & Turoff, 1975; York & Ertmer, 2011) and is a combination of qualitative and quantitative methods (Thangaratinam et al., 2005). The Delphi technique is an established and well-suited method for obtaining agreement, or consensus, on a particular topic based on data gathered from an anonymous panel of individuals who have practical experience and knowledge with said topic through the utilization of a series of surveys (Cumin et al, 2021; Dalkey & Helmer, 1963; Young & Jamieson, 2001).

Where Delphi surveys stand out from other surveys is that they answer the question “what could/should be” instead of “what is” (Hsu & Sandford, 2007; Miller, 2006). Another key element of a Delphi study is that it comprises from three to five various, iterated rounds of questionnaires, responses, and analysis (dell’Olio et al., 2018). For each round of the study, survey questions were in the form of a Likert scale (i.e., quantitative data collection), and each question had a place to provide an optional “Reason/Explanation” item (i.e., qualitative data collection). Combined participant responses were provided anonymously with each new survey round so that participants could reconsider and revise responses, if desired, based on the responses of the group (Barrett, 2020; Niederberger & Spranger, 2020). Other attributes of the Delphi technique include participant anonymity (Barrett, 2020); objective and impartial statistical analysis techniques (Hsu & Sandford, 2007); as well as iterative and controlled feedback (Nasa et al., 2021). Considering the above characteristics, the Delphi survey technique
aligned with the goal of the proposed study, which was to see where a panel of experienced educators’ opinions on SEL techniques align or converge toward forming a consensus on what works and what does not work for teaching SEL to middle school students with ASD.

A limitation of the Delphi technique is that administering multiple rounds of surveys can be time-consuming (Ludlow, 1975; Hsu & Sandford, 2007), and researchers recommend reserving at least 45 days to administer and collect data (Ludwig, 1994). For the proposed study, the researcher met with potential participants during a bi-monthly staff meeting to explain the purpose of the study and provide instructions, including a brief overview of the Delphi process. Furthermore, the headmaster of the school indicated that participants should have time during workday breaks to take the survey. After the survey link was shared with the school, participants were given a week to take the first survey and then another week to take the second one, as well as the opportunity to leave the survey and return to finish them later, as needed. The second survey comprised 39 items compared to 75 in the first survey.

Another challenge with the Delphi technique is that the participants may have varied knowledge and experience of the topic being studied. In the case of this proposed study, some educators on the participant panel may have different experience using SEL techniques than others, but for the most part, this should be a fairly homogenous group for purposes of this study, considering they work at the same small school with the same students. For the proposed study, the inclusion criteria to participate for the participant panel was educators at the participating school who work with students in grades fifth through ninth. Selecting special education teachers with SEL experience as participants was good for this study because they are the ones who are focused on working with this population of students with ASD. They also have first-hand experience with the middle school adolescent age group we were targeting for the study.
Finally, in a Delphi study, quantitative and qualitative responses to the same questions by the same participant could diverge in ways that bring out new questions; in which case, a new or amended question may need to be added to the second round of survey questions. However, for this study, participants did not indicate any confusion, nor did they have any questions or comments that warranted creating new questions for the second survey. Research has shown that many Delphi studies can garner consensus after two or three rounds (Diamond et al., 2014, von der Gracht, 2012). Fan and Cheng (2006) also indicated that “Research indicated that three iterations are typically sufficient to identify points of consensus” (p. 218). Two rounds were completed for this study, which is in line with precedent for Delphi studies as an initial open-ended survey round or focus group was not used for survey item creation. Instead, the survey items were derived from existing, evidence-based practices in literature (Collaborative for Academic, Social, and Emotional Learning, 2017). In Tables 5 and 6, the researcher shows where items garnered consensus and where they did not. Chapters four and five describe qualitative responses and themes.

**Participants**

Crucial to the Delphi methodology is the selection of panel members, or participants. Often referred to as an “expert” panel, there is no standard of measurement that defines an expert for Delphi studies (Nasa et al., 2021). Selection of participants should, however, be based on experience in the domain of study (Hsu & Sandford, 2007) and based on predetermined criteria (Devaney & Henchion, 2018; Ogbeifun et al., 2016).

The current Delphi study enlisted a purposeful, convenient sampling of educators working at a special needs school in the southeastern part of the U.S. that caters to the social and emotional learning needs of students with ASD. Appendix A outlines the initial profile plan of
participant characteristics as suggested by Dick et al. (2015). Eligible participants included fifth through ninth grade core academic teachers, teachers from non-core subjects (e.g., art, music, drama, physical education), school counselors / social skills teachers, and after school faculty members (e.g., sports coaches, club facilitators) that are using SEL strategies in their curriculum.

The researcher captured participant demographic data in Qualtrics as part of the Delphi survey process. The principal of the participating school forwarded the researcher’s email with a survey link to 25 educators working at the school. Of the 25 potential participants, 18 finished both surveys for a 72% completion rate. The first-round survey included most demographic survey items including gender, race, job role, education level, K-12 experience, ASD experience, and SEL experience. However, the race/ethnicity question which was included with the second-round survey. More than half of the participants were current classroom teachers ($n = 12; 66.7\%$), and all participants had higher-level education ranging from graduate or professional certificates to terminal degrees. There were more female participants ($n = 10; 55.6\%$) than male participants ($n = 8; 44.4\%$), and no one identified as non-binary or preferred not to answer. Ages ranged from 25 to 34 ($n = 4; 22.2\%$), 35 to 44 ($n = 3; 16.7\%$), 45 to 55 ($n = 4; 22.2\%$), and over 55 ($n = 7; 38.9\%$). All participants had at least three to five years of experience in the Education field, five participants had 16 to 20 years ($n = 5; 27.8\%$), and five participants had than 20+ years ($n = 5; 27.8\%$). Participants’ race/ethnicities were Asian or Pacific Islander ($n = 1; 5.6\%$), Black or African American ($n = 3; 16.7\%$), and White or Caucasian ($n = 14; 77.8\%$). Participant job roles were school administrator ($n = 5, 27.8\%$), student counselor ($n = 1; 5.6\%$), and K-12 teacher ($n = 12; 66.7\%$). All participants except one had formal experience teaching SEL to students with ASD ($n = 17; 94.5\%$), but this person did have experience working on SEL strategies as a
counselor of students with ASD. Table 3 presents total counts and percentage results for each demographic question.

Table 3

Demographic Characteristics of Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
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<td>Gender</td>
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<td>55.6</td>
</tr>
<tr>
<td></td>
<td>Male</td>
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<td>44.4</td>
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<td></td>
<td>Non-binary</td>
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<td>0</td>
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<td></td>
<td>45 to 55</td>
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<tr>
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<td>6 to 9 Years</td>
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<td>16.7</td>
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<td></td>
<td>10 to 15 Years</td>
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<td>16 to 20 Years</td>
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<td></td>
<td>More than 20 Years</td>
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Table 3 – Continued

Demographic Characteristics of Participants

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<th>%</th>
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</thead>
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<td>3 to 5 Years</td>
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<td>6 to 9 Years</td>
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<td>16.7</td>
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<td>16 to 20 Years</td>
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<td>22.2</td>
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<tr>
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<td>&gt; 20 Years</td>
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<tr>
<td></td>
<td>&lt; 3 Years</td>
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<td>11.1</td>
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<td>3 to 5 Years</td>
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<td>&gt; 20 Years</td>
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<td>5.6</td>
</tr>
<tr>
<td></td>
<td>&lt; 3 Years</td>
<td>4</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>3 to 5 Years</td>
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<td>27.8</td>
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<td></td>
<td>6 to 9 Years</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>10 to 15 Years</td>
<td>4</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>16 to 20 Years</td>
<td>3</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>&gt; 20 Years</td>
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<td>0</td>
</tr>
<tr>
<td>Years of Experience Counseling Children/Adolescents with ASD on SEL skills</td>
<td>None</td>
<td>10</td>
<td>55.6</td>
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<tr>
<td></td>
<td>&lt; 3 Years</td>
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<td>0</td>
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<td>3</td>
<td>16.7</td>
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<td></td>
<td>6 to 9 Years</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>10 to 15 Years</td>
<td>3</td>
<td>16.7</td>
</tr>
<tr>
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<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>&gt; 20 Years</td>
<td>0</td>
<td>0</td>
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</table>
Demographic Characteristics of Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of Experience in Admin or Leadership Role Working</td>
<td>None</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Children/Adolescents with ASD</td>
<td>Fewer than 3 Years</td>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>3 to 5 Years</td>
<td>4</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>6 to 9 Years</td>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>10 to 15 Years</td>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>16 to 20 Years</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>More than 20 Years</td>
<td>1</td>
<td>5.6</td>
</tr>
</tbody>
</table>

*Note. This participant has experience working with students on SEL as a counselor in the school.

Among the research, there is no standard number of participants required for a Delphi study panel, but it has been recommended to use 10 to 18 individuals with experience in the field or topic being studied (Santaguida et al., 2018), and studies have used anywhere from 4 to 3,000 participants (Thangaratinam & Redman, 2005). The maximum number of qualifying educators within the participating school is 25. With a research goal of 15 participants, all 25 educators were asked to participate in the study to account for the potential of 40% attrition.

Setting

The survey was taken online by participants who work for the participating school, an accredited fourth through twelfth grade special needs school in the southeastern United States. The school focuses on children with Level 1 ASD. However, it is much like a typical school in many ways, offering grade-level academics, as well as extracurricular activities (e.g., sports, clubs, social events). The school was started by a mother who was motivated to find a school for her child with Level 1 ASD after experiencing the shortcomings of other schools when it came to the needs of her son and students with similar needs. Classroom sizes are small at the school with student-teacher ratio being approximately 6 to 1.
Most, if not all, teachers have some sort of special education degree or certification. For recruitment purposes, initial information regarding education backgrounds of participants will be pulled from the school website bios. The headmaster of the school agreed to fill in gaps where the website fell short. Finally, the researcher included a demographics section (i.e., age, gender, race/ethnicity, job role, highest education level, years of K-12 teaching experience, years of teaching students with ASD, years of experience teaching SEL to students with ASD, years of administrative experience working with kids with ASD, and years of experience counseling students with ASD on SEL) on the survey to gather data for official analysis and reporting purposes.

All participants have some experience working directly with students with ASD. Selecting participants with special education teaching or counseling experience was beneficial for this study because they can attest to SEL techniques that work or do not work for their students with ASD. The teachers at this school also have first-hand experience with the adolescent age group the researcher is concentrating on for this study. The school also employs psychologists, counselors, and social skills professionals who are on hand to help students, as well as educational technologists, sports coaches, and other administrators who have experience with SEL for this age group. To summarize, the school was chosen for this study primarily for three reasons: 1) they have a large population of students with Level 1 ASD; 2) their faculty members are educated and trained in special education; and 3) they believe in addressing the SEL needs of each student and have adopted a school wide SEL curriculum into their overall school mission. Participants chosen for the study needed to work at the participating school with students grades fifth through ninth who have ASD, Level 1.
Instrumentation / Data Collection Methods

The purpose of this study was to collect data toward garnering agreement, or consensus, regarding the level of effectiveness of SEL techniques within CASEL’s five core competencies as rated by educators at a special education school in the southeastern United States for their students with ASD.

Survey Instrument – Delphi Technique

As previously mentioned, the method proposed for this research was a Delphi study technique, which typically utilizes a series of two to five rounds of surveys designed to garner a consensus on a poorly structured or undefined issue from a panel of individuals with experience in the field of study (Habibi et al., 2014; Hsu & Sandford, 2007; Mohr & Shelton, 2017). For the proposed study, the researcher created two surveys in Qualtrics containing one-answer, multiple-choice questions with a freeform text field following each question for participants to add a “Reason/Explanation.” The use of a Likert-type scale comparable to the one shown in Figure 2 resulted in measurable numerical data that could be analyzed quantitatively (e.g., “strongly disagree” = 1 to “strongly agree” = 7).

To mitigate response bias (Fernandez & Randall, 1991), the researcher used a 7-point scale to provide participants who were unable to agree or disagree with a neutral option (i.e., “undecided”). Having this “undecided” option allows people who are not familiar with the teaching practice to indicate that they do not have an answer. Furthermore, having a “reason/explanation” field affords those who choose “undecided” an opportunity to express if they are confused by the question or any other reasons why they were undecided about that item. Furthermore, research posits that combining a 1–7 linear rating scale in combination with
parametric statistical methods is a valid way to analyze quantitative data from Delphi studies (Franc et al., 2023).

![Likert Scale Example](image)

**Figure 2**

*7-Point Likert-Type Scale Example*

**Creation of Survey Questions for Initial Survey (Round One)**

Research provides examples of social and emotional techniques authored by practitioners and researchers in the field of education such as social thinking/Superflex (Winner, 2014), Sea Bridge (Philips, 2021), Positivity ([https://www.n2y.com](https://www.n2y.com)), and Emotional ABCs ([https://www.emotionalabcs.com](https://www.emotionalabcs.com)) to name a few. Arguably one of the most established and researched frameworks for SEL, as stated earlier, was formed by a team of researchers, educators, practitioners, and child advocates who also coined the term “social and emotional learning” (Collaborative for Academic, Social, and Emotional Learning, 2023). Questions for the initial round one survey were based on techniques derived from the CASEL literature on SEL education (Collaborative for Academic, Social, and Emotional Learning, 2017) and fell within one or more of the five SEL core competencies as outlined by CASEL (i.e., self-awareness, self-management, social awareness, relationship skills, and responsible decision-making).

CASEL published 178 evidence-based sample SEL activities categorized by their five core SEL competencies. Approximately half of the activities were classified as Classroom Instruction and the remaining items were classified as Ongoing Teaching Practices. To reduce the number of items to a reasonable amount for a survey and avoid survey fatigue (Porter et al., 2004), the researcher narrowed the list to Ongoing Teaching Practices for this study. The
decision to keep the Ongoing Teaching Practices instead of the Classroom Instruction for the current study was based on research positing that SEL strategies should be ongoing and designed for the “long haul” (Moreno, 2024).

After removing the Classroom Instruction activities, 99 items remained. The researcher further narrowed the list of activities by removing redundant activities and combining similar/overlapping activities. This left a total of 75 items for the first-round survey. Any CASEL survey items that were combined or removed were reviewed by a subject matter expert with nine years of senior academic leadership experience in PK-12 school systems that include social and emotional learning practices/curriculum.

See Appendix B for the teaching practices published by CASEL (Collaborative for Academic, Social, and Emotional Learning, 2017) that were used as survey items for this study (Collaborative for Academic, Social, and Emotional Learning, 2023; Scully, 2023). The Notes column of Appendix B shows subject matter expert comments and how they were addressed.

**Data Collection / Procedures**

**Step One: IRB Approval**

The Internal Review Board (IRB) was notified of the details of the instrumentation and data collection to gain IRB approval as needed to protect the rights of human subjects/participants. Two circumstances related to IRB approval that are worth noting are: 1) the researcher has a child who attends eighth grade at the school setting where the panel of participants teach, and 2) the researcher provided breakfast for the potential participants when describing the first and second round surveys during two school staff meetings. A lead administrator at the participating school indicated that food is a “huge motivator” for their teachers.
Step Two: Participant Consent

The researcher sent an email to the administrative leaders at the school that explained the expectations and participants’ rights, along with a link to the initial survey. Subsequently, an administrative leader disseminated the email to the educators to obtain participant consent.

Step Three: Survey Dissemination

The researcher reviewed survey instructions with participants, as well as the purpose, benefits, and limitations of the study during a morning staff meeting. The researcher then emailed a description and link to the initial survey (i.e., round one) to several lead administrators at the school, and one of those leaders forwarded the email to potential participants (i.e., staff of educators). Participants were given one week to take the survey, and they could save their progress and return to finish the survey later as needed. This process was repeated for the second survey.

Step Four: Survey Rounds

Round One

The first-round survey comprised a structured, multiple-choice style questionnaire, using a 7-point Likert Scale such as the one in Figure 2. As mentioned previously, each question had a “Reason/Explanation” free-form question following it. For the survey items, the researcher utilized CASEL’s most common strategies for teaching the five core components of SEL (i.e., self-awareness, self-management, social awareness, relationship skills, and responsible decision making) used in evidence-based school programs (CASEL, 2017). For the most part the strategies were used as-is, except for exclusions and minor revisions as needed to avoid redundancy and improve clarity of any combined survey items. Upon receipt of finished surveys/questionnaires, the researcher examined responses for areas of agreement and
disagreement, and at this point, and consensus began to form in some areas (Hsu & Sandford, 2007). Criteria for agreements are listed in the Analysis section of this paper.

**Round 2**

The second-round survey consisted of items from the first-round questionnaire where the respondents did not reach an agreement, as well as the anonymous responses to those items by all participants. This afforded participants the opportunity to reflect on the perspectives of others without pressure or judgment, as well as the chance to modify their previous answers based on the collective responses (Barrett & Heale, 2020). It also gave them the opportunity to provide additional reasons/explanations for their responses. The researcher determined that two rounds were sufficient for this study based on the following:

1. Research shows that a two-round survey is acceptable for Delphi Studies (von der Gracht, 2012; Diamond et al., 2014), and consensus of all items is not a requirement. In fact, in addition to consensus items, the researcher was interested to see which items resulted in dissent among participants and why. As Scheibe et al. (1975) posited, “the absence of consensus is, from the perspective of data interpretation, as important as the existence of it” (pp. 262–287).

2. Round one began with pre-determined items taken from evidence-based, CASEL-approved ongoing teaching techniques, eliminating the need for a typical first survey round to determine the initial survey items for round two.

3. Consensus criteria was set to a high standard wherein the measure of central tendency looked at only the highest two levels of disagreement (1 and 2 on a scale of 7) or agreement (6 and 7 on a scale of 7), rather than measuring central tendency using the full 1 to 7 scale. The percentage of agreement was set to a higher level as well (i.e., 80%)
compared to the typical 75% median threshold for Delphi Study consensus (Diamond et al., 2014; Foth et al., 2016). With such a high threshold, the likelihood of gaining additional consensus items from a third round seemed low.

4. Qualitative results showed the same or similar comments in the second survey as in the first, which can be an indicator of saturation.

5. Participants did not indicate any confusion or misunderstandings regarding questions. Also, a review of qualitative responses (i.e., freeform “reason/explanation” fields) found no need for any new items to be added to round two nor any needed for a potential round three.

6. Survey attrition was a concern for a several reasons: 1) more reminders were needed prior to receiving all completed surveys, 2) the amount of time it took to complete the second survey was more than expected considering the decrease in total number of questions, and 3) out of consideration for participants’ busy work schedules. Furthermore, if participants did drop out in the third round, overall percentages would not match up across all rounds.

**Analysis**

The primary researcher analyzed the data gathered from the two surveys using formulas within Microsoft Excel to calculate interquartile range (IQR) for measure of distribution, standard deviation, and percentage of agreement for each survey item. A second researcher was utilized to analyze responses to offset potential bias.

Because the Delphi technique is a mixture of quantitative and qualitative methods, analysis of the data varies with no consensus regarding the best approach (Diamond et al., 2014; Thangaratinam & Redman, 2005). For example, von der Gracht (2012) argued that the
interquartile range is enough for a proper analysis. However, York and Ertmer (2011) were proponents of measuring both centrality and dispersion for a thorough analysis.

The proposed study adopted the Delphi analysis methods outlined by York & Ertmer (2011), particularly for the quantitative portion of the study. Accordingly, any item that met the following requirements was labeled as having reached a strong consensus among the participant panel: (1) the interquartile range was less than or equal to 1, and (2) responses are equal to 80% or higher on a rating of 1 to 2 (in strong disagreement) or 6 to 7 (in strong agreement).

If survey items had reached a consensus of “undecided,” those items would have been a) posed again with aggregated responses provided to see if responses differ or b) reworded as a new item if any participant expressed confusion or misunderstanding based on qualitative feedback (i.e., “reason/explanation” responses. However, no items reached a consensus of “undecided” in either survey round.

Once participants completed the first survey, the researcher downloaded quantitative and qualitative data to a spreadsheet located on a secure server. Any items that reached strong consensus in Round 1 were removed from the Round 2 survey (Diamond et al., 2014; Hsu & Sandford, 2007; Thangaratinam & Redman, 2005). Participants did not indicate confusion, explicit or implied, regarding wording of any survey items, and therefore, no new or revised survey items were added prior to round two. Before sharing the link to the second survey, the researcher aggregated qualitative data (i.e., “Reason/Explanation” responses) for non-consensus items and added them below each item within the second survey. All 18 participants completed both rounds of the survey.

For analysis of qualitative data, the researcher utilized codes developed upon examination of the data (i.e., inductive codes; Bingham & Witkowski, 2022). When examining common
language (i.e., in-vivo), the researcher employed a thematic analysis (Savin-Baden & Major, 2013) by looking for common threads/themes from the “Reason/Explanation” questions, especially where item agreements or disagreements were strong, as well as when and how shared perspectives may have changed from the first round to the second. “Paying attention to, and maintaining the language of, the study participants will allow identification of common language,” (Keeley et al., 2016, p. 7); therefore, the researcher shared exact quotes rather than relying solely on paraphrasing. This led to a better, more collective examination of the data to find “relevant and understandable outcomes” (Keely et al., 2016, p. 7). Note that each participant quote shared in the final documentation remained anonymous and was tied to its corresponding Likert survey item.

Specifically, the researcher’s initial coding process allowed her to identify and organize participant comments (i.e., “reasons/explanations”) into short phrases that best represented attributes within the participant-provided text, which falls in line with literature on qualitative coding (Chandra & Shang, 2019; Saldafia, 2009; Williams & Moser, 2019). The researcher then analyzed the identified short phrases (i.e., codes), refining them as needed and identifying themes among them. This allowed for a more accurate comparison of qualitative data to corresponding quantitative data for each survey item. In many cases, these themes helped to make meaning of the participant comments and understand possible reasons for consensus versus non-consensus where qualitative data was available (Bingham & Witkowski, 2022). As shown in Table 4, participant comments were organized by letter- and color-coded by topic; this helped the researcher identify commonalities more efficiently and accurately. Chapter five explains themes found among qualitative responses.
Table 4

Codes Used in Analysis of Qualitative Survey Responses

<table>
<thead>
<tr>
<th>Letter Coding</th>
<th>Color Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Haven't done this / not participated in this kind of activity / does not teach that subject; no opportunity in their class</td>
</tr>
<tr>
<td>B</td>
<td>May require a different approach depending on the student (e.g., age, maturity, executive functioning, difficulty verbalizing feelings; no desire to share; other deficits, struggles, etc.)</td>
</tr>
<tr>
<td>C</td>
<td>May require a different approach depending on the situation</td>
</tr>
<tr>
<td>D</td>
<td>Tricky; requires a lot of teacher prep and consideration; needs to be timed well</td>
</tr>
<tr>
<td>E</td>
<td>Requires adult monitoring and/or good facilitation/leadership</td>
</tr>
<tr>
<td>F</td>
<td>Run through a different program (e.g., counseling, peer mentorship), by a different person (e.g., dean), or in a different place other than classroom (e.g., hallway)</td>
</tr>
<tr>
<td>G</td>
<td>Helpful/important</td>
</tr>
<tr>
<td>H</td>
<td>Done a little differently at their school</td>
</tr>
<tr>
<td>I</td>
<td>Helpful/agree with caveat/stipulation/additional idea</td>
</tr>
<tr>
<td>J</td>
<td>Technique is not useful for ND students</td>
</tr>
<tr>
<td>K</td>
<td>General comment; doesn't fit with other themes</td>
</tr>
</tbody>
</table>

Note. Color-coding was useful in identifying re-occurring themes. Letters were used for documentation and black and white printing.

To ensure a "credible and accurate representation of the data," the primary researcher used procedures similar to inter-rater reliability procedures (Cofie et al., 2022, p. 73). A second researcher examined the qualitative data, themes, and codes created by the primary researcher for construct validity. The second researcher has an advanced degree in instructional design and technology and experience with coding. To address bias, this second coder was not otherwise involved in this research study or data collection. There were no disagreements remaining after comparison and discussion of codes between the primary researcher and second, so there was no need for a third person with a PhD and expertise in qualitative methods to be consulted to arrive at a final decision.
CHAPTER FOUR: RESULTS

As mentioned previously, the purpose of this Delphi study was to gain a consensus among educators employed at a special needs academy in the southeastern United States regarding which SEL practices are effective in advancing the social-emotional learning of their students in grades fifth through ninth with Autism Spectrum Disorder (ASD), Level 1 (American Psychiatric Association, 2022). The research questions for this study were:

RQ1: What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD?

- RQ1a: What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of self-awareness?
- RQ1b: What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of self-management?
- RQ1c: What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of social awareness?
- RQ1d: What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of relationship skills?
• **RQ1e:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of responsible decision making?

The Delphi method used for the study consisted of a two-round survey approach with items from the first-round survey coming from the literature and items from the second-round survey being items that did not reach consensus in the first round. Surveys employed a 7-point Likert-type scale with demographic questions and 75 survey items. Each of the 75 survey items was followed by an optional open-ended “Reason/Explanation” question. One optional open-ended question was added at the very end of the second survey to gather any final comments.

Initial survey items were taken from evidence-based SEL teaching practices published by CASEL (Collaborative for Academic, Social, and Emotional Learning, 2017). A subject matter expert who oversees SEL programs for Pre-K-12 students, including those with ASD, Level 1, reviewed and approved any items the researcher combined or removed due to redundancy to make the survey a more reasonable length. A second researcher with an advanced degree in instructional design and technology and experience with coding qualitative data (i.e., “Reason/Explanation” responses) reviewed the primary researcher’s inductive themes and coding of qualitative data and found them to be credible from a qualitative analysis perspective.

**Results**

Analysis of the first-round survey responses revealed a strong group consensus on 36 of the SEL techniques used in the survey, while there was not strong consensus on 39 SEL techniques used in the survey. The second-round survey resulted in strong consensus on five items in which there was not strong consensus in the first round for a total of 41 consensus items and 34 non-consensus items across both rounds. There were no items that participants disagreed
to (i.e., deemed not effective) or were “undecided” on as a group consensus. As mentioned earlier, the researcher determined that two rounds were sufficient for this study based on the following:

1. Research shows that a two-round survey is acceptable for Delphi Studies (von der Gracht, 2012; Diamond et al., 2014), and consensus of all items is not a requirement. In fact, in addition to consensus items, the researcher was interested to see which items resulted in dissent among participants and why. As Scheibe et al. (1975) posited, “the absence of consensus is, from the perspective of data interpretation, as important as the existence of it” (pp. 262–287).

2. Round one began with pre-determined items taken from evidence-based, CASEL-approved ongoing teaching techniques, eliminating the need for a typical first survey round to determine the initial survey items for round two.

3. Consensus criteria was set to a high standard wherein the measure of central tendency looked at only the highest two levels of disagreement (1 and 2 on a scale of 7) or agreement (6 and 7 on a scale of 7), rather than measuring central tendency using the full 1 to 7 scale. The percentage of agreement was set to a higher level as well (i.e., 80%) compared to the typical 75% median threshold for Delphi Study consensus (Diamond et al., 2014; Foth et al., 2016).

4. Participants did not indicate any confusion or misunderstandings regarding questions. Also, a review of qualitative responses (i.e., freeform “reason/explanation” fields) found no need for any new items to be added to round two nor any needed for a potential round three.
5. Survey drop-out was a concern, considering the busy schedules of the educators at the participating school. If participants did drop out in the third round, overall percentages would not match up across all rounds.

See Appendices C and D for a breakdown of the strong consensus and non-consensus data (i.e., Item #, Round, IQR, SD, and % of Agreement) by survey item (i.e., ongoing teaching technique”) from both survey rounds.

**RQ1a: Self-Awareness Techniques**

*Self-awareness* involves the ability to identify emotions, have an accurate self-perception, recognize strengths, have a sense of self-confidence, and have a sense of self-efficacy (Collaborate for Academic, Social, and Emotional Learning, 2023). Students with ASD have impairments in this area, starting with the basics of intuitively understanding what self-awareness is and how much they need to learn about it.

**Self-Awareness Items That Reached Strong Consensus: 3 out of 11 Survey Items (27%)**

Three items dealing with age-appropriate techniques for teaching self-awareness reached high levels of consensus among educators in the first round. Participants were in strong agreement overall that establishing clear, age-appropriate norms and consequences is effective in teaching students to see the impact of their own actions and behaviors on outcomes (Q2, Round 1, IQR = 1.00, SD = 0.62, Agreement = 94%). One participant agreed, stating “Knowing the rules helps everyone.” Participants also strongly agreed that asking age-appropriate questions to help students reflect on their own strengths and interests is effective (Q3, Round 1, IQR = 0.00, SD = 0.47, Agreement = 94%), as is talking in an age-appropriate way about one’s own feelings, how you know what you were feeling, and how it influences behavior (Q1, Round 1, IQR = 1.00,
SD = 0.73, Agreement = 83%). There were no other participant comments related to consensus items within the self-awareness construct.

**Self-Awareness Items That Did Not Reach Strong Consensus: 8 out of 11 Survey Items (73%)**

Most self-awareness techniques in this study did not reach a strong level of consensus. One of the lowest scoring techniques was having younger children routinely express their emotions through role-playing the feelings of characters or their own feelings and discussing them (Q45, Round 1, IQR = 2.00, SD = 1.06, Agreement = 33%; Q45, Round 2, IQR = 1.75, SD = 1.13, Agreement = 44%). One participant indicated in round 1, “This strategy will be dependent on the level of the student and the ability of the facilitator to monitor it.” In the second survey, two participants shared, “We don't have that age group at school.. but I would do this with much younger kids” and “My age group would not do this effectively, in my opinion.”

The second of the two lowest-scoring items involved encouraging students to talk to a peer or use a journal to reflect on their feelings, and specifically, how their feelings affected their behavior and decision making and how those behaviors may have affected others (Q44, Round 1, IQR =1.00, SD = 1.06, Agreement = 44%; Q44 Round 2, IQR = 1.00, SD = 0.61, Agreement = 44%). In the first-round survey, participants commented, “Write or draw – a lot of students at our school hate writing,” and “Some students would rather write down than speak about it. Once out they can move on.” A participant from round two added further insight explaining, “Some students have a harder time putting their ideas/feelings on paper. This may work for some, but not for others.”

Other self-awareness techniques were closer to forming strong consensus. Specifically, establishing a classroom space (e.g., chill zone, reflection corner, reading corner, etc.) for students for reflection, conflict resolution, and self-management practice (Q41, Round 1, IQR =
1.00, SD = 1.15, Agreement 67%; Q41, Round 2, IQR = 1.06, SD = 0, Agreement = 72%). In Round 1, differences in participant comments provided further insight into non-consensus stating, “This is a must,” “Maybe a separate place not in a small classroom,” and “Age dependent?” Round 2 produced additional reasons as participants commented, “Here it is the counseling office, not necessarily in the classroom,” “This is important for the student to be able to reset, but not used as a punitive measure,” “A place in the school... not classroom... we do not have the space,” and “Our counseling office is the cool down area. Sometimes the students need a different environment to reset.”

Emphasizing the strengths, improvement areas, and goals of individuals, as well as group goals, with age-appropriate classroom roles and responsibilities (Q46, Round 1, IQR = 0.75, SD = 0.73, Agreement = 72%; Q46, Round 2, IQR = 0.75, SD = 0.73, Agreement = 72%) was another non-consensus item and one that resulted in the same percentage of agreement between rounds. Related comments, both from the second round, were “Having students help set roles and responsibilities is important to helping the student understand their place in the class,” and “If I ran a self contained class... rather than 50-minute period.’

Four self-awareness techniques were even closer to meeting consensus. One of those techniques was routinely discussing in age-appropriate ways how emotional and physical cues can show us how we are feeling in various situations (Q42, Round 1, IQR = 1.00, SD = 0.94, Agreement = 67%; Q42, Round 2, IQR = 1.00, SD = 0.51, Agreement = 78%). The two comments received showed disagreement about the value as a participant from round one stated, “This helps the student identify their own feelings and follow the cues for further interaction,” while a participant from round two commented, “Most ASD students have a hard time being self aware so speaking about it helps them.” Another technique that was close to strong consensus
involved routinely posing questions using age-appropriate methods to help students identify and express their different feelings (e.g., with negative emotions, “Would you like to change the way you feel? What are some things you might be able to do right now to change the way you feel?”) in the moment (Q43, Round 1, IQR = 0.75, SD = 1.00, Agreement = 78%; Q43, Round 2, IQR = 0.75, SD = 0.77, Agreement = 72%). While there were no comments in the first survey round, a participant in the second round shared a positive viewpoint stating, “This goes a long way in helping students realize their behaviors and their ability to change them.”

A third technique that reached near consensus was providing authentic and age-appropriate feedback and asking open-ended questions to encourage students to reflect deeper on their interests and strengths (Q47, Round 1, IQR = 1.00, SD = 0.76, Agreement = 78%; Q47, Round 2, IQR = 0.00, SD = 0.86, Agreement = 78%). There was one comment shared in round two regarding this technique that happened to be a positive one, which was “Open ended questions allow for students to associate their behavior with their consequences.” Lastly, routinely telling students why you, the teacher, feels optimistic/happy for them and their future (Q48, Round 1, IQR = 1.00, SD = 0.87, Agreement = 78%; Q48, IQR = 0.00, SD = 0.80, Agreement = 78%) also came very close to garnering consensus among participants. While there were no comments related to this technique from round one, participants in round two commented, “If students know what makes the teacher happy then they are more apt to do those positive behaviors, and “not so much future... but do share their excitement and happiness and try to tell them when they should be proud of themselves.”

**RQ1b: Self-Management Techniques**

Students with ASD can have difficulty regulating their own emotions, thoughts, and behaviors in different situations and to achieve goals, yet the ability to do these things is at the
core of *self-management*. In learning to self-manage, students gain the ability to (a) manage stress, (b) delay gratification, and (c) feel motivated to and capable of accomplishing personal and group goals (Collaborative for Academic, Social, and Emotional Learning, 2023).

**Self-Management Items That Reached Strong Consensus: 9 out of 15 (60%)**

Of the nine strong consensus items, three reached 100% agreement. Two of these teaching practices centered around asking questions that encourage reflection to a) help in overcoming barriers in difficult situations (Q9, Round 1, IQR = 1.00, SD = 0.50, Agreement = 100%) and b) help students think through alternative approaches when facing challenges (Q10, Round 1, IQR = 0.75, SD = 0.46, Agreement = 100%). In response to the latter strategy, one participant in the round 1 survey opined, “I think this is one of the main things missing in all schools in general. Problem solving or encounter challenges should have its own curriculum. Teaching a child to identify a problem and learn how to put steps together on ways to possibly solve it. Especially as it pertains to real life scenarios is missing!”

Items related to establishing rules and short-term goals around transitioning in the classroom (e.g., putting away classroom equipment and supplies appropriately and getting settled after the bell rings) also were among those in the first round that participants strongly agreed were effective self-management teaching strategies (Q5, Round 1, IQR = 1.00; SD = 0.67, Agreement = 89%; Q6, Round 1, IQR = 1.00, SD = 0.70, Agreement = 89%). Another area of strong consensus in the first round within the self-management competency was routinely providing authentic praise and support, specifically when students are seen managing themselves well, for example, taking a deep breath to calm down (Q7, Round 1, IQR = 1.00, SD = 0.50, Agreement = 100%) and persevering (Q8, Round 1, IQR = 1.00, SD = 0.61, Agreement = 0.94). In response to the example questions provided for expressing and managing emotions...
appropriately (e.g., “I know you’re angry at her, right now for _____. What are some calm ways you could tell her what you’re upset about?” or “I saw the way you waited your turn just now [e.g., to get a cupcake, to look in the microscope]. I know you were excited and it was hard to do, but I saw you take a breath. I’m proud of you, and you should be proud of yourself.”), a participant commented in the round 2 survey, “If you have a separate adult (a counselor) to ask these questions, while not in the classroom setting, this strategy will work.”

Furthermore, participants agreed with a strong consensus in the first round that modeling effective self-management consistently and in an age-appropriate manner (Q4, Round 1, IQR = 1.00, SD = 0.71, Agreement = 83%) is an effective self-management teaching practice, as is routinely asking or reminding students to think about who might be able to help them in different situations and what other resources might be available to them (Q11a, Round 1, IQR = 0.75, SD = 0.68, Agreement = 83%). Participants provided no additional comments regarding self-management strategies.

Consensus was reached in round two for the self-management technique of listening deeply to students and providing age-appropriate support and/or authentic praise for expressing and managing emotions appropriately (Q51, Round 1, IQR = 1.50, SD = 0.77, Agreement = 72%; Q11, Round 2, IQR = 0.00, SD = 0.73, Agreement = 83%). Examples of authentic praise included in the survey item were, “I know you’re angry at her, right now for _____. What are some calm ways you could tell her what you’re upset about?” or “I saw the way you waited your turn just now. I know you were excited and it was hard to do, but I saw you take a breath. I’m proud of you, and you should be proud of yourself.” A comment from round one (non-consensus round) was “this can’t always be done in a class setting.” There were no participant comments in the second round.
**Self-Management Items That Did Not Reach Strong Consensus: 6 out of 15 (40%)**

In the first survey round, seven self-management items reached strong consensus. However, one item (Q51), described in the previous section, garnered consensus in the second survey round. The other six self-management items not only failed to reach strong consensus in round two, but they demonstrated lower agreement scores in the second round, which included an aggregate of “reason/explanation” responses from the first round.

Practicing age-appropriate self-management techniques, such as deep breathing exercises before the start of class, as part of the school day (Q49, Round 1, IQR = 1.00, SD = 1.04, Agreement = 67%; Q49, Round 2, IQR = 1.00, SD = 0.78, Agreement = 50%) went down 17 percentage points of agreement between rounds showing further lack of consensus. Specific comments shared in round one were, “It is a method I use when I notice the energy in the class is "off"... I should explore using it regularly” and “Some students need this, others do not.” There were no new comments in round two, but one participant copied a comment from round one.

A related self-management technique that involves establishing a separate part in the classroom for individuals to practice self-management (Q50, Round 1, IQR = 1.00, SD = 1.09, Agreement = 67%; Q50, Round 2, IQR = 1.00, SD = 0.70, Agreement = 56%) failed to reach strong consensus and decreased eleven percentage points from round one to round two. Comments participants made in response to this item appear to be more in line with the decrease in agreement. Explicitly, two participants commented in round one, “Not in the classroom, but on the hall,” and “Perhaps not inside a small classroom, more general spot.” Three comments from the second round were consistent with first round as participants explained, “Outside the classroom for privacy and effectiveness,” “An alternative place for students to self regulate is helpful,” and “If you have a separate adult (a counselor) to ask these questions, while not in the
classroom setting, this strategy will work.” Four of the five comments specifically suggest a room outside of the classroom (e.g., “hall,” “more general spot,” “outside the classroom for privacy, “not in the classroom setting”), and one comment alludes to the same with the words “an alternative place.” This indicates a potential partial agreement whereas participants may like the idea of a separate space to practice self-management techniques but not in the classroom.

Regularly encouraging students to save desired activities or experiences (e.g., eating a cookie) until they have completed tasks (e.g., cleaning up) also failed to reach strong consensus in both rounds, although it did not decrease as much as previously mentioned items (Q52, Round 1, IQR = 0.75, SD = 1.18, Agreement = 72%; Q52, Round 2, IQR = 1.00, SD = 1.10, Agreement = 67%). A participant from round one explained a likely issue with this technique for neurodivergent students as s/he stated,

“For folks with poor executive function, often delaying the fun thing means just not doing anything and being consumed by guilt. I know it seems more virtuous to do the hard part first, but often times ND [neurodivergent] brains just can't force themselves to do the low dopamine task. It's often better to go ahead and do the high dopamine task and then use the momentum to do the low dopamine task.”

A comment from a participant in round two suggested it could work but depends on the student, “It is difficult to start this process, but it is worthwhile in the end. Some students will be able to have enough self control to do this, some others will not.”

Modeling and discussing your own goals as a teacher was another item that did not demonstrate strong consensus and, in fact, declined by 17 percentage points between rounds (Q53, Round 1, IQR = 1.75, SD = 1.19, Agreement = 61%; Q53, Round 2, IQR = 1.00, SD = 0.83, Agreement = 44%). However, the only participant comment given, “Modeling will help
show the usefulness of goals,” was on the positive/agreement side. Routinely encouraging journal use and pair shares to reflect on why efforts succeed or fail depending on the situation and what to do differently in the future (Q54, Round 1, IQR = 1.75, SD = 0.99, Agreement = 33%; Q54, Round 2, IQR = 0.75, SD = 0.83, Agreement = 28%) was another item that failed to reach consensus both rounds, and it decreased by five percentage points between rounds. Round one did not produce any comments, but a participant in round two provided one potential rationale for why strong consensus was not reached stating, “Some students find writing an arduous task. The success of this strategy would be dependent on the student's attitude towards writing.”

The final item that failed to reach consensus after two rounds of surveys pertained to working routinely with students to establish and encourage completion of age-appropriate class projects that require effort (Q55, Round 1, IQR = 1.00, SD = 1.09, Agreement = 83%; Q55, Round 2, IQR = 2.00, SD = 1.44, Agreement = 61%). While round one produced no comments, round two resulted in four responses that offer different, yet valuable, perspectives on the subject. Specifically, participants from round two commented,

“This will depend greatly on the adult supervising or facilitating the project. Rituals and routines that are norms for the class would have to be established for success in working as a group,” “Curriculum must be adhered to, however, age appropriate is different for each student depending on their emotional/social regulation. Some students need a simpler task or smaller group projects based on their needs. This is also true with writing individually. If a student has a speech/language challenge or learning disability, requiring a certain length that is unattainable for that student doesn't help them feel accomplished and instead discouraged” “I think projects are great learning tools, but only when teachers
have taken a lot of time to prepare for the project. Teachers must build in the progress checks and brainstorming opportunities to be effective,” and “Instills and helps students understand the concept.”

**RQ1c: Social Awareness Techniques**

Perspective-taking, empathy, appreciating diversity, and respect for others are all characteristics of appropriate *social awareness* (Collaborative for Academic, Social, and Emotional Learning, 2017). Because of their differences in social awareness compared to neurotypical students, individuals with ASD could benefit greatly from SEL techniques that are specifically geared toward their challenges with social awareness (e.g., social-emotional reciprocity, making and keeping friends, recognizing when they are being bullied, etc.).

**Social Awareness Items That Reached Strong Consensus: 13 out of 25 (52%)**

Out of the 13 social awareness techniques that garnered consensus, modeling appropriate behaviors was a prominent theme. Specifically, results showed strong consensus among participants for teachers modeling the following: a) respectful behavior (Q16, IQR = 0.00, SD = 0.57, Agreement = 94%) b) concern for other’s well-being (Q17, IQR = 0.00, SD = 0.69, Agreement = 89%), c) service to others (Q19, IQR = 1.00, SD = 0.51, Agreement = 100%), and enthusiasm for learning about and respecting diversity and other cultures (Q13, IQR = 1.00, SD = 0.78, Agreement = 83%). Qualitative results (i.e., “Reasons/Explanations”) were more abundant regarding modeling as a technique for teaching several aspects of social awareness to students with ASD. Participant comments included “You must show respect to receive respect,” “This may be the most important quality in a teacher, at least at times,” and Modeling concern is good. Sometimes ASD students don't pick up on the concern for others.” Specific to modeling service to others, participant comments expressed the presence of service in their curriculum and
explicated a need for a more targeted approach for students with ASD, specifically “We have started incorporating community service projects,” and When we model service to others ASD students can be aware of it. It has to be done overtly and possibly getting the attention of the ASD student to show them what is happening.”

Pertaining to modeling both respect for diversity and enthusiasm for learning about diversity, one participant responded generally that “Modeling by teachers is very impactful.” Another participant offered additional, situational clarification regarding unique needs of ASD students as s/he commented, “depends on the situation - if you are talking about "cultures" of race, ethnicity, religion, etc. like would be studied in social studies I would agree. However, diversity in gender and sexual orientation I don't think should be presented broadly because ASD kids receive that information differently and are more easily influenced, many are desperate for belonging.”

Participants also reached a strong consensus in the second round for the effectiveness of having the students themselves model respect to younger students with whom they are assigned to work (Q68, Round 1, IQR = 0.75, SD = 0.67, Agreement = 72%; Q24, Round 2, IQR = 0.75, SD = 0.68, Agreement = 83%) in teaching social awareness. Two participants provided reasons for their agreement as they wrote, “Love the mentoring, I’ve seen it be effective,” and “This helps both parties. For one, the older student gets a boost of self esteem knowing that (in a world where everything is foreign) they are doing something correct and take pride in themselves. It also helps as a reminder to be a role model and take a second longer to thing about a decision before there are negative consequences. For the younger students, there is someone for them to use as a model and ask questions to. There is a
peer (not an adult) that they can feel comfortable with asking questions or sharing an opinion that they may hesitate to ask a grown up.”

In addition to modeling enthusiasm for learning about diversity, there were four other items that reached strong consensus related to how to teach about differences among people. These items were: a) routinely talking to students about how others feel in various situations (Q12, IQR = 1.00, SD = 0.69, Agreement = 89%), b) asking students questions in different situations to convey that we all have our similarities and our differences (Q15, IQR = 1.00, 0.86, Agreement = 83%), and c) allowing students to share their own family traditions during classroom holiday celebrations (Q14, IQR = 1.00, SD = 0.94, Agreement = 94%). In response to routinely talking about other’s feelings in different situations, participants noted, “This is essential as our students need help recognizing other people's perspective,” and Understanding how others feel is the first step toward empathy.” Regarding routinely asking questions in different situations to show that people are all similar, yet different, participants expressed, their support in expressing that “Modeling of routine questions is a great way to show differences,” and

“Since this population is seen as ‘different’ by neurotypical standards, it is important to impress upon them that their differences make them unique and they should love who they are just as we ask them to do for their peers. Noticing our differences and embracing them is what makes us human.”

One participant noted a caveat that, “Routinely may be too strong a word.” In response to sharing holiday family traditions to promote learning about and respecting diversity, one participant stated in agreement, “Having students share their traditions is a great way for others to see differences, but can now understand and be respectful to those differences.”
The next two strong consensus items under social awareness relate to teacher feedback and direction, specifically, reminding students when they need help thinking of available resources (Q22, IQR = 1.00, SD = 0.83, Agreement = 83%) and providing students with timely and specific feedback when they do a good job taking direction from authority figures (Q20, IQR = 1.00, SD = 0.96, Agreement = 89%). A final strong consensus item within the social awareness shows that teachers recognize the importance of working with other adults in the school, in this case, teachers and administrators, to foster a sense of responsibility among them to help their students (Q23, IQR = 1.0, SD = 0.61, Agreement = 0.94. There were no additional participant comments on social awareness.

The social awareness teaching technique of giving feedback/praise to students in authentic ways for being respectful toward others and encouraging students to identify how they felt when they were respectful or supportive of another person (Q69, Round 1, IQR = 0.75, SD = 1.20, Agreement = 94%; Q18, Round 2, IQR = 1.00, SD = 0.69, Agreement = 89%) reached strong consensus in round 2. There were no participant comments in round two, but there were four in round 2. Specifically, participants expressed that, “Authentic praise is very helpful to supporting the positive behaviors that students show,” “Positive reinforcement is always a good tool. Teaching students to recognize when they have been kind is a good thing,” “It encourages the positive behavior to be repeated,” and “Good Feedback is always useful.”

Another social awareness item that reached strong consensus in round two was modeling and routinely promoting a school norm of treating others the way you would want to be treated. (Q70, Round 1, IQR = 1.00, SD = 1.02, Agreement = 89%; Q21, Round 2, IQR = 1.00, SD = 0.70, Agreement = 89%). There were several comments from each round that described some unique considerations for students with ASD when using this teaching technique. From round
one, participants wrote, “Routine is good for students with ASD,” “Just be prepared for the kid who says ‘I don't mind if people talk to me like that’,”

“With executive functioning skills lacking, these students need help reminding of things that are important to do that they do not necessarily notice on their own. Forming a plan and sticking to it is overwhelming and the dysregulation of emotions can cloud an already skewed judgement,” and

“That doesn’t always work - for example, some children have sensory integration disorders and don’t feel pain the same way as others so they may not think hitting is physically hurtful the way they experience it. The same could be said for blunt statements that could be hurtful to others, but they may see as a fact.”

In round two, one person commented that s/he agreed with all the aggregated comments from round one. Three other people stated, “Modeling is an effective way of showing what you want to see in student behaviors,” “It encourages the expected behavior,” and “Good Feedback is always useful.”

Social Awareness Items That Did Not Reach Strong Consensus: 12 out of 25 (48%)

Among the 12 items that did not reach strong consensus within the social awareness construct, allowing students to dress up as historical or literary characters and act out how those individuals were feeling and the effects on their behavior (Q58, Round 1, IQR = 1.00, SD = 1.06, Agreement = 22%; Q58, Round 2, IQR = 2.00, SD = 0.94, Agreement = 33%) had the lowest percentage of agreement, even though it did increase from round one to round two. In round one, a couple of participants indicated they had not done this type of activity. Additional comments from round two were, “Many students find dressing up distressing and struggle with this, “Perhaps not something I would do in math class,” and “Seems like a complex venture.”
Another item that did not reach consensus was the technique of discussing literary characters or historical figures, how they felt, and reasons for their actions or behaviors and what we know based on what the author says about the character's behavior (Q56, IQR = 1.00, SD = 0.84, Agreement = 67%; Q56, IQR = 1.75, SD = 1.13, Agreement = 50%). Participant comments provide no evidence for the lack of strong consensus nor for the decrease in agreement percentage. In round one, participants suggested that “More information about how others act can be helpful,” and “Noticing the subtle difference in tone, facial expression, and body language, students can pick out the ‘features’ that show a difference and practice looking for those differences in the people around them.” Round two revealed similar comments from participants who stated that “Empathy is a hard concept for students with ASD. Literature class can help them be more empathetic,” and “I think this is helpful to try to encourage perspective taking and also connection with others.” One participant stated, “Not my subject to teach,” a likely reference to literature.

Providing opportunities for students to share in small groups how they feel in various situations (Q57, Round 1, IQR = 0.75, SD = 0.94, Agreement = 78%; Q57, Round 2, IQR = 1.00, SD = 0.61, Agreement = 44%) demonstrated a significant decrease in agreement (i.e., 34 percentage points) from the first round to the second round. While one participant in round one commented, “Noticing the subtle difference in tone, facial expression, and body language, students can pick out the ‘features’ that show a difference and practice looking for those differences in the people around them,” others took a more conditional stance commenting, “depends on the student – I knew one who had difficulty verbalizing his feelings,” “It has to be monitored closely,” and “Sharing is a good idea, but some students just don't want to share their interpersonal feelings.” Round two presented additional thoughts from participants, “Some
students are reluctant to share and others don't mind,” “In the counseling department we have small social groups where students can share how they feel in different situations.”

When it comes to asking routine questions throughout the day to draw attention to how students’ behavior is affecting others (Q66, Round 1, IQR = 1.00, SD = 1.09, Agreement = 67%; Q66, Round 2, IQR = 1.00, SD = 1.26, Agreement = 44%), participants did not come to a consensus. In round one, a participant commented “Not sure how often this is useful. These moments may need to be timed well for effectiveness.” Round three resulted in a few different comments, “Awareness of others can be used to help students see the behavior that they show,” “Many times a student will adjust their behavior if it is bothering another student...when pointed out in subtle and kind way,” and “Depends on the time of day when of it could be utilized more effectively,” but none did much to explain the quantitative data which showed a decrease in agreement from one survey to the next.

Participants did not come to a consensus on strategically using cooperative learning and project-based learning to build diverse working groups (Q61, Round 1, IQR = 1.00, SD = 1.00, Agreement = 67%; Q61, Round 2, IQR = 1.75, SD = 1.70, Agreement = 50%), and many of the comments speak to the different challenges their students can have working in cooperative groups. In round one, participants commented, “Building groups in cooperative settings can be helpful, but lots of thought needs to go into the make up of that group. Sometimes strong personalities can dominate the group,” “Working in groups can be difficult for some students,” “Cooperative groups can be difficult because of several factors,” “It is difficult for many of our students to work with others due to their lack of executive functioning skills and certain behaviors,” “The groups can't be too diverse or our population won't work together but building groups that have complementary strengths and weaknesses is important,” and “Some students do
not want to work with others, some are willing for others to lead and dominate the discussions, and some don't have the capacity to work independently.” In round two participants presented similar feedback expressing that “Many students do not have the executive functioning to work independently, so group work is extremely difficult,” and “As educators you have to be careful to make certain the topic is appropriate.”

Also not garnering strong consensus was the social awareness technique of allowing students to reflect on their feelings by drawing a picture or writing in a journal and sharing it with a partner or small group when there is a difference of opinion; this is so that they can be heard as well as listen to how others may feel differently in the same situation and why (Q60, Round 1, IQR = 1.75, SD = 0.94, Agreement = 56%; Q60, Round 2, IQR = 1.00, SD = 0.84, Agreement = 67%). The feelings of participants who opted to comment appear to be more in agreement with each other than the whole group. In the first round, they specifically opined, “This allows them to identify what they are feeling and remember what that feels like if it were another person at a later time,” “We frequently discuss differences in opinions and trying to recognize space for compromise or to agree to disagree,” and “Expression through art can be easier for some students than sharing verbally.” Opinions expressed in the second round were, “Expression through art can be easier for some students than sharing verbally,” “Some students really enjoy transferring their feelings to art, especially those who are not very verbal,” “We encourage sharing differences of opinions... there is not a focus on journaling your ideas,” and “Art is used as a form of therapy depending on the situation.”

Comments from the next non-consensus item, building on classroom diversity by asking students to share their varied cultural perspectives on situations (Q59, Round 1, IQR = 1.50, SD = 0.77, Agreement = 72%; Q59, Round 2) (IQR = 1.00, SD = 1.04, Agreement = 56%), are
diverse, and some highlight that the success of the technique can depend on the student or situation. In round one, participants shared,

“again depends on the student - some are overly empathetic and latch onto a subject which may not be as broadly experienced as one individual's experience – for example, an individual with ASD hears a story about a police officer doing something wrong and then believes all police are bad,”

“Understanding how others see things is important,” and “I do not have this opportunity in MY class but like the idea.” In round two, participants commented, “Show differences that are important to one group over another,” “Sharing is good, however some are reluctant to share,” “This comes up some in casual conversations and I do encourage it briefly... but not very relevant in a math class,” and “I would like to see this happen more in the classroom.”

Another social awareness technique that did not demonstrate consensus was developing empathy and appreciation for similarities and differences by designing class or morning meetings to involve students in sharing and recognizing that others have different experiences (Q63, Round 1, IQR = 0.75, SD = 1.08, Agreement = 72%; Q63, Round 2, IQR = 1.00, SD = 0.78, Agreement = 56%). The percentage of agreement decreased by 16 percentage points from the first to the second round. Comments were mostly positive but included caveats regarding timing and teacher leadership and facilitation. Specifically, participants from first round expressed, “This helps them realize they are not alone in a feeling they do not understand. It also helps them to be able to empathize with others when they have gone through a similar scenario,” “A specific time to do this would be ideal. The teacher/adult leading needs to be able to model and discuss these concepts,” and “When students have a better understanding of their own feelings, sharing
there were no additional comments in round 2.

Modeling acceptance of others, while still not gaining strong consensus, was somewhat close to strong consensus and stayed the same from the first round to the second (Q62, Round 1, IQR = 1.75, SD = 0.88, Agreement = 72%; Q62, Round 2, IQR = 1.75, SD = 1.37, Agreement = 72%). Specific freeform text feedback on this item from round one participants was that “Modeling of routine questions is a great way to show differences,” and “well, except for nazis, etc.” (The latter could indicate that there may be a need to communicate to students with ASD that there are circumstances where it is appropriate not to accept certain people.) A participant from round two expressed, “Modeling tolerance is a good thing.”

Developing and revising classroom rules and norms with students to work together to promote understanding and respect (Q64, Round 1, IQR = 1.75, SD = 1.40, Agreement = 72%; Q64, Round 2, IQR = 0.75, SD = 1.23, Agreement = 72%) as a technique for teaching social awareness almost reached strong consensus among educators. The opinions shared in comments differed slightly with participants expressing in round one that, “My experience is only at a special needs school and I think the teachers know what is needed for classroom structure and routine - the students need to know what the expectations are I think revising them with the students would cause other students' frustration and confusion,” and “Anytime that students have a voice in the rules of the classroom, those rules are much easier to keep and to enforce.” In round two, participants commented that “Having a voice in what the rules are is important to the success of the climate of the classroom,” “For our population a consistency of the rules and routine is key to maintaining a stable environment,” and “I like the engagement, empowering them. And they're more likely to conform.”
Routinely discuss the reason for classroom or school rules in the context of current experiences in the school or classroom and how they are affecting students’ current behavior was close to garnering strong consensus, especially in the first round (Q67, Round 1, IQR = 0.75, SD = 1.19, Agreement = 78%; Q67, Round 2, IQR = 0.75, SD = 0.68, Agreement = 72%). The only first-round comments submitted were positive with participants stating, “This helps students that have a hard time looking at a situation objectively see how one action (inadvertently or not) affect everyone around them good or bad,” and “Routine is good for students with ASD.” There were no comments in round 2. Another social awareness item/technique that almost reached strong consensus was identifying and celebrating historical figures who have contributed to the common good of their communities. (Q65, Round 1, IQR = 1.50, SD = 0.87, Agreement = 72%; Q65, Round 2, IQR = 0.00, SD = 0.69, Agreement = 78%). Even though there was not strong consensus among participants, they shared several positive comments. Specifically, participants wrote, “Anytime we can show others in a positive light it is helpful,” “Using others as a role model can be helpful,” and “Having examples of positive role models/historical figures is very important.”

**RQ1c: Relationship Skills Techniques**

Social, communication, and motor skills deficits in children and adolescents with ASD make interacting with peers in the classroom difficult (Cheung et al., 2022), which can lead to problems making and keeping friends (Kolb; 2017). Forming relationships with peers can produce positive social support systems, while poor or non-existent relationships can increase the potential for low self-esteem, a decline in academic performance, and anxiety (Chen et al., 2020). Learning the best techniques to help students with ASD work on their relationship skills...
from their teachers who witness their social interactions in the classroom can be valuable to others working with students with similar needs.

**Relationship Skills Items That Reached Strong Consensus: 13 out of 19 (68%)**

Providing authentic feedback to teach relationship skills was a definite theme among items that garnered a strong consensus. Specifically, participants agreed that authentic feedback to encourage managing one’s own behavior, such as waiting your turn (Q25, Round 1, IQR = 1.00, SD = 0.07, Agreement = 83%), resolving conflicts peacefully (Q27, Round 1, IQR = 1.00, SD = 0.60, Agreement = 94%), sharing feelings appropriately (Q29, Round 1, IQR = 1.00, SD = 0.50, Agreement = 100%), and giving and receiving assistance appropriately was an effective way to teach relationship skills (Q30, Round 1, IQR = 1.00, SD = 0.61, Agreement = 100%).

Related comments from Round 1 included, “Positive feedback is always productive,” “Support students as needed when they are working to resolve a conflict,” “I frequently help them express their feelings more clearly when discussing issues with peers,” and “These students can feel that they are being heard and encouraged by the reward, knowing they made a good decision and to remind themselves to perform a similar action in a similar situation.” Another participant offered a more detailed viewpoint in round 1 that impels the need for ongoing techniques/strategies for students with ASD symptoms, “With dysregulation of emotion, feelings can become elevated and cloud the judgment of a student. Walking through the reasoning, feelings of the other individual, and the impact of their actions, students can be guided to know the correct responses for the given situation. However, this is not a one time lesson. This lesson has to be repeatedly done.” Related to authentic feedback is the technique of telling students “thank you” when they do a good job of listening, providing specific feedback on what they did well (Q30, Round 1, IQR = 1.00, SD = 0.70, Agreement = 80%).
Teaching practices designed to model and reinforce appropriate behavior are peppered throughout CASEL’s list of evidence-based practices and span multiple competencies (Collaborative for Academic, Social, and Emotional Learning, 2017). Regarding relationship skills, participants agreed with strong consensus that modeling can be an effective method for teaching good boundaries (Q26, Round 1, IQR = 1.00, SD = 1.19, Agreement = 94%), communication skills (Q32, Round 1, IQR = 1.0. SD = 0.50, Agreement = 100%), conflict resolution skills (Q33, Round 1, IQR = 1.0, SD = 0.60, Agreement = 80%), and ways to seek help in an age-appropriate manner (Q34, Round 1, IQR = 1.0, SD = 0.60, Agreement = 80%).

Additional items that reached strong consensus with participants were a) supporting students in resolving conflicts (Q28, Round 1, IQR = 1.00, SD = 0.96, Agreement = 94%), b) helping students to organize and manage service projects (Q36, Round 1, IQR = 1.00, SD = 0.99, Agreement = 83%), and c) holding class meetings that provide opportunities to work on speaking and listening skills while interacting with other students (Q74, Round 1, IQR = 0.75, SD = 1.09, Agreement = 72%; Q37, Round 1, IQR = 0.00, SD = 0.47, Agreement = 94%). Several participants commented on the topic of service projects stating, “This helps tremendously with executive functioning disorders. The behavior is modeled and practiced in each class in order to pass and stay organized,” High school students may collaborate, but this would be difficult for middle school students,” and “Having a service goal is a good away to increase communication and team building.” Comments from round one regarding establishing class or morning meetings that give students the opportunity to interact with each other and practice speaking and listening skills were “This encourages social skill development between similar peers,” “We try to incorporate this every day throughout the day,” and “This can be effective if the teacher/adult is a good facilitator.”
**Relationship Skills Items That Did Not Reach Strong Consensus: 6 out of 19 (32%)**

Out of the relationship skills teaching techniques in this study, modeling assertive behavior (Q75, Round 1, IQR = 1.00, SD = 0.88, Agreement = 44%; Q75, Round 2, IQR = 1.00, SD = 0.69, Agreement = 44%) was the furthest from reaching strong consensus. However, the free-form comments provided a lot of insight and perspective on this item, especially for students with ASD. Specifically, participants in the first round expressed, “This teeters on the line of ‘it depends on the situation.’ Advocating for oneself and needing guidance is one thing. Closing off the mind and feelings to manipulate a situation is not ok,” and “I think that teaching students to be confident in advocation for themselves is very important, but there is a line that should not be crossed.” In the second round, participants stated, “Advocation by students is important. Sometimes being assertive is confused with ‘getting my way,’ not just being heard,” “Self-advocacy is important, but this is difficult for students to manage without adding intense emotional feelings,” “I agree with the statement below that says it depends on the situation,” and “This is clearly situational, case by case.” A similar item in the relationship skills competency was giving authentic praise to students for being assertive (Q76, Round 1, IQR = 1.00, SD = 0.97, Agreement = 50%; Q76, Round 2, IQR = 1.00, SD = 0.73, Agreement = 61%). Specific participant comments were “Agree for advocation, not manipulation” from round one, and “Positive feedback in important to affect given behaviors,” and “Depends on when and how and whether appropriate” from round two.

The next item that did not reach strong consensus was establishing a school-wide conflict resolution process (e.g., peer mediation program) in middle or high school to help students work through all conflicts in a constructive way (Q77, Round 1, IQR = 1.75, SD = 1.42, Agreement = 56%; Q77, Round 2, IQR = 1.00, SD = 0.70, Agreement = 61%). In round one, three participants
commented, “Different students need different strategies,” “we run this through our counseling program,” and “Students are able to participate in peace tables when experiencing conflicts with other students. Having a plan for anything is helpful for ASD students.” There were no new comments in round two.

Using team-based, collaborative teaching practices such as cooperative learning and project-based learning activities to provide students with opportunities to develop and practice communication, social, and assertiveness skills, as well as intentionally balancing student groups so that natural leaders can inspire the others they are working with (Q71, Round 1, IQR = 1.00, SD = 1.13, Agreement = 56%; Q71, Round 2, IQR = 1.00, SD = 0.84, Agreement = 67%) did not reach strong consensus among participants. Comments indicated that it could be effective but would require a lot of preparation and monitoring from teachers. Specifically, participants said, “To be done well and effectively it requires a lot of teacher prep and monitoring... but it can be effective,” “Our small class size behaves like a small group,” and “Student leadership is tricky, but can be effective.”

Also not reaching strong consensus was having students routinely evaluate how well they worked together in the group (e.g., evaluate how well they listened, took turns or how they contributed information to the learning situation); this process holds the students accountable for improving their part in a group learning situation (Q72, Round 1, IQR = 0.75, SD = 0.62, Agreement = 72%; Q72, Round 2, IQR = 1.00, SD = 1.18, Agreement = 56%). Participant comments suggest dependencies related to the effectiveness of this technique. Specifically, participants stated that “This helps the student recognize a behavior or phrase that may have been good or bad to the other person and how it affected them when the comment or action seems innocent to the initial student” and “The effectiveness of this technique is dependent on the
perception of their own participation. It is easier with a more mature group of students.” A participant in round two added, “With my group, they are a little less mature for this activity.”

Establishment of a peace corner for students, this time in conjunction with conflict resolution procedure (Q73, Round 1, IQR = 2.00, SD = 1.10, Agreement = 67%; Q73, Round 2, IQR = 0.75, SD = 0.73, Agreement = 72%), did not reach consensus among participants as an effective strategy for teaching relationship skills. A few comments were provided indicating that, according to some participants, this technique is done differently for their population in their environment, “We offer peace tables through our counseling program...we also meet more informal to discuss conflicts. I find it most beneficial to have all parties involved in the discussion,” “We have this in place at our school,” and “This works if there is an adult who monitors it.”

**RQ1e: Decision-Making Skills Techniques**

*Responsible decision making* brings together aspects of the other four competencies to make responsible decisions. (Alexander & Vermette, 2019; Collaborative for Academic, Social, and Emotional Learning, 2023). As middle school students with ASD are navigating more mature situations and decisions, they may struggle with common aspects of responsible decision making, such as analyzing situations, identifying problems, solving problems, evaluating, reflecting, and ethical responsibility due to deficits in areas such as the “ability to understand social context and emotions of others” (Khalil, 2018, p. 5).

**Decision-Making Items That Reached Strong Consensus: 3 out of 5 (60%)**

In line with themes highlighted already in other SEL competency areas, participants arrived at a consensus on responsible decision-making items related to giving authentic feedback, class rules, and modeling. Specifically, participants agreed that providing authentic
feedback when students make good decisions and supporting them throughout the process (Q38) (IQR = 0.75, SD = 0.62, Agreement = 89%) including modeling appropriate decision making and suitable behaviors (Q40, IQR = 1.00, SD = 0.51, Agreement 100%), and creating, discussing, and enforcing classroom rules and shared norms (Q39, IQR = 1.00, SD = 0.73, Agreement = 83%) were also effective SEL strategies for teaching decision-making skills. While participants strongly agreed with three out of five items within the responsible decision-making construct, no one provided related remarks.

**Decision-Making Items That Did Not Reach Strong Consensus: 2 out of 5 (40%)**

Both items that did not reach strong consensus scored low compared to most agreement scores in this study. Examining problems or moral situations from literature and examining other alternatives and impacts (Q78, Round 1, IQR = 0.75, SD = 1.08, Agreement = 72%; Q78, Round 2, IQR = 2.00, SD = 1.06, Agreement = 39%) decreased in agreement by 33 percentage points from round one to round two. Comments do not allude to any reason for this change, other than literature class. Specifically, participants said, “I do not teach literature,” and in round 2, “Characters from literature and the situations they are in can be excellent ways to discuss how the student would handle themselves,” “If I taught something other than math,” and “I do not teach literature.”

Lastly, create, agree to, and help students understand logical consequences, discussing them frequently and whenever appropriate (Q79, Round 1, IQR = 1.00, SD = 0.79, Agreement = 78%; Q79, Round 2, IQR = 0.00, SD = 1.02, Agreement = 83%) was another non-consensus item. Corresponding participant comments were “The counselors or the dean of students handles this situation” and in round 2, “Knowing what the consequence will be for a certain behavior,
whether positive or negative, is very helpful to getting the student to be able to choose how to behave,” and “Infrequently, but possible given a certain moment.

**Major Themes Among Qualitative Results**

As mentioned previously, the researcher found several common threads, or themes, among experts’ qualitative responses (i.e., “Reason/Explanation”). As expected, many items reached strong agreement, and Table 5 shows themes among those strong consensus items by competency.

**Table 5**

*Qualitative Themes Among Strong Consensus Items*

<table>
<thead>
<tr>
<th>Competency</th>
<th>Themes Spanning Across Multiple Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Awareness (RQ1a)</td>
<td>Asking question &amp; encouraging reflection on their own strengths and interests (94%)</td>
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<td></td>
<td>Establish clear, age-appropriate norms and consequences so students can see the impact of their own actions and behaviors on outcomes (94%)</td>
</tr>
<tr>
<td>Self-Management (RQ1b)</td>
<td>Authentic praise &amp; feedback for calming down (100%) and persevering (94%)</td>
</tr>
<tr>
<td></td>
<td>Modeling effective self-management (83%)</td>
</tr>
<tr>
<td></td>
<td>Routinely reminding students to think about available resources (83%)</td>
</tr>
<tr>
<td></td>
<td>Asking questions &amp; encouraging reflection to overcome barriers (100%) &amp; solve problems (100%)</td>
</tr>
<tr>
<td>Social Awareness (RQ1c)</td>
<td>Authentic praise &amp; feedback for being respectful toward others and encourage students to identify how they felt when they were respectful or supportive of another person (100%)</td>
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<td></td>
<td>Modeling respectful behavior (94%), concern for other’s well-being (89%), service to others (100%), treating others how you want to be treated (89%), respect for diversity and other cultures (83%); encourage students to talk about how they modeled respect when working with younger students (83%)</td>
</tr>
<tr>
<td></td>
<td>Routinely reminding students to think about available resources (formal and informal; 83%)</td>
</tr>
<tr>
<td>Relationship Skills (RQ1d)</td>
<td>Authentic feedback &amp; praise for waiting their turn or managed own behavior to work well with others (83%), resolving conflicts peacefully (94%), sharing feelings appropriately (100%) giving and receiving help well (94%), offering &amp; seeking help (83%)</td>
</tr>
<tr>
<td></td>
<td>Modeling effective communication &amp; relationship building (100%), conflict resolution skills (89%), ways to seek/offer help (89%)</td>
</tr>
<tr>
<td>Responsible Decision-Making (RQ1e)</td>
<td>Authentic feedback and for making good decisions (83%) and support through the process</td>
</tr>
<tr>
<td></td>
<td>Modeling good decision-making and appropriate behaviors based on norms &amp; rules (100%)</td>
</tr>
<tr>
<td></td>
<td>Developing and discussing class rules &amp; shared norms (83%)</td>
</tr>
</tbody>
</table>

*Consensus Requirements: IQR < or = 1; SD < or = 1; Agreement = 80% or higher
Tables 6 – 8 provide a quick glance of the themes among items that were not in strong agreement. Each table also outlines some connections to related literature on the topic. Chapter five delves deeper into themes among items that reached strong consensus and especially those that did not.

**Table 6**

*Qualitative Data Related to Non-Consensus Theme of Calm Space*

<table>
<thead>
<tr>
<th>Competencies</th>
<th>Qualitative Data (Reasons/Explanations)</th>
<th>What the Literature Says</th>
</tr>
</thead>
</table>
| RQ1a: Self-Awareness (72%) | **Experts expressed value in a calm space:**  
- “this is a must,”  
- “important for student to reset”  

**But with caveats (mostly regarding location):**  
- “not as a punitive measure”  
- “some need a different environment to reset”  
- “not in classroom”  
- “here it is the counseling office, not necessarily in the classroom”  
- a place in the school...not classroom...we do not have the space “our counseling office is the cool down area)”  
- ”not in the classroom, but on the hall”  
- “perhaps not inside a small classroom, more general spot”  
- “outside the classroom for privacy and effectiveness”  
- “An alternative place for students to self-regulate is helpful” | Students with disabilities often need:  
- A somewhat private, safe, and easily accessible space for self-regulation and respite from classroom demands (Maich et al., 2019; Roskos & Neuman, 2011)  
- Sensory-friendly, calm space to practice self-regulation and mindfulness for healthy emotional behaviors (Todd et al., 2022). |
| RQ1b: Self-Mgmt. (56%) | Important for students with ASD due to:  
- Inflexibility & distress over transitions and changes (American Psychiatric Association, 2022)  
- Sensitivities to sensory input (American Psychiatric Association, 2022)  
- Lack of self-awareness to recognize their emotions (Hobson, 2006; Huang et al., 2017; Huggins et al., 2021; Morin, 2006)  
- Self-management techniques to handle or regulate those emotions, causing inappropriate emotional reactions, especially without proper supports (Berkovits et al., 2017; Cai et al., 2018; Kautz et al., 2021; Koegel et al., 2014; Kuypers, 2011; Lee et al., 2007; McDougall, 1998)  

Disagreements regarding location align with literature:  
- Effectiveness & appropriateness of a calm space in the classroom can depend on student’s Zone of Regulation (Kuypers, 2011)  
- Students with ASD may require more help outside of the classroom away from other students or from where a frustrating incident occurred to regulate their emotions (Kautz et al., 2021) |
# Table 7

*Qualitative Data Related to Non-Consensus Theme of Journaling*

<table>
<thead>
<tr>
<th>Competencies</th>
<th>Qualitative Data (Reasons/Explanations)</th>
<th>What the Literature Says</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1a: Self-Awareness (33%)</td>
<td>Some experts expressed value in journaling (writing or drawing): (For reflection) “Allows them to identify what they are feeling and remember what that feels like if it were another person at a later time”</td>
<td>Research suggests: Social interactions shape writing (Schultz &amp; Fecho, 2000; Zajic &amp; Wilson, 2020). Communication via writing is a social occurrence between the writer and the reader (McCutchen, 2003). This reciprocal communication requires perspective-taking which is often challenging for students with ASD (American Psychiatric Association, 2022). Writing involves simultaneous management of several motor, cognitive, and linguistic processes, which may be difficult for students with ASD (American Psychiatric Association, 2022; LeBarton &amp; Landa, 2019; Pennington &amp; Delano, 2012; Singer &amp; Basher, 2004). Writing can be impacted by communication deficits that are core to an ASD diagnosis and include challenges with handwriting, describing abstract concepts, length of writing assignments, and organizational skills (Hilvert et al., 2020; Myles et al., 2003; Pennington &amp; Delano, 2012; Reilly, 2017). Writing can be more difficult for some students with ASD (Gillespie-Lynch et al., 2020; Zajic et al., 2020) and challenges can be frustrating, which may cause them to avoid writing and become non-compliant (Church et al., 2000) and can also result in lower narrative writing scores (Zajic et al., 2020).</td>
</tr>
<tr>
<td>RQ1b: Self-Mgmt. (28%)</td>
<td>“Expression through art can be easier for some students than sharing verbally” “Some students really enjoy transferring their feelings to art, especially those who are not very verbal” “Art is used as a form of therapy depending on the situation”</td>
<td></td>
</tr>
<tr>
<td>RQ1c: Social Awareness (56%)</td>
<td>Some expressed disagreement or caveats “Many students hate writing, trouble putting their ideas/feelings on paper” “We encourage sharing differences of opinions... there is not a focus on journaling your ideas” “Depends on student, some would rather write down than speak about, once out then they can move on” “Write or draw - a lot of the students at our school hate writing”</td>
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</tbody>
</table>

*Students with ASD still need writing skills for independence and success in life.*
Table 8
Qualitative Data Related to Non-Consensus Theme of Modeling

<table>
<thead>
<tr>
<th>Competencies</th>
<th>Qualitative Data (Reasons/Explanations)</th>
<th>What the Literature Says</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routinely model &amp; talk about your own goals</strong>&lt;br&gt;RQ1b: Self-Mgmt. (44%)</td>
<td><strong>For modeling and talking about your own goals, the only qualitative feedback received was positive:</strong>&lt;br&gt;• Modeling will help show the usefulness of goals.&lt;br&gt;• For younger students, it develops rapport and encourages them to express themselves (both from round 2).</td>
<td>Many situations require individuals with ASD to advocate for themselves (e.g., equity in resources, job opportunities, standing up to bullies).&lt;br&gt;&lt;br&gt;<strong>Research suggests that:</strong>&lt;br&gt;• Due to deficits such as use of more literal language and difficulty adjusting behavior to various social contexts call for careful consideration of the specific learning needs of students with ASD when teaching assertiveness (Kanner, 1943; Volkmar &amp; McPartland, 2014).&lt;br&gt;• Students may need to learn how to manage their feelings and regulate their emotions better or to engage in more flexible thinking before they are taught to demonstrate certain characteristics of assertiveness (American Psychiatric Association, 2022; Bambara et al., 2018).</td>
</tr>
<tr>
<td><strong>Model Assertive Behavior</strong>&lt;br&gt;RQ1d: Social Awareness (44%)</td>
<td><strong>Experts expressed that modeling assertive behavior is not effective for students with ASD or it depends on the situation:</strong>&lt;br&gt;• “Advocation by students is important. Sometimes being assertive is confused with ‘getting my way,’ not just being heard.”&lt;br&gt;• “Self-advocacy is important, but this is difficult for students to manage without adding intense emotional feelings.”&lt;br&gt;• “This is clearly situational, case by case.”&lt;br&gt;• “This teeters on the line of &quot;it depends on the situation. Advocating for oneself and needing guidance is one thing. Closing off the mind and feelings to manipulate a situation is not ok. I think that teaching students to be confident in advocation for themselves is very important, but there is a line that should not be crossed.”&lt;br&gt;• “I agree with the statement below that says it depends on the situation.”</td>
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</tr>
</tbody>
</table>
Summary

Delphi study comprised a total of 75 survey items derived from evidence-based ongoing teaching practices published by CASEL (Collaborative for Academic, Social, and Emotional Learning, 2017). The 75 questions were divided by SEL core competency taught. There were 11 items (14.7%) in the self-awareness SEL competency, 15 (20.0%) in the self-management competency, 25 (33.3%) in the social awareness competency, 19 (25.3%) in the relationship skills competency, and 5 (6.7%) in the responsible decision-making competency.

In analyzing the data for this study, the consensus criteria were for strong disagreement/agreement (1 and 2 or 6 and 7 on the 7-point scale) versus disagreement/agreement (1 to 3 or 5-7 on the 7-point scale). The second round gave participants an opportunity to revisit those items they did not rate particularly high or low while viewing an aggregated list of comments made by other participants. Of all 75 items, 41 (55%) reached strong consensus and 34 (45%) did not. Of the 11 self-awareness items, 3 items reached strong consensus and 8 did not. Of the 15 self-management items, 9 reached strong consensus and 6 did not. Of the 25 social awareness items, 13 reached strong consensus and 12 did not. Of the 19 relationship skills items, 13 reached strong consensus and 6 did not. Lastly, of the 5 responsible decision-making items, 3 reached strong consensus and 2 did not. Stand-out quantitative themes in strong consensus items spanning the five core SEL competencies were modeling appropriate behaviors and social norms, providing authentic feedback and praise, and teaching awareness and acceptance of differences among people.
CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

The purpose of this study was to gain a consensus among educators employed at a special needs academy in the southeastern United States regarding which SEL practices are effective in advancing the social-emotional learning of their students in grades 5 - 9 with Autism Spectrum Disorder (ASD), Level 1 (American Psychiatric Association, 2022). Survey items for this Delphi study consisted of 75 ongoing teaching practices published by CASEL (Collaborative for Academic, Social, and Emotional Learning, 2017). The original set of ongoing teaching practices included 99 items which were narrowed to 75 items by combining similar items and removing redundant items only as needed to shorten the overall number of questions to avoid potential survey fatigue (Field, A., 2020; O’Reilly-Shah, V. N., 2017). Results of the survey showed that whenever participants reached strong consensus on an item (i.e., IQR \( \leq 1 \), SD \( 80 \leq 1 \), and Agreement = 100%), which was 55% of the time, it was to agree to the effectiveness of that item. No items reached a consensus as to their ineffectiveness.

In addition to quantitative data regarding consensus and non-consensus items, the Delphi method used for this study also gathered optional qualitative feedback from survey participants. Several qualitative data themes emerged among survey items that demonstrated strong consensus as well as those survey items that did not reach strong consensus. This chapter will present themes found when analyzing quantitative data (i.e., Likert-scale responses) and qualitative data (i.e., “reason/explanation” responses) as they relate to the literature on ASD and SEL within the context of CASEL’s five SEL core competencies as stated in the following research questions:

- **RQ1a:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of *self-awareness*?
• **RQ1b:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of *self-management*?

• **RQ1c:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of *social awareness*?

• **RQ1d:** What techniques within CASEL’s five core competencies of SEL do educators at a special education academy in the southeastern United States consider effective for their students with ASD within the construct of *relationship skills*?

In addition, this chapter will cover potential applications for practitioners and others working in SEL and ASD education, possible limitations of this study, recommendations for future studies, and conclusions.

**Interpretation of Findings**

As shown in previous chapters, there was strong consensus, or agreement, among experts regarding 41 of the 75 items in the survey. Some agreement was expected considering the instrument itself drew from CASEL’s sample of evidence-based activities. The following sections comprise a summary of items that reached strong consensus within each CASEL competency and a reference to how they align with topical literature. In addition, each section includes a discussion of themes among items within each CASEL competency that did not demonstrate strong consensus and possible reasons for disagreement among experts.
Strong Consensus Themes Within Self-Awareness

Sharing & Reflecting

Several items corresponding to the self-awareness competency (RQ1a) reached strong consensus. These items centered around teachers communicating in age-appropriate ways about their own feelings and associated behaviors (e.g., teachers talking, asking questions, setting expectations) to encourage recognition and reflection of one’s own feelings, the effects of those feelings on behavior, and how your feelings and behaviors affect the feelings and behaviors of others. These techniques make sense considering that students with ASD tend to have trouble understanding their own emotions and identifying the emotions of people around them (Hobson, 2006; Huang et al., 2017; Huggins et al., 2021; Morin, 2006) and therefore, need guidance and encouragement in this area.

Non-Consensus Themes Within Self-Awareness

Sharing & Reflecting

As mentioned in chapter four, 73% of self-awareness items (8 out of 11) did not reach strong consensus among experts. Upon investigation, the only two self-awareness items that scored below 72% in agreement both related to teaching students to discuss and reflect on feelings (of their own and of others) and how their feelings impacted behaviors – one item took an acting, or role-playing, approach, and the other item took a journal writing approach. Considering qualitative data (i.e., user comments) for both reflection-related self-awareness questions, the reason for disagreement on effectiveness among expert appears to be with the specific activities used to promote emotional reflection among students with ASD, rather than emotional reflection itself as an SEL technique for this population of students.
Specifically, one expert participant commented that the effectiveness of role-playing to discuss and reflect on feelings depends “on the level of the student and the ability of the facilitator to monitor it,” while two other experts indicated that it would not work effectively for the middle-school age group but might for younger students. Possible reasons for disagreement regarding the journaling self-awareness item, as well as other journaling-themed items, are provided in the following section and relate to the different writing struggles sometimes seen in students with ASD compared to their neurotypical peers.

Literature posits that adolescents with ASD “appear to be intensely aware of their social disconnectedness, but do not have sufficient social tools to manage and negotiate conflict,” which can result in a low level of self-confidence and a high level of anxiety (Atwood, 2000, Hochhauser et al., 2018, p. 114). This appears to indicate a need for SEL research on the best tools (e.g., video playback, 3-D virtual reality) to help students with ASD learn to see and manage conflict, which often causes or is the product of a person’s feelings. For example, adapting the self-awareness role-playing survey item or adding a new one to include recording the role-playing scenario and playing back the video for students to see themselves and self-reflect with a teacher or qualified facilitator guidance may be helpful for students with ASD. Hochhauser and colleagues (2018) found in their study that adolescent students with ASD benefitted from pausing and replaying videos of themselves role-playing, because it gave them time to reflect and adapt their responses to the social situation (Dewey, 1997; Piaget & Campell, 2011; Hochhauser et al., 2018). Students who are less verbal or may be reluctant to role-play in front of a group might benefit from pairing up with friends or peers they connect well with instead of in front of the whole class.
The remaining six self-awareness items that did not reach strong consensus were all close to reaching strong consensus with agreement scores ranging from 72% to 78%. These centered around providing authentic feedback, establishing roles, setting goals, and encouraging discussion, which are all covered in other sections of this chapter. Because the current study set a high threshold to determine strong consensus, borderline items like these may still be effective for some students with ASD. This may be especially true with appropriate modifications based on student needs.

**Non-Consensus Themes Within Self-Awareness, Self-Management & Social Awareness**

**Journaling**

Several items – one from the self-awareness competency (RQ1a), one from self-management (RQ1b), and one from social awareness (RQ1c) – included a teaching technique related to journal writing, and all three had very low agreement percentages (i.e., 33%, 28%, and 56%, respectively). Some experts shared that a) writing can be difficult for their students with ASD, b) they have a hard time putting their ideas on paper, c) it may work for some students but not others, or d) they hate writing. In contrast, other participants indicated that some students prefer to write about something than to verbalize it, that art can be an easier form of expression for some students, and that some students, especially those who are not very verbal, enjoy transferring their feelings to art. One participant shared that while they encourage sharing different opinions, they do not focus on journaling ideas.

As the educators at the participant school indicated, the success of journal writing depends on the student. This makes sense when considering the research that suggests social interactions shape writing (Schultz & Fecho, 2000; Zajic & Wilson, 2020) and that communication via writing is a social occurrence between the writer and the reader (McCutchen,
This reciprocal communication requires perspective-taking which is often challenging for students with ASD (American Psychiatric Association, 2022). Furthermore, writing involves managing “several cognitive, linguistic, and motor processes simultaneously (Singer & Basher, 2004) while engaging in planning, generating text, organizing, and revising” (Pennington & Delano, 2012, p. 158) – all things that may be difficult for students with ASD (American Psychiatric Association, 2022; LeBarton & Landa, 2019; Pennington & Delano, 2012).

Also, there is a solid relationship between the development of oral and written language (Shanahan, 2016). Studies have shown that writing can be impacted by communication deficits that are core to an ASD diagnosis and social cognitive skills (Hilvert et al., 2020; Pennington & Delano, 2012) and include challenges with handwriting, describing abstract concepts, length of writing assignments, and organizational skills (Myles et al., 2003; Church et al., 2000, Pennington & Delano, 2012; Reilly, 2017). These challenges can be frustrating for some students with ASD, which may cause them to avoid writing and become non-compliant (Church et al., 2000). A more recent study by Zajic et al., (2020) suggests that writing tasks are more difficult for some students with ASD compared to allistic students (Gillespie-Lynch et al., 2020; Zajic et al., 2020) and that lack of engagement in writing tasks can contribute to lower scores in narrative writing (Zajic et al., 2020). Additional research by Hilvert et al. (2020) showed further evidence that students with ASD may experience more difficulties with narrative writing and added that students with ASD have trouble getting started as well as remaining on task compared to allistic peers. In their study, Reilly et al., (2017) found that students with ASD had more difficulty with a personal writing assignment (e.g., “shorter texts,” “more grammatical errors” and “fewer and less diverse complex sentences”), compared to their neurotypical peers (Hilvert, et al., 2020, p. 2). Zajic & Brown (2022) stress the importance of considering the person rather than the
diagnosis alone, as strengths and challenges vary among individuals with Autism and writing difficulties can exist for different reasons and may be situational.

It would be interesting to research the effects of incorporating journaling for SEL purposes (e.g., reflection, recognizing feelings, coping) into the language arts classroom curriculum for students with ASD. Because students are working on writing skills during language arts already, adjusting classroom assignments to align with SEL competencies seems like a logical fit. For example, the teacher could have the students read a story; write or discuss what the story is about for comprehension; and then ask the class to write about how they have felt or would feel in a similar situation as the child or character in the story. Journal writing could be done on the computer or on paper. Journal entries could be shared by those who feel comfortable sharing.

Regardless of writing challenges, students with ASD, like their neurotypical peers, need writing skills to succeed as independent adults (Asaro-Saddler et al., 2017), and poor writing skills can put students with ASD and other disabilities at a disadvantage among their neurotypical peers (Graham, 2019). Students with ASD need teachers who understand their individual writing needs and can teach to those needs. For students who struggle with writing, technology may play a supportive role in effectively teaching writing to students with ASD. Computers and iPads, particularly for those who struggle with handwriting, have been used to varying degrees in schools for years to aid writing in schools, and applications are available to help students with research, spelling, defining words, and writing narratives (Hedges et al., 2018). More recent technological advances in artificial intelligence (AI)-assisted writing, such as ChatGPT, may help students with ASD. For example, ChatGPT can offer sample sentences, define words in context, offer different meanings of words, provide text on a specific topic,
explain language mistakes, and create various forms of writing such as stories and emails (Kohnke et al., 2023). In addition, teachers can adjust the complexity level to meet the needs of different students (Kohnke et al., 2023). In their research, Bedington et al. (2024) recommended that teachers have students practice using AI at different phases of the writing process while also educating them on the limitations of AI. Considering this, it may be worthwhile to study the outcomes, including potential drawbacks (e.g., inaccuracy, plagiarism; Kohnke et al., 2023), of using AI tools to teach writing in the classroom for students with ASD.

**Strong Consensus Themes Within Self-Management**

*Modeling, Praising, Developing Short-Term Goals, Establishing Rules, & Reflecting*

Within the *self-management* competency (RQ1b), strong agreements among experts centered around modeling effective self-management in consistent and age-appropriate ways, providing authentic praise/feedback upon observing students managing themselves well (e.g., regulate emotions by taking a breath or a break; express/manage emotions appropriately, persevere); routinely developing age-appropriate, short-term goals (e.g., reduce transition time, get settled after bell rings); routinely teaching and establishing rules for using and storing equipment; and helping and encouraging students to think through and reflect on challenges (e.g., alternatives, who might be able to help, what resources might be available). For students with ASD, emotional regulation has been identified as being related to core symptoms of ASD (Berkovits et al., 2017; Cai et al., 2018), and learning self-management techniques (e.g., taking a deep breath or a break) to regulate their own emotions, thoughts, and behaviors, rather than depending on help from others (Koegel et al. 2014; Lee et al., 2007; McDougall, 1998) can be beneficial in working toward their independence. In addition, encouragement and praise,
especially specific, immediate, descriptive praise, has been shown to be a good behavioral reinforcer for most students with ASD (Polick et al., 2017; Roy, 2018).

Non-Consensus Themes Within Both Self-Awareness & Self-Management

Calm Spaces

Several items within the evidence-based CASEL techniques surveyed in this study propose using a calm space (also referred to as chill zone, cozy corner, reflection corner, etc.) in the classroom for teaching SEL to the general population of K-12 students. Research suggests that it is important to have a space within the classroom for students with and without disabilities that students can access easily and safely when they need a temporary respite from classroom demands, where they have some privacy for self-regulation, and where the teacher can still provide necessary supervision (Maich et al., 2019; Roskos & Neuman, 2011). Research by Todd et al. (2022) also suggests that a sensory-friendly, calm space where students who have trouble regulating their emotions, such as those with ASD, can go to practice self-regulation and mindfulness can be an effective method for fostering healthy social-emotional behaviors. For students with ASD, this is important because their propensity to be inflexible to changing routines, to become distressed at small changes, to have trouble with transitions, and to have hypersensitivity to sensory input (American Psychiatric Association, 2022) can cause frustration and inappropriate emotional reactions that require SEL competencies in which students with ASD struggle. Specifically, students, including adolescents, with social and emotional challenges inherent with ASD tend to lack the self-awareness to recognize their emotions (Hobson, 2006; Huang et al., 2017; Huggins et al., 2021; Morin, 2006) and the self-management techniques to handle or regulate those emotions, especially without proper supports (Berkovits et al., 2017; Cai et al., 2018; Koegel et al., 2014; Lee et al., 2007; McDougall, 1998).
Despite literature in support of using calm spaces for teaching *self-awareness* (RQ1a) and *self-management* (RQ1b) to students, including those with autism, the expert participants in our study did not reach a strong agreement for the use of a calm space in the classroom for their students with autism to teach self-awareness or self-management. Specifically, some experts agreed with the concept of calm spaces (e.g., “this is a must”) but offered more guidance for the accommodations needed for their students. Some experts surveyed indicated the classroom was not the best location for a calm space, because either there is not enough space, not enough privacy, or students “need a different environment to reset.”

Why experts in this study were not in strong agreement on the use of a calm space in the classroom, largely appears to be dependent on the student and the situation. Research related to calm spaces for students with ASD echoes this feedback. Todd et al., (2022) suggested that the effectiveness and appropriateness of a calm space in the classroom can depend on what Zone of Regulation (Kuypers, 2011) that student is in at that time. These Zones of Regulation are used to teach students with ASD how to identify with their feelings and consist of the blue zone (sluggish; feeling tired, bored, or sad), the green zone (in control of emotions and body; feeling calm or focused; the ideal zone), the yellow zone (beginning to lose control of emotions and body; feeling worried, frustration, or silly), and the red zone (loss of control of body and emotions; coping is more difficult; feelings of rage, terror; aggressive, hitting, kicking, screaming; Kuypers, 2011; Spence & Tseng, 2018). When a student is in the blue zone or the yellow zone, a self-regulation break, which may include relocating to a calm space, chill zone, etc. within the classroom, may suffice. However, a student in the red zone may need a separate sensory-friendly (not overstimulating) calm room with an adult present to help them regulate their emotions (Todd, et al., 2022). This research highlights the importance of the educator in a)
helping the student to recognize and regulate their own emotions, and b) recognizing what type of break, space in the classroom, or separate room an individual student needs at a specific time or under a particular circumstance. Because students with ASD have more social and emotional challenges associated with recognizing and managing their feelings (Huggins et al., 2021; Kautz et al., 2021), they may require more help outside of the classroom away from other students or from where a frustrating incident occurred to regulate their emotions.

While the need for a space outside of the classroom may have kept the expert panelists from demonstrating strong consensus on a calm space in the classroom, they seemed to agree that a place for students to go to “reset” or self-regulate was important. This may be why they still reached agreement that was close to strong consensus, especially for self-awareness (Agreement = 72%) and to a lesser degree self-management (Agreement = 56%). Therefore, creating a calm space in the classroom or outside of the classroom with proper adult supervision, depending on the student’s needs in that moment, may still prove to be a great solution for teaching the SEL practices of ongoing self-awareness and possibly for self-management as well. Both are certainly worth a try given that the threshold used for strong consensus was high.

Gathering feedback from students with ASD, as well as their teachers, regarding what specific aspects of a calm space or room work for them would be interesting and could lead to improvements in emotional regulation and self-management practices. If space and funds were no concern for teachers of ASD students, what sort of calm space would they design? Would it be in the classroom? Outside the classroom? Both? Additionally, it may be helpful to know what teachers in inclusive classrooms (i.e., where students with ASD attend classes with their neurotypical peers) have to say about calm spaces and how their experiences compare to the experiences of teachers who work at a special needs school.
Strong Consensus Themes Within Social Awareness

Encouragement, Authentic Praise, & Routine Reminders

Within the social awareness competency (RQ1c), experts were in strong agreement that discussing how we are all different, how others might feel in different situations, and sharing/explaining family traditions during different holiday celebrations in the classroom were all effective ways of teaching social awareness. They also united in strong agreement for encouraging students to identify their feelings when they were respectful or supportive of another person and for giving authentic feedback/praise to students when they take direction from authority figures well and show respect toward others. Experts also strongly agreed to the value of routinely reminding students in developmentally appropriate ways to think about available resources (formal and informal) when they need help and to working with other teachers and administrators to promote a sense of responsibility to be available to students.

Modeling

Experts also strongly agreed that modeling is an effective ongoing teaching practice for social awareness. Specifically, they strongly agreed that modeling concern for others’ well-being, service to others, and respect and enthusiasm for learning about different cultures, as well as teaching and modeling respectful behavior and modeling and routinely promoting a school norm of treating others how you would want to be treated were all effective strategies for teaching social awareness to students with ASD. Experts also strongly agreed to having students discuss how they modeled respect when tasked with working with a younger student. This aligns with research suggesting that social awareness skills have been taught most often and effectively to children with ASD through “modeling, prompting, and reinforcement” techniques (Quigley et al., 2018; Schrandt et al., 2013 p. 18).
Strong Consensus Themes Within Relationship Skills

Encouragement, Authentic Feedback, Modeling, Social Opportunities, & Service Learning

Regarding the relationship skills competency (RQ1d), strong consensus among experts was strong among techniques related to providing authentic feedback (e.g., praise, thanks) to encourage healthy relationship skills (e.g., waiting your turn, resolving conflicts peacefully, sharing feelings appropriately, and giving and receiving assistance appropriately). Modeling good boundaries, conflict resolution skills, and age-appropriate ways to seek and offer help, as well as modeling and reinforcing effective communication and relationship building, were additional strategies that experts strongly agreed were effective in teaching relationship skills to students with ASD. Lastly, the expert panel reached a consensus on establishing class meetings for social, speaking, and listening opportunities and on organizing service-learning strategies.

As mentioned in a previous chapter, social and emotional obstacles, diagnostically prevalent in students with ASD, can strain relationships, particularly peer relationships among middle school students. This can lead to anxiety, loneliness, (Cappella et al., 2019), disengagement (Steinberg, 2017), increased emotional and behavioral issues, a decline in academic performance, and vulnerability to social disorders (Green et al., 2021; Rockoff & Lockwood, 2010). Experts indicated that helping students work through conflicts, modeling, giving authentic praise, and reinforcing good choices and appropriate behaviors are all teaching strategies that can help students with ASD improve their relationship skills, which is crucial for this population (Collaborative for Academic, Social, and Emotional Learning, 2023).

Strong Consensus Themes Within Responsible Decision-Making

Authentic Feedback, Modeling, & Routine Discussion of Rules
When it came to responsible decision making (RQ1e), three out of five items demonstrated consensus among experts. Experts felt strongly that providing authentic feedback for making good decisions and supporting students with ASD through decision-making steps in age-appropriate ways whenever they face a choice or decision was an effective technique. They also demonstrated strong consensus that developing, enforcing, and routinely discussing class rules and shared norms, as well as modeling good decision-making, were all effective techniques for students with ASD. The techniques experts strongly agreed on for decision-making mirror many of those from the other competencies. This is not surprising since we pull together aspects of the other four competencies (i.e., self-awareness, self-management, social awareness, and relationship skills) to make responsible decisions (Alexander & Vermette, 2019; Collaborative for Academic, Social, and Emotional Learning, 2023).

**Strong Consensus Themes Within Social Awareness & Self-Management**

**Modeling**

Of the 11 items related to modeling that reached consensus among experts, 10 belonged to the *social awareness* competency (RQ1c), while one pertained to *self-management*. Within the 10 social awareness items, it is worth noting that 100% of experts agreed that modeling service to others, modeling and reinforcing effective communication and relationship building, and modeling good decision-making and appropriate behaviors based on rules and norms were all effective ongoing teaching strategies. Agreement for modeling good boundaries, as well as teaching and modeling respectful behavior, was also very high at 94%. It is not surprising that experts agreed that modeling can be a great method for teaching social awareness skills, as their opinions align with research which suggests that social awareness skills among students with ASD are most often and most effectively taught through “modeling, prompting, and
reinforcement” (Quiqley et al., 2018; Schrandt et al., 2013, p. 18). This is understandable considering the history of research on social learning theory that puts observation of others at the forefront of social learning (Bandura, 1977; Qi et al., 2017), and it has been shown to work for learners with Level 1 ASD (Alkinj et al., 2022).

Non-Consensus Themes Within Self-Management & Relationship Skills

Modeling

However, as evidenced by non-consensus results among several items pertaining to modeling, it is not a “one size fits all” technique for students with ASD, and its effectiveness depends on the skill you are teaching. Specifically, two items demonstrated a low agreement percentage of 44% among participants: 1) modeling assertive behavior, which is a relationship skill (RQ1d) and 2) routinely modeling and talking about your own goals, which is a self-management skill (RQ1e). Modeling acceptance of others who have different attitudes and values also did not reach consensus, although the agreement was much higher at 72%.

Modeling Assertive Behavior. Why did experts disagree as to the effectiveness of modeling assertive behavior? Experts indicated in their qualitative feedback that some students might use assertive behavior to manipulate a situation or that students might confuse assertiveness with “getting my way.” Multiple participants expressed that it depends on the situation. As one participant said, “I think that teaching students to be confident in advocation for themselves is very important, but there is a line that should not be crossed.” Another stated, “Self-advocacy is important, but this is difficult for students to manage without adding intense emotional feelings.”

This relates to the deficits individuals with ASD have with regulating their emotions (American Psychiatric Association, 2022). A lack of understanding regarding assertiveness is not
uncommon among students with ASD (Bambara et al., 2018). In fact, low levels of assertive communication (e.g., not initiating conversation, asking follow-up questions, or responding to cues) is one of the many pragmatic language difficulties individuals with ASD face, especially during the adolescent years when social demands increase (Bambara et al., 2018).

Expert responses indicated that a more individualized approach to modeling may be needed when teaching assertiveness to students with ASD. This aligns with literature. For example, students may need to learn how to manage their feelings and regulate their emotions better or to engage in more flexible thinking (American Psychiatric Association, 2022) before they are taught to demonstrate certain characteristics of assertiveness. The low levels of assertive communication in students with ASD mentioned in the previous paragraph (Bambara et al., 2018) may need to be taught to students with ASD before they are ready to learn higher levels of assertive communication, such as advocating for oneself. This is not to say that advocacy is not important. There are many situations that require individuals with ASD to advocate for themselves (e.g., equity in resources, job opportunities, standing up to bullies), but due to deficits in social and emotional communication, including the use of more literal language than typical peers and difficulty adjusting behavior to meet various social contexts (American Psychiatric Association, 2022, Kanner, 1943; Volkmar & McPartland, 2014), careful consideration of their specific learning needs may be crucial in teaching assertiveness.

Where teacher modeling does not always work well, other approaches might. For example, depending on the challenges of the individual student and situation, research on autism and SEL shows that video modeling can be a successful approach to teaching assertiveness to students with ASD. Specifically, studies have shown that video modeling for children and adolescents with ASD with various “exemplar” ways to respond to social exclusion and physical
and verbal bullying in an appropriately assertive way can be effective, especially when combined with in situ probes, or “skits” (Hochhauser et al., 2018; Rex et al., 2018, p. 2711). Students responded with appropriate assertiveness when shown multiple video scenarios, and most responded accordingly during live scenarios, showing that the skills were likely to be transferrable to real-life situations (Hochhauser et al., 2018; Rex et al., 2018). One student in Rex et al.’s (2018) study, who exhibited more deficits in reciprocal communication and echolalia, required more video sessions than other study participants to learn how to respond appropriately, further supporting the need for individualized approaches for students with ASD.

In general, video modeling has been shown to be successful in teaching a variety of skills to students with ASD. There are many reasons proffered for why this is the case. Research has shown that students with autism process visual information better than they do verbal information (Corbett & Abdullah, 2005; DeMyer et al., 1974; Freeman et al., 1985; Happe 1994a). Students with autism who have trouble with social interactions may benefit from learning social models through video prior to experiencing live social interactions. Research also suggests that video modeling may improve the attention of students with autism by selecting the relevant stimuli on which to focus their attention via the screen through creation of a “restricted field of focus,” as well as through the removal of extraneous auditory and visual stimuli (Charlop-Christy et al., 2000; Charlop-Christy & Daneshvar, 2002; Corbett & Abdullah, 2005, p. 4; Shipley-Benamou et al., 2002). In addition, repeating target behaviors on-screen helps promote retention (Corbett & Abdullah, 2005). When transitioning to in vivo modeling, using scenarios and items that closely mimic the videos watched have been shown to help with transference (Corbett & Abdullah, 2005; Taylor et al., 1999). Some research further suggests that videos are naturally motivating and reinforcing to students with autism simply because they are
more visually stimulating (Charlop-Christy & Daneshvar, 2002; Corbett & Abdullah, 2005; Wert & Neisworth, 2003). For educators, video modeling has advantages such as ease of creation (Charlop-Christy et al., 2000) and portability (Macpherson et al., 2015).

A future study that explores various methods for teaching different levels of assertiveness to different students with ASD would be interesting. Perhaps a case study or another type of qualitative research would be beneficial in getting to the unique challenges of teaching different aspects of assertiveness to students with ASD. This may lead to unveiling unique dependencies for some students with ASD when learning one level of assertiveness to the next. Such research potentially could help educators better understand the needs of ASD students when it comes to assertiveness, especially in relationships, and how best to meet those needs.

**Routinely Modeling and Talking About Your Own Goals.** Two experts provided reasons for why they thought this was an effective teaching strategy, stating that “Modeling will help show the usefulness of goals,” and “For younger students, it develops rapport and encourages them to express themselves.” On the other hand, experts who did not think this was an effective strategy did not provide any reasons why. While goal setting is an important part of the self-management core competency (Cai et al., 2018; Berkovits et al., 2017; Collaborative for Academic, Social, and Emotional Learning, 2017, 2023), there is little to no peer-reviewed research on the effectiveness of teacher modeling or discussing their own goals as a method for teaching self-management, and specifically goal setting, to students with ASD. More research may be needed to determine why experts do not find modeling effective for teaching self-management to middle school students with ASD. As with modeling assertiveness, video modeling may be an effective approach, but more research is needed to explore the best way to teach goal setting to students with ASD.
Suggestions for Future Studies

The participant pool for this study, while focused on educators at one school, drew responses from different types of educators (e.g., classroom teachers, counselors, lead administrators). It would be interesting to survey classroom teachers only, counselors only, or administrators only, as well as to survey parents and compare the different viewpoints. This would be in accordance with CASEL’s “school-wide” approach to SEL (Collaborative for Academic, Social, and Emotional Learning, 2023).

While the purpose of this study was to explore the effectiveness of evidence-based SEL techniques recommended by CASEL, a logical next step in research would be to investigate how those techniques should be revised to better suit SEL for students with Level 1 ASD. A potential refinement to the original CASEL sample techniques for a future study would be to a) add new and edit existing items to meet the needs of students with Level 1 ASD based on the results of the current study (e.g., modifications to calm space techniques based on student needs or situation, alternatives to journaling techniques that still support reflecting, sharing, etc. for students who struggle with writing). A second potential improvement would be to edit items to ensure they are most effective (e.g., clear, neutral, separated/single-barreled, relevant, focused, and specific) for survey validity (Brown, 2023; Menold & Raykov, 2022). Additionally, the current study benefitted from the “reason/explanation” qualitative findings from expert participants. However, a future study that includes additional and possibly more specific qualitative questions might result in a higher qualitative response rate and richer data (e.g., better understanding of relationships, process, and perceptions; Barroga & Matanguihan, 2022; Drury et al., 2011) that can, in turn, inform additional surveys or follow-up studies.
Another topic that may be worth exploring is the potential advantages of teaching SEL as a separate class versus integrating SEL into other academic classes. Is one better than the other, or is it best to use a combination of the two? Another area to investigate is how to broach sensitive topics with students who have ASD, such as diversity in gender and sexual orientation. As a participant stated, “…diversity in gender and sexual orientation I don't think should be presented broadly because ASD kids receive that information differently and are more easily influenced, many are desperate for belonging.”

Overall, the results of this study emphasize the need for more SEL research related to the needs of students with ASD. Specifically, little peer-reviewed research has looked at the best ways to modify SEL strategies for neurodivergent students or even what how current strategies work or do not work for neurodivergent students and what are some effective ways to modify SEL techniques for neurodivergent students. This research drives home that SEL at its best is not a “one size fits all” method, because it does not fit the population of students our participants work with every school day.

**Study Limitations**

The current study was performed with educators at one school. While this school is chosen for valid reasons (i.e., they have a large population of students with Level 1 ASD, faculty members are educated and/or trained in special education, and SEL is part of their school mission), the results might not generalize to other similar schools or other types of schools, such as public or private schools with inclusive classrooms. This study was also limited to a set age group (i.e., fifth to eighth grade) students and we do not know if the results will generalize to younger or older children and adolescents. In addition, this study focused on Level 1 ASD but
might not work as well or at all for students with ASD Levels 2 or 3 who require more substantial support.

There were some survey items that reached near consensus. Some of those items might have resulted in strong agreement if the study had included a third survey. However, keep in mind that there were solid reasons for limiting the study to two rounds. Plus, we were looking at strong consensus, so even if the item did not meet the criteria for strong consensus, several or more people were still in agreement.

The ongoing teaching practices used were a portion of a larger list of sample activities which also included 79 “Lesson and Instruction” activities. Exploring all 178 of the sample activities provided by CASEL would have been out of the scope of this research study, but it may be worthwhile to explore the remaining activities in future studies and perhaps even compare them with the data gathered on the ongoing teaching practices.

Lastly, the researcher’s son is a student at the participating school. This could have influenced participation which was at 72%. However, it was communicated upfront that participation was voluntary and participant information related to this study would remain confidential.

Applications for Practitioners

For classroom teachers or anyone teaching SEL to students with ASD, Level 1, this research provides a great starting point of activities and techniques to implement. The study began with 75 suggested activities for teaching SEL. This study presented those activities to current educators at a school for students with ASD and gathered their expert opinions on all 75 activities. Forty-one of those activities garnered strong consensus (see Table 5) and would be great approaches to start with when teaching SEL to this specific population of neurodivergent
students (i.e., fifth through ninth grade students with ASD, Level). Items that did not gain strong consensus but bordered on strong agreement (see Table 6) are still worth trying, because the threshold for strong consensus was set high (SD < or = 1; IQR < or = 1 and agreement = 80% or higher). The remaining non-consensus items may not work as well, and if used, may need to be modified to accommodate the individual needs of the student, the environment, or both.

Data gathered from this study, (i.e., strong consensus) could be used to create a set of SEL standards, or starting points at least, for middle school students with ASD that potentially can be generalized for use by other schools. Items that almost reached consensus could be tried as-is or modified for individual students and their environment. A set of best practices and starting points could be beneficial to educators who have never taught students with ASD or who are not experienced with using SEL techniques for students with ASD. This would, in turn, benefit the students with ASD by, hopefully, improving their social and emotional skills and relieving some of the negative conditions that come with delays in social and emotional learning.
Table 9

**Strong Consensus SEL Activities – Great to Start With for Students with ASD**

<table>
<thead>
<tr>
<th>Competency</th>
<th>CASEL’s Sample Ongoing Teaching Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-Awareness</strong></td>
<td>1. Talk about one’s own feelings in an age-appropriate way and how you knew what you were feeling and how it influenced behavior.</td>
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<td></td>
<td>2. Establish clear, age-appropriate norms and consequences so students can see the impact of their own actions and behaviors on outcomes.</td>
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<td></td>
<td>3. Ask age-appropriate questions that help students reflect on their own strengths and interests. E.g., “I can tell you’re really enjoying this. Can you tell me what about this is making you so happy?” “I can tell you’re really proud of how you did. Can you tell me what about this you’re most proud of?”</td>
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<tr>
<td><strong>Self-Management</strong></td>
<td>4. As a teacher, consistently model effective self-management in an age-appropriate way for students (“I’m feeling a little frustrated, so I’m going to stop and take a breath before I decide what to do next.”).</td>
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<td></td>
<td>5. Routinely develop and complete age-appropriate, short-term classroom goals (reduce time taken during transitions, put supplies away more quickly for young children, get settled after the bell rings for older children).</td>
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<td></td>
<td>6. Routinely teach students, and establish rules for, how to use and put away certain equipment and resources appropriately.</td>
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<td></td>
<td>7. Routinely provide authentic praise to students when you observe them managing themselves well (e.g., regulating their emotions by taking a breath, taking a break to think about a decision, etc.).</td>
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<td></td>
<td>8. Routinely notice, discuss, and provide authentic feedback when students persevere (e.g., “I know how hard that was, but you never gave up. You kept on going. I’m very proud of you, and you should be proud of yourself”).</td>
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<td>9. Help students think through and suggest alternatives when students encounter challenges.</td>
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<td></td>
<td>10. Routinely ask questions that encourage students to reflect on barriers they may encounter and that also help them think about ways they can overcome them, in any difficult situation they are facing.</td>
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<td>11. Listen deeply to students and provide age-appropriate support and/or authentic praise for expressing and managing emotions appropriately (e.g., “I know you’re angry at her, right now for ____. What are some calm ways you could tell her what you’re upset about?” or &quot;I saw the way you waited your turn just now [e.g., to get a cupcake, to look in the microscope]. I know you were excited and it was hard to do, but I saw you take a breath. I’m proud of you, and you should be proud of yourself.”).</td>
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<td></td>
<td>11a.Routinely ask or remind students to think about who might be able to help them in various situations or what other resources might be available.</td>
</tr>
<tr>
<td><strong>Social Awareness</strong></td>
<td>12. Routinely talk about how others feel in different situations.</td>
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</tbody>
</table>
### Table 9 - Continued

**Strong Consensus SEL Activities – Great to Start With for Students with ASD**

<table>
<thead>
<tr>
<th>Competency</th>
<th>CASEL’s Sample Ongoing Teaching Practices</th>
</tr>
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<tbody>
<tr>
<td><strong>Social Awareness - Continued</strong></td>
<td>13. Model respect and enthusiasm for learning about diversity – show enthusiasm for literature by authors from many different cultures, show enthusiasm for learning about different cultures.</td>
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<td></td>
<td>14. At holiday time create classroom celebrations that allow students to share and explain traditions from their own family holidays. Give everyone an opportunity to participate. Involve older family members, asking them to share their traditions with students.</td>
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<td>15. Routinely ask questions in different situations that make the point that we all are similar and we all are different.</td>
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<td>16. Teach and model respectful behavior.</td>
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<td>17. Model concern for the well-being of others.</td>
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<td>18. Give feedback/praise to students in authentic ways when they are respectful toward others and encourage students to identify how they felt when they were respectful or supportive of another person.</td>
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<td>19. Model service to others.</td>
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<td>20. Routinely give specific and timely feedback to students for accepting direction well from authority figures.</td>
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<td></td>
<td>21. Model and routinely promote a school norm of treating others the way you would want to be treated.</td>
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<tr>
<td></td>
<td>22. Routinely remind students in developmentally appropriate ways when they need help to think about the resources (formal and informal) that are available to them.</td>
</tr>
<tr>
<td></td>
<td>23. Work with other teachers and administrators to create a sense of responsibility among adults in the school to be available to help students.</td>
</tr>
<tr>
<td></td>
<td>24. Have students work with younger students and discuss how they modeled respect with the younger student.</td>
</tr>
<tr>
<td><strong>Relationship Skills</strong></td>
<td>25. Give students authentic feedback when they wait their turn or anytime they managed their own behavior to work well with others. (E.g., “I saw the way you waited your turn just now. I know you were excited, but you kept your hands to yourself. You did great.”)</td>
</tr>
<tr>
<td></td>
<td>26. Model good boundaries.</td>
</tr>
<tr>
<td></td>
<td>27. Give students authentic feedback, including in the form of praise, for resolving conflicts peacefully.</td>
</tr>
<tr>
<td></td>
<td>28. Support students as needed when they are working to resolve a conflict.</td>
</tr>
<tr>
<td></td>
<td>29. Give students authentic feedback when they share their feelings appropriately.</td>
</tr>
<tr>
<td></td>
<td>30. Give students authentic feedback for giving and receiving help well.</td>
</tr>
<tr>
<td></td>
<td>31. Thank students whenever they listen well and tell them specifically what they did well.</td>
</tr>
<tr>
<td></td>
<td>32. Model and reinforce effective communication and relationship building.</td>
</tr>
</tbody>
</table>
Table 9 - Continued

*Strong Consensus SEL Activities – Great to Start With for Students with ASD*

<table>
<thead>
<tr>
<th>Competency</th>
<th>CASEL’s Sample Ongoing Teaching Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship Skills - Continued</td>
<td>33. Model good conflict resolution skills.</td>
</tr>
<tr>
<td></td>
<td>34. Model age-appropriate ways to seek and offer help.</td>
</tr>
<tr>
<td></td>
<td>35. Encourage students to offer or seek help in age-appropriate ways, whenever appropriate, and provide them with age-appropriate, authentic feedback for offering and seeking help.</td>
</tr>
<tr>
<td></td>
<td>36. Especially with middle and high school students, organize service-learning strategies within the school. Have students collaborate on how to organize and manage the project.</td>
</tr>
<tr>
<td></td>
<td>37. Establish class or morning meetings that give students the opportunity to interact with each other and practice speaking and listening skills.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Competency</th>
<th>CASEL’s Sample Ongoing Teaching Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Decision-Making</td>
<td>38. Give students authentic feedback for making good decisions and support them through the steps of making a decision in age-appropriate ways anytime they face a choice or decision.</td>
</tr>
<tr>
<td></td>
<td>39. Develop and enforce class rules and shared norms, discussing them routinely.</td>
</tr>
<tr>
<td></td>
<td>40. Model good decision-making and appropriate behaviors based on norms and rules.</td>
</tr>
</tbody>
</table>

Table 10

*SEL Activities Worth Trying – Likely to Need Modifications for Students with ASD*

<table>
<thead>
<tr>
<th>Competency</th>
<th>CASEL’s Sample Ongoing Teaching Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Awareness</td>
<td>43. Routinely ask questions in age-appropriate ways when students are experiencing different feelings to help them identify and express those feelings. (E.g., When students are experiencing negative emotions, routinely ask, “Would you like to change the way you feel? What are some things you might be able to do right now to change the way you feel?”)</td>
</tr>
<tr>
<td></td>
<td>46. Create age-appropriate class roles and responsibilities that emphasize individual strengths, areas to improve, and personal and group goals.</td>
</tr>
<tr>
<td></td>
<td>47. Provide age-appropriate authentic feedback and ask open-ended questions that invite students to engage in deeper reflection about their own strengths and interests.</td>
</tr>
<tr>
<td></td>
<td>48. Tell students routinely why you the teacher feel happy/optimistic for them and their future.</td>
</tr>
<tr>
<td></td>
<td>46. Create age-appropriate class roles and responsibilities that emphasize individual strengths, areas to improve, and personal and group goals.</td>
</tr>
</tbody>
</table>
Table 10 - Continued

SEL Activities Worth Trying – Likely to Need Modifications for Students with ASD

<table>
<thead>
<tr>
<th>Competency</th>
<th>CASEL’s Sample Ongoing Teaching Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Management</td>
<td>51. Listen deeply to students and provide age-appropriate support and/or authentic praise for expressing and managing emotions appropriately (e.g., “I know you’re angry at her, right now for _____. What are some calm ways you could tell her what you’re upset about?” or “I saw the way you waited your turn just now [e.g., to get a cupcake, to look in the microscope]. I know you were excited and it was hard to do, but I saw you take a breath. I’m proud of you, and you should be proud of yourself.”). 52. Routinely encourage students to save a desired activity or experience (e.g., eating a cookie, going out with a friend) until they have completed tasks or duties (e.g., cleaning up after play time or finishing their homework).</td>
</tr>
<tr>
<td>Social Awareness</td>
<td>57. Provide students with opportunities to share in small groups how they feel in different situations. 72. Have students routinely evaluate how well they worked together in the group. One day it may be to evaluate how well they listened, took turns or how they contributed information to the learning situation. This process holds the students accountable for improving their part in a group learning situation.</td>
</tr>
</tbody>
</table>
adjustments for students with ASD based on individual needs, environment, and teacher experience.

An important take-away from this research is that many SEL techniques depend on the student and the situation. Teachers are in the best position to determine which SEL techniques work well for their students, which ones may need to be modified and how, as well as which ones absolutely do not work for their students. The hope is that teachers can use this research as a good starting point for some evidence-based practices that work for many students and might work for theirs as well, as-is or modified.

Another key takeaway is that SEL for ASD needs more research and exploration in collaboration with educators, parents, and therapists other support providers, as well as, and perhaps most crucially, with the students themselves. Students with ASD need and are expected by society to have social skills to be successful in this world (Oberle et al., 2016; Osher et al., 2008). Students with autism deserve opportunities to learn the same social skills as their neurotypical peers do, but they have different and unique needs from other students and may need different supports when it comes to learning (Boujut et al., 2016; Denning & Moody, 2013; Stichter et al., 2007). Working toward finding evidence-based solutions to meet their SEL needs through research and development of specialized techniques and programs can go a long way to providing practitioners with the tools they need to help these students succeed socially, emotionally, and academically.
REFERENCES


https://www.autismspeaks.org/autism-diagnosis-criteria-dsm-5

https://doi.org/10.1016/j.rasd.2018.01.002


http://dx.doi.org/10.1136/ebnurs-2020-103303


https://doi.org/10.1007/s10803-007-0501-2

https://doi.org/10.1016/j.compcom.2024.102833


https://doi.org/10.1177/0272431617735653

https://www.cdc.gov/ncbddd/autism/facts.html

https://www.cdc.gov/ncbddd/autism/hcp-dsm.html


https://doi.org/10.1037/a0018607

https://doi.org/10.1037/h0100294


https://doi.org/10.1038/265726a0


https://doi.org/10.1016/B978-0-12-823410-5.00007-3

https://doi.org/10.1177/20597991231179393


https://doi.org/10.1007/s40263-018-0556-y
https://doi.org/10.1080/2372966X.2022.2030193


program for middle school students. *Psychology in the Schools, 58*(6), 1056–1069. [https://doi.org/10.1002/pits.22487](https://doi.org/10.1002/pits.22487)


Kelly, R., O’Malley, M.-P., & Antonijevic, S. (2018). ‘Just trying to talk to people … It’s the hardest’: Perspectives of adolescents with high-functioning autism spectrum disorder on
their social communication skills. *Child Language Teaching and Therapy, 34*(3), 319-334. [https://doi.org/10.1177/0265659018806754](https://doi.org/10.1177/0265659018806754)


https://doi.org/10.3389/fpsyg.2015.00539


https://doi.org/10.1177/0031721718815668


Moreno, A. (2024, January 17). Even if it seems like SEL “isn’t working” keep at it. Here’s why. CASEL. https://casel.org/blog/even-if-it-seems-like-sel-isnt-working-keep-at-it-heres-why/


http://www.jstor.org/stable/23879912


https://doi.org/10.5662/wjm.v11.i4.116


http://doi.org/10.1080/0305764X.2015.1125450


https://doi.org/10.1016/j.appdev.2014.02.004


https://doi.org/10.1901/jaba.2012.45-593

https://doi.org/10.1002/ir.101

https://doi.org/10.1177/108835761774128

https://doi.org/10.1007/s40617-018-0225-0

https://doi.org/10.1586/14737175.8.4.657


Thangaratinam, S., & Redman, C. W. E. (2005). The delphi technique. The Obstetrician & Gynaecologist, 7(2), 120-125. https://doi.org/10.1576/toag.7.2.120.27071


https://doi.org/10.1146/annurev-clinpsy-032813-153710

https://doi.org/10.1016/j.techfore.2012.04.013

https://doi.org/10.1007/s12098-015-1938-5


https://doi.org/10.1177/1362361317723836


https://doi.org/10.1016/j.rasd.2020.101590


https://www.spectrumnews.org/news/evolution-autism-diagnosis-explained/


APPENDICES

Appendix A

Analysis of Participant Characteristics

<table>
<thead>
<tr>
<th>Participant Characteristics for Participant Educators of Middle School Students with ASD</th>
<th>Data Sources</th>
<th>Participant Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information</strong></td>
<td><strong>Entry experience</strong></td>
<td>Email to school leadership with questions</td>
</tr>
<tr>
<td><strong>Knowledge of topic areas</strong></td>
<td></td>
<td>School leadership to confirm experience; survey/questionnaire to gather specific knowledge and feedback</td>
</tr>
<tr>
<td><strong>Educational and ability level</strong></td>
<td></td>
<td>School leadership to confirm educational and ability level; school website profile</td>
</tr>
<tr>
<td><strong>Attitudes</strong></td>
<td><strong>Attitude toward survey(s)</strong></td>
<td>Email and survey/questionnaire</td>
</tr>
<tr>
<td><strong>Attitude toward content</strong></td>
<td></td>
<td>Survey/questionnaire (difficult to determine)</td>
</tr>
</tbody>
</table>
# Appendix B

## CASEL Sample Ongoing Teacher Practices for Delphi Survey Items

<table>
<thead>
<tr>
<th>Ref #</th>
<th>Core Comp.</th>
<th>Original CASEL Item(s)</th>
<th>Proposed New Item</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Self-Awareness</td>
<td>Set up a peace corner where kids can go and reflect on their feelings.</td>
<td>Establish a separate space in the classroom where students can go to reflect on their feelings, practice individual self-management, or resolve conflicts (e.g., cozy corner, happy place, cool-down corner, reading corner).</td>
<td>Originally combined #s 13, 35 &amp; 131 (from original list), but separated again because I ended up with one item that applied to self-awareness, self-mgmt, and relationship skills. How it was combined: SME Notes: I’d include some middle and high school examples and name it a reflection corner, sensory corner, chill zone, etc. Addressed? Did not add examples, but I did add “reflection corner, chill zone, etc” to the examples.</td>
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<tr>
<td>15</td>
<td>Routinely talk about physical and emotional cues that tell us how we’re feeling in different situations in age-appropriate ways. E.g., with younger children, “You’re feeling really excited right now, I can tell by the big smile on your face. How can you tell on the inside you’re feeling happy?” With older children, “I can tell by the way you’re fidgeting right now that you might be a little nervous. How can you tell on the inside that you’re feeling nervous?”</td>
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<tr>
<td>16</td>
<td>Self-Awareness</td>
<td>Talk about one’s own feelings in an age-appropriate way and how you knew what you were feeling, how it influenced behavior….</td>
<td>Talk about one’s own feelings in an age-appropriate way and how you knew what you were feeling and how it influenced behavior.</td>
<td>Changed after SME looked at revised questions, but no meaning/context was changed (basically just grammatical to clarity).</td>
</tr>
<tr>
<td>18</td>
<td>Self-Awareness</td>
<td>18. Routinely ask questions in age-appropriate ways when students are experiencing different feelings to help them identify and express those feelings. 19. When students are experiencing negative emotions, routinely ask, “Would you like to change the way you feel? What are some things you might be able to do right now to change the way you feel?”</td>
<td>Routinely ask questions in age-appropriate ways when students are experiencing different feelings to help them identify and express those feelings. (E.g., When students are experiencing negative emotions, routinely ask, “Would you like to change the way you feel? What are some things you might be able to do right now to change the way you feel?”)</td>
<td>Combined #s 18 &amp; 19, because 19 seems like an example of 18.</td>
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<td>SME Notes: Does this matter if the questions are closed or open-ended questions</td>
<td></td>
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<tr>
<td></td>
<td>Self-Awareness</td>
<td>17. Routinely encourage middle and high school students to reflect and analyze in journals or in pair shares how their thoughts and emotions affect decision-making and responsible behavior. 20. Routinely encourage students to write in journals or share with partners in pair shares to reflect on their feelings and how their feelings affected their own behavior as well as the impact of their feelings and actions on others.</td>
<td>Routinely encourage students to write in journals or share with partners in pair shares to reflect on their feelings and how their feelings affected their own behavior and decision making, as well as the impact of their feelings and actions on others.</td>
<td>Combined #s 17 and 20 from original list. They were very similar. SME Notes: This is good! Should this be split in two? Was already somewhat double-barreled as written in CASEL’s example. I did not make it worse.</td>
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<tr>
<td>21</td>
<td>Self-Awareness</td>
<td>Younger children can role play the feelings of characters or their own feelings and talk about the way they look and feel. As feelings become more complex, routinely acting or role playing can be a powerful way to express those emotions.</td>
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<tr>
<td>24</td>
<td>Self-Awareness</td>
<td>Create age-appropriate class roles and responsibilities that emphasize individual strengths, areas to improve, and personal and group goals.</td>
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<tr>
<td>25</td>
<td>Self-Awareness</td>
<td>Establish clear, age-appropriate norms and consequences so students can see the impact of their own actions and behaviors on outcomes.</td>
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<tr>
<td><strong>26</strong></td>
<td><strong>Self-Awareness</strong></td>
<td>Ask age-appropriate questions that help students reflect on their own strengths and interests. E.g., “I can tell you’re really enjoying this. Can you tell me what about this is making you so happy?” “I can tell you’re really proud of how you did. Can you tell me what about this you’re most proud of?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>27</strong></td>
<td><strong>Self-Awareness</strong></td>
<td>Provide age-appropriate authentic feedback and ask open-ended questions that invite students to engage in deeper reflection about their own strengths and interests.</td>
<td></td>
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</tr>
<tr>
<td><strong>28</strong></td>
<td><strong>Self-Awareness</strong></td>
<td>Tell students routinely why you the teacher feel happy/optimistic for them and their future.</td>
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</tr>
<tr>
<td><strong>34</strong></td>
<td><strong>Self-Mgmt.</strong></td>
<td>Routinely practice age-appropriate self-management techniques as a regular part of the school day (e.g., start class with a deep breathing exercise).</td>
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<tr>
<td><strong>35</strong></td>
<td><strong>Self-Mgmt.</strong></td>
<td>Establish a separate space in the classroom for individual self-management (e.g., cozy corner, happy place, cool-down corner, reading corner).</td>
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</tr>
<tr>
<td>36</td>
<td>Self- Mgmt.</td>
<td>As a teacher, consistently model effective self-management in an age-appropriate way for students (“I’m feeling a little frustrated, so I’m going to stop and take a breath before I decide what to do next.”).</td>
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<tr>
<td>37</td>
<td>Self- Mgmt.</td>
<td>14. Listen deeply to what students say and reflect what you heard about their feelings, e.g., “It sounds like you’re feeling very frustrated right now....” 37. Give students age-appropriate, authentic praise for self-management (e.g., “I saw the way you waited your turn just now [e.g., to hold the bunny, to look in the microscope]. I know you were excited and it was hard to do, but I saw you take a breath. I’m proud of you, and you should be proud of yourself.”). 38. Give students age-appropriate support and/or authentic praise for expressing emotions appropriately (e.g., “I know you’re angry at her, right now for _____. What are some calm ways you could tell her what you’re upset about?” or “I saw the way you waited your turn just now [e.g., to get a cupcake, to look in the microscope]. I know you were excited and it was hard to do, but I saw you take a breath. I’m proud of you, and you should be proud of yourself.”).</td>
<td>Combined #s 14, 37 &amp; 38 (from original list)</td>
<td>SME Notes: Good! I might add “specific, sequential rules”</td>
</tr>
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</table>
corner and drawing that picture about what happened/coming to talk to me about it.”

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<tr>
<td>39</td>
<td>Self- Mgmt.</td>
<td>Routinely encourage students to save a desired activity or experience (e.g., eating a cookie, going out with a friend) until they have completed tasks or duties (e.g., cleaning up after play time or finishing their homework).</td>
</tr>
<tr>
<td>46</td>
<td>Self- Mgmt.</td>
<td>Routinely develop and complete age-appropriate, short-term classroom goals (reduce time taken during transitions, put supplies away more quickly for young children, get settled after the bell rings for older children).</td>
</tr>
<tr>
<td>47</td>
<td>Self- Mgmt.</td>
<td>41. Teach students a lesson on how to use certain equipment and resources appropriately. Use a lesson to establish rules for how equipment should be put away. Routinely teach students, and establish rules for, how to use and put away certain equipment and resources appropriately.</td>
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</tr>
<tr>
<td>47</td>
<td>Routinely teach students how to use equipment and resources appropriately.</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Self-Mgmt.</td>
<td>Routinely provide authentic praise to students when you observe them managing themselves well (e.g., regulating their emotions by taking a breath, taking a break to think about a decision, etc.).</td>
</tr>
<tr>
<td>49</td>
<td>Self-Mgmt.</td>
<td>Routinely model and talk about your own goals.</td>
</tr>
</tbody>
</table>
|50| Self-Mgmt. | Routinely work with the class to establish and complete class projects.  
51. Students can also be taught to self-assess progress toward their learning goals, which is a powerful strategy that promotes academic growth and should be an instructional routine in classroom grades 4-12. |
|55| Self-Mgmt. | Routinely notice and discuss with students when they are being perseverant.  
60. Give authentic feedback when students persevere (e.g., “I know how hard that was, but you never gave up. You kept on going. I’m very proud of you, and you should be proud of yourself”). |

Combined #s 50 & 51 from original list.  
SME Notes: Good!
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<tbody>
<tr>
<td>56</td>
<td>Self- Mgmt.</td>
<td>Help students think through and suggest alternatives when students encounter challenges.</td>
</tr>
<tr>
<td>57</td>
<td>Self- Mgmt.</td>
<td>Routinely ask questions that encourage students to reflect on barriers they may encounter and that also help them think about ways they can overcome them, in any difficult situation they are facing.</td>
</tr>
<tr>
<td>58</td>
<td>Self- Mgmt.</td>
<td>Routinely ask students who might be able to help them in various situations or what other resources might be available. Routinely ask or remind students to think about who might be able to help them in various situations or what other resources might be available.</td>
</tr>
<tr>
<td>59</td>
<td>Self- Mgmt.</td>
<td>Routinely encourage students to write in journals or share with partner in pair shares to reflect why their efforts in certain situations succeeded or failed and what they might do differently in the future.</td>
</tr>
<tr>
<td></td>
<td>Social Awareness</td>
<td>69. Discuss characters in literature or figures in history, how they felt, and why they took certain actions or behaved the way they did. 70. Discuss how we know the way characters in literature feel, based on what the author tells us about the character’s behavior.</td>
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</tr>
<tr>
<td>69</td>
<td>Social Awareness</td>
<td>Discuss characters in literature or figures in history, how they felt, and why they took certain actions or behaved the way they did. Discuss how we know how the characters feel based on what the author says about the character's behavior.</td>
</tr>
<tr>
<td>71</td>
<td>Social Awareness</td>
<td>Routinely talk about how others feel in different situations.</td>
</tr>
<tr>
<td>72</td>
<td>Social Awareness</td>
<td>Provide students with opportunities to share in small groups how they feel in different situations.</td>
</tr>
<tr>
<td>74</td>
<td>Social Awareness</td>
<td>In teaching allow students to dress up as characters in history or literature and act out how those individuals were feeling and how it affected their behavior.</td>
</tr>
<tr>
<td>75</td>
<td>Social Awareness</td>
<td>Build on the diversity in the classroom by having students share their different cultural</td>
</tr>
<tr>
<td>Page</td>
<td>Header</td>
<td>Content</td>
</tr>
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</tr>
<tr>
<td>76</td>
<td>Social Awareness</td>
<td>When there is a difference of opinion among students, allow them to reflect on how they are feeling (drawing a picture or writing an essay or in a journal) and then share with a partner or in a small group, to be heard but also to listen to how others feel differently and why in the same situation.</td>
</tr>
<tr>
<td>82</td>
<td>Social Awareness</td>
<td>Model respect and enthusiasm for learning about diversity – show enthusiasm for literature by authors from many different cultures, show enthusiasm for learning about different cultures.</td>
</tr>
<tr>
<td>83</td>
<td>Social Awareness</td>
<td>At holiday time create classroom celebrations that allow students to share and explain traditions from their own family holidays. Give everyone an opportunity to participate. Involve older family members, asking them to share their traditions with students.</td>
</tr>
<tr>
<td>84</td>
<td>Social Awareness</td>
<td>Use cooperative learning and project-based learning strategically (reflecting thoughtfully and intentionally on the composition of groups) to build diverse working groups.</td>
</tr>
<tr>
<td>85</td>
<td>Social Awareness</td>
<td>Routinely ask questions in different situations that make the point that we all are similar and we all are different.</td>
</tr>
<tr>
<td>86</td>
<td>Social Awareness</td>
<td>Model acceptance of others who have different attitudes and values.</td>
</tr>
<tr>
<td>87</td>
<td>Social Awareness</td>
<td>Class or morning meetings are designed to involve students in sharing and recognizing others have different experiences, which develops empathy and appreciation for differences and similarities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Design class or morning meetings to involve students in sharing and recognizing others have different experiences, which develops empathy and appreciation for differences and similarities.</td>
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<tr>
<td></td>
<td></td>
<td>Changed the first part of sentence slightly to use active voice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SME Notes: Do you care if they explicitly teach students how to participate?</td>
</tr>
<tr>
<td>95</td>
<td>Social Awareness</td>
<td>88. Teach lessons on respect.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>95. Model respectful behavior.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teach and model respectful behavior.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Combined with #88. Perhaps this makes it too double-barreled. I’m thinking if there's an issue with the question, we can address it in the second survey round by breaking them up, assuming the number of questions will be significantly fewer in the second round.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SME Notes: Could you include “and practice”</td>
</tr>
<tr>
<td></td>
<td>Social Awareness</td>
<td>Develop and revise classroom rules and norms with students to work together to promote understanding and respect.</td>
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<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>96</td>
<td></td>
<td>Model concern for the well-being of others.</td>
</tr>
<tr>
<td>97</td>
<td></td>
<td>98. Give feedback to students in authentic ways when they are respectful toward others encourage students to identify how they feel when they were respectful or supportive of another person. 130. Give students authentic praise when they show respect for boundaries (e.g., “Thank you for waiting patiently while I was speaking to her. What can I help you with, now?”).</td>
</tr>
<tr>
<td>98</td>
<td></td>
<td>Give feedback/praise to students in authentic ways when they are respectful toward others and encourage students to identify how they felt when they were respectful or supportive of another person.</td>
</tr>
<tr>
<td>99</td>
<td></td>
<td>Identify and celebrate historical figures who have contributed to their communities. List their contributions and ways that they contributed to the common good.</td>
</tr>
<tr>
<td>100</td>
<td></td>
<td>Ask routine questions throughout the day to draw attention to how students’ behavior is affecting those around them.</td>
</tr>
<tr>
<td>101</td>
<td></td>
<td>Model service to others.</td>
</tr>
<tr>
<td></td>
<td>Social Awareness</td>
<td>Routinely give specific and timely feedback to students for accepting direction well from authority figures.</td>
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<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>106</td>
<td>Social Awareness</td>
<td>Routinely discuss why we have classroom or school rules in the context of current experiences in the school or classroom and how they are affecting students’ current behavior.</td>
</tr>
<tr>
<td>107</td>
<td>Social Awareness</td>
<td>Model and routinely promote a school norm of treating others the way you would want to be treated.</td>
</tr>
<tr>
<td>108</td>
<td>Social Awareness</td>
<td>Have students work with younger students and discuss how they modeled respect with the younger student.</td>
</tr>
<tr>
<td>115</td>
<td>Social Awareness</td>
<td>Routinely remind students in developmentally appropriate ways when they need help to think about the resources (formal and informal) that are available to them.</td>
</tr>
<tr>
<td>116</td>
<td>Social Awareness</td>
<td>Work with other teachers and administrators to create a sense of responsibility among adults in the school to be available to help students.</td>
</tr>
<tr>
<td>Item</td>
<td>Relationship Skills</td>
<td>Note</td>
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<td>------</td>
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</tr>
<tr>
<td>126</td>
<td>Use team-based, collaborative teaching practices such as cooperative learning and project-based learning to provide students with opportunities to develop and practice communication and social and assertiveness skills. Be very intentional to balance student groups so that natural leaders can inspire the others they are working with. Intentionally use collaborative work groups to reinforce the importance of working together to solve problems and achieve goals. Give students opportunities to practice social skills in small groups and project based learning activities. Use interactive teaching strategies such as cooperative learning and project-based learning to provide students with opportunities to develop and practice positive communication skills. Use collaborative work groups (e.g., cooperative learning projects or project based learning) to reinforces the importance of working together to solve problems and achieve goals.</td>
<td>Combined #s 126, 128, 137, 148, &amp; 158. from original list. (Note: original item #126 was two sentences.) SME Notes: Good!</td>
</tr>
<tr>
<td>127</td>
<td>Relationship Skills</td>
<td>Give students authentic feedback when they wait their turn (“I saw the way you waited your turn just now. I know you were excited, but you kept your hands to yourself. You did great.”) or anytime they managed their own behavior to work well with others.</td>
</tr>
<tr>
<td>129</td>
<td>Relationship Skills</td>
<td>Have students routinely evaluate how well they worked together in the group. One day it may be to evaluate how well they listened, took turns or how they contributed information to the learning situation. This process holds the students accountable for improving their part in a group learning situation.</td>
</tr>
<tr>
<td>131</td>
<td>Relationship Skills</td>
<td>Establish a peace corner, and a conflict resolution procedure students can use.</td>
</tr>
<tr>
<td>132</td>
<td>Relationship Skills</td>
<td>Model good boundaries.</td>
</tr>
</tbody>
</table>
| 133 | Relationship Skills | 133. Praise students for resolving conflicts peacefully.
159. Give students authentic feedback for resolving conflicts peacefully. | Give students authentic feedback, including in the form of praise, for resolving conflicts peacefully. | Combined #s 133 and 159 from original list.  
SME Notes: Good!
<table>
<thead>
<tr>
<th></th>
<th>Relationship Skills</th>
<th>Support students as needed when they are working to resolve a conflict.</th>
<th>Deleted #160 in lieu of #134 as they were saying the same thing worded differently. 160-Deleted: Give students support as needed when they are working out a conflict.</th>
</tr>
</thead>
<tbody>
<tr>
<td>134</td>
<td>Relationship Skills</td>
<td>Give students authentic feedback when they share their feelings appropriately.</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>Relationship Skills</td>
<td>Give students authentic feedback for giving and receiving help well.</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>Relationship Skills</td>
<td>Thank students whenever they listen well and tell them specifically what they did well.</td>
<td></td>
</tr>
<tr>
<td>145</td>
<td>Relationship Skills</td>
<td>Model and reinforce effective communication and relationship building.</td>
<td></td>
</tr>
<tr>
<td>146</td>
<td>Relationship Skills</td>
<td>Establish class or morning meetings that give students the opportunity to interact with each other and practice speaking and listening skills.</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>Relationship Skills</td>
<td>Model assertive behavior.</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>Relationship Skills</td>
<td>Give students authentic praise for being assertive.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relationship Skills</td>
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</tr>
<tr>
<td>155</td>
<td>155. Establish a conflict resolution process that is used school-wide any time there is a conflict. 157. Establish a school-wide peer mediation program in middle or high school to help students work through conflicts in a constructive way.</td>
<td>155. Establish a school-wide conflict resolution process (e.g., peer mediation program) in middle or high school to help students work through all conflicts in a constructive way.</td>
<td>Combined #s 155 &amp; 157 from original list. They were very similar.</td>
</tr>
<tr>
<td>156</td>
<td>156. Relationship Skills Model good conflict resolution skills.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>163</td>
<td>163. Relationship Skills Model age-appropriate ways to seek and offer help.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>164. Relationship Skills 164. Encourage students to offer or seek help in age-appropriate ways, whenever appropriate. 165. Provide students with age-appropriate, authentic feedback.</td>
<td>164. Encourage students to offer or seek help in age-appropriate ways, whenever appropriate, and provide them with age-appropriate, authentic feedback for offering and seeking help.</td>
<td>Combined 164 &amp; 165 from original list. for offering and seeking help.</td>
</tr>
<tr>
<td>166</td>
<td>166. Relationship Skills Especially with middle and high school students, organize service-learning strategies within the school. Have students collaborate on how to organize and manage the project.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Responsible Decision Making</td>
<td>174. Give students authentic feedback for making good decisions. 175. Support students through the steps of making a decision in age-appropriate ways, anytime they face a choice or decision.</td>
<td>Give students authentic feedback for making good decisions and support them through the steps of making a decision in age-appropriate ways anytime they face a choice or decision.</td>
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<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>176</td>
<td>Responsible Decision Making</td>
<td>Examine problems or moral situations from literature and examine other alternatives and impacts.</td>
<td></td>
</tr>
<tr>
<td>177</td>
<td>Responsible Decision Making</td>
<td>Create, agree to, and help students understand logical consequences, discussing them frequently and whenever appropriate.</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>Responsible Decision Making</td>
<td>Develop and enforce class rules and shared norms, discussing them routinely.</td>
<td></td>
</tr>
<tr>
<td>179</td>
<td>Responsible Decision Making</td>
<td>173. Model good decision-making. 179. Model appropriate behaviors based on norms and rules.</td>
<td>Model good decision-making and appropriate behaviors based on norms and rules.</td>
</tr>
</tbody>
</table>
## Appendix C

SEL Techniques That Reached Strong Consensus

<table>
<thead>
<tr>
<th>SEL Competencies (American Psychiatric Association, 2022)</th>
<th>After Delphi Round 1</th>
<th>After Delphi Round 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IQR</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Self-Awareness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Talk about one’s own feelings in an age-appropriate way and how you knew what you were feeling and how it influenced behavior.</td>
<td>1.00</td>
<td>0.73</td>
</tr>
<tr>
<td>2. Establish clear, age-appropriate norms and consequences so students can see the impact of their own actions and behaviors on outcomes.</td>
<td>1.00</td>
<td>0.62</td>
</tr>
<tr>
<td>3. Ask age-appropriate questions that help students reflect on their own strengths and interests. E.g., “I can tell you’re really enjoying this. Can you tell me what about this is making you so happy?” “I can tell you’re really proud of how you did. Can you tell me what about this you’re most proud of?”</td>
<td>0.00</td>
<td>0.47</td>
</tr>
<tr>
<td><strong>Self-Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. As a teacher, consistently model effective self-management in an age-appropriate way for students (“I’m feeling a little frustrated, so I’m going to stop and take a breath before I decide what to do next.”).</td>
<td>1.00</td>
<td>0.71</td>
</tr>
<tr>
<td>5. Routinely develop and complete age-appropriate, short-term classroom goals (reduce time taken during</td>
<td>1.00</td>
<td>0.67</td>
</tr>
</tbody>
</table>
transitions, put supplies away more quickly for young children, get settled after the bell rings for older children).

6. Routinely teach students, and establish rules for, how to use and put away certain equipment and resources appropriately.  

|          | 1.00 | 0.70 | 0 | 89 |

7. Routinely provide authentic praise to students when you observe them managing themselves well (e.g., regulating their emotions by taking a breath, taking a break to think about a decision, etc.).

|          | 1.00 | 0.50 | 0 | 100 |

8. Routinely notice, discuss, and provide authentic feedback when students persevere (e.g., “I know how hard that was, but you never gave up. You kept on going. I’m very proud of you, and you should be proud of yourself”).

|          | 1.0 | 0.61 | 0 | 94 |

9. Help students think through and suggest alternatives when students encounter challenges.

|          | 1.00 | 0.50 | 0 | 100 |

10. Routinely ask questions that encourage students to reflect on barriers they may encounter and that also help them think about ways they can overcome them, in any difficult situation they are facing.

|          | 0.75 | 0.46 | 0 | 100 |

11. Listen deeply to students and provide age-appropriate support and/or authentic praise for expressing and managing emotions appropriately (e.g., “I know you’re angry at her, right now for _____. What are some calm ways you could tell her what you’re upset about?” or “I saw the way you waited your turn just now [e.g., to get a cupcake, to look in the microscope]. I know you were excited and it was hard to do, but I saw you take a breath. I’m proud of you, and you should be proud of yourself.”).

|          | 0.00 | 0.73 | 0 | 83 |
11a. Routinely ask or remind students to think about who might be able to help them in various situations or what other resources might be available.

**Social Awareness**

12. Routinely talk about how others feel in different situations.

13. Model respect and enthusiasm for learning about diversity – show enthusiasm for literature by authors from many different cultures, show enthusiasm for learning about different cultures.

14. At holiday time create classroom celebrations that allow students to share and explain traditions from their own family holidays. Give everyone an opportunity to participate. Involve older family members, asking them to share their traditions with students.

15. Routinely ask questions in different situations that make the point that we all are similar and we all are different.

16. Teach and model respectful behavior.

17. Model concern for the well-being of others.

18. Give feedback/praise to students in authentic ways when they are respectful toward others and encourage students to identify how they felt when they were respectful or supportive of another person.

19. Model service to others.
20. Routinely give specific and timely feedback to students for accepting direction well from authority figures.  

21. Model and routinely promote a school norm of treating others the way you would want to be treated.  

22. Routinely remind students in developmentally appropriate ways when they need help to think about the resources (formal and informal) that are available to them.  

23. Work with other teachers and administrators to create a sense of responsibility among adults in the school to be available to help students.  

24. Have students work with younger students and discuss how they modeled respect with the younger student.  

**Relationship Skills**

25. Give students authentic feedback when they wait their turn or anytime they managed their own behavior to work well with others. (E.g., “I saw the way you waited your turn just now. I know you were excited, but you kept your hands to yourself. You did great.”)  

26. Model good boundaries.  

27. Give students authentic feedback, including in the form of praise, for resolving conflicts peacefully.  

28. Support students as needed when they are working to resolve a conflict.
29. Give students authentic feedback when they share their feelings appropriately. 1.00 0.51 0 100
30. Give students authentic feedback for giving and receiving help well. 1.00 0.61 0 94
31. Thank students whenever they listen well and tell them specifically what they did well. 1.00 0.70 0 89
32. Model and reinforce effective communication and relationship building. 1.00 0.50 0 100
33. Model good conflict resolution skills. 1.00 0.66 0 89
34. Model age-appropriate ways to seek and offer help. 1.00 0.66 0 89
35. Encourage students to offer or seek help in age-appropriate ways, whenever appropriate, and provide them with age-appropriate, authentic feedback for offering and seeking help. 1.00 0.57 0 94
36. Especially with middle and high school students, organize service-learning strategies within the school. Have students collaborate on how to organize and manage the project. 1.00 0.99 0 83
37. Establish class or morning meetings that give students the opportunity to interact with each other and practice speaking and listening skills. 0.00 0.47 0 94

**Responsible Decision-Making**

38. Give students authentic feedback for making good decisions and support them through the steps of making a decision in age-appropriate ways anytime they face a choice or decision. 0.75 0.62 0 89
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<tbody>
<tr>
<td>39. Develop and enforce class rules and shared norms, discussing them routinely.</td>
<td>1.00</td>
<td>0.73</td>
<td>0</td>
</tr>
<tr>
<td>40. Model good decision-making and appropriate behaviors based on norms and rules.</td>
<td>1.00</td>
<td>0.51</td>
<td>0</td>
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</table>
# Appendix D

SEL Techniques That Did Not Reach Strong Consensus

<table>
<thead>
<tr>
<th>SEL Competencies (American Psychiatric Association, 2022)</th>
<th>Delphi Round 1</th>
<th>Delphi Round 2</th>
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<tbody>
<tr>
<td></td>
<td>IQR</td>
<td>SD</td>
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<tr>
<td>Self-Awareness</td>
<td></td>
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<tr>
<td>41. Establish a separate space in the classroom where students can go to reflect on their feelings, practice individual self-management, and resolve conflicts (e.g., cozy corner, happy place, cool-down corner, reading corner, reflection corner, chill zone, etc.).</td>
<td>1.00</td>
<td>1.15</td>
</tr>
<tr>
<td>42. Routinely talk about physical and emotional cues that tell us how we’re feeling in different situations in age-appropriate ways. E.g., with younger children, “You’re feeling really excited right now, I can tell by the big smile on your face. How can you tell on the inside you’re feeling happy?” With older children, “I can tell by the way you’re fidgeting right now that you might be a little nervous. How can you tell on the inside that you’re feeling nervous?”</td>
<td>1.00</td>
<td>0.94</td>
</tr>
<tr>
<td>43. Routinely ask questions in age-appropriate ways when students are experiencing different feelings to help them identify and express those feelings. (E.g., When students are experiencing negative emotions, routinely ask, “Would you like to change the way you feel? What are some things you might be able to do right now to change the way you feel?”)</td>
<td>0.75</td>
<td>1.00</td>
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</table>
44. Routinely encourage students to write in journals or share with partners in pair shares to reflect on their feelings and how their feelings affected their own behavior and decision making, as well as the impact of their feelings and actions on others.  

45. Have younger children role play the feelings of characters or their own feelings and talk about the way they look and feel. As feelings become more complex, routinely acting or role playing can be a powerful way to express those emotions.  

46. Create age-appropriate class roles and responsibilities that emphasize individual strengths, areas to improve, and personal and group goals.  

47. Provide age-appropriate authentic feedback and ask open-ended questions that invite students to engage in deeper reflection about their own strengths and interests.  

48. Tell students routinely why you the teacher feel happy/optimistic for them and their future.  

**Self-Management**  

49. Routinely practice age-appropriate self-management techniques as a regular part of the school day (e.g., start class with a deep breathing exercise).  

50. Establish a separate space in the classroom for individual self-management (e.g., cozy corner, happy place, cool-down corner, reading corner, chill space, reflection spot, etc.).  

51. Listen deeply to students and provide age-appropriate support and/or authentic praise for
expressing and managing emotions appropriately (e.g., “I know you’re angry at her, right now for _____. What are some calm ways you could tell her what you’re upset about?” or “I saw the way you waited your turn just now [e.g., to get a cupcake, to look in the microscope]. I know you were excited and it was hard to do, but I saw you take a breath. I’m proud of you, and you should be proud of yourself.”).

52. Routinely encourage students to save a desired activity or experience (e.g., eating a cookie, going out with a friend) until they have completed tasks or duties (e.g., cleaning up after play time or finishing their homework).

53. Routinely model and talk about your own goals.

54. Routinely encourage students to write in journals or share with partner in pair shares to reflect why their efforts in certain situations succeeded or failed and what they might do differently in the future.

55. Routinely work with the class to establish and complete age-appropriate class projects requiring effort, and encourage completion.

**Social Awareness**

56. Discuss characters in literature or figures in history, how they felt, and why they took certain actions or behaved the way they did. Discuss how we know how the characters feel based on what the author says about the character’s behavior.

57. Provide students with opportunities to share in small groups how they feel in different situations.
58. In teaching allow students to dress up as characters in history or literature and act out how those individuals were feeling and how it affected their behavior.

59. Build on the diversity in the classroom by having students share their different cultural perspectives on situations.

60. When there is a difference of opinion among students, allow them to reflect on how they are feeling (drawing a picture or writing an essay or in a journal) and then share with a partner or in a small group, to be heard but also to listen to how others feel differently and why in the same situation.

61. Use cooperative learning and project-based learning strategically (reflecting thoughtfully and intentionally on the composition of groups) to build diverse working groups.

62. Model acceptance of others who have different attitudes and values.

63. Design class or morning meetings to involve students in sharing and recognizing others have different experiences, which develops empathy and appreciation for differences and similarities.

64. Develop and revise classroom rules and norms with students to work together to promote understanding and respect.

65. Identify and celebrate historical figures who have contributed to their communities. List their contributions and ways that they contributed to the common good.
66. Ask routine questions throughout the day to draw attention to how students’ behavior is affecting those around them.

67. Routinely discuss why we have classroom or school rules in the context of current experiences in the school or classroom and how they are affecting students’ current behavior.

68. Have students work with younger students and discuss how they modeled respect with the younger student.

69. Give feedback/praise to students in authentic ways when they are respectful toward others and encourage students to identify how they felt when they were respectful or supportive of another person.

70. Model and routinely promote a school norm of treating others the way you would want to be treated.

**Relationship Skills**

71. Use team-based, collaborative teaching practices such as cooperative learning and project-based learning activities to provide students with opportunities to develop and practice communication and social and assertiveness skills. Be very intentional to balance student groups so that natural leaders can inspire the others they are working with.

72. Have students routinely evaluate how well they worked together in the group. One day it may be to evaluate how well they listened, took turns or how they contributed information to the learning situation. This process holds the students accountable for improving their part in a group learning situation.
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<tbody>
<tr>
<td>73. Establish a peace corner, and a conflict resolution procedure students can use.</td>
<td>2.00</td>
<td>1.10</td>
<td>0</td>
<td>67</td>
<td>0.75</td>
<td>0.73</td>
<td>0</td>
<td>72</td>
</tr>
<tr>
<td>74. Establish class or morning meetings that give students the opportunity to interact with each other and practice speaking and listening skills.</td>
<td>0.75</td>
<td>1.09</td>
<td>0</td>
<td>72</td>
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<tr>
<td>75. Model assertive behavior.</td>
<td>1.00</td>
<td>0.88</td>
<td>0</td>
<td>44</td>
<td>1.00</td>
<td>0.69</td>
<td>0</td>
<td>44</td>
</tr>
<tr>
<td>76. Give students authentic praise for being assertive.</td>
<td>1.00</td>
<td>0.97</td>
<td>0</td>
<td>50</td>
<td>1.00</td>
<td>0.73</td>
<td>0</td>
<td>61</td>
</tr>
<tr>
<td>77. Establish a school-wide conflict resolution process (e.g., peer mediation program) in middle or high school to help students work through all conflicts in a constructive way.</td>
<td>1.75</td>
<td>1.42</td>
<td>6</td>
<td>56</td>
<td>1.00</td>
<td>0.70</td>
<td>0</td>
<td>61</td>
</tr>
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</table>

**Responsible Decision-Making**

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<tbody>
<tr>
<td>78. Examine problems or moral situations from literature and examine other alternatives and impacts.</td>
<td>0.75</td>
<td>1.08</td>
<td>0</td>
<td>72</td>
<td>2.00</td>
<td>1.06</td>
<td>0</td>
<td>39</td>
</tr>
<tr>
<td>79. Create, agree to, and help students understand logical consequences, discussing them frequently and whenever appropriate.</td>
<td>1.00</td>
<td>0.79</td>
<td>0</td>
<td>78</td>
<td>0.0</td>
<td>1.02</td>
<td>0</td>
<td>83</td>
</tr>
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</table>
Appendix E
IRB Approval Letter

Institutional Review Board
Division of Research and Innovation
Office of Research Compliance
University of Memphis
315 Admin Bldg
Memphis, TN 38152-3370

February 13, 2024

PI Name: Linda Payne
Co-Investigators:
Advisor and/or Co-PI: Craig Shepherd
Submission Type: Initial
Title: EFFECTIVENESS OF SOCIAL AND EMOTIONAL LEARNING PRACTICES FOR MIDDLE SCHOOL STUDENTS WITH ASD AS RATED BY EDUCATORS: A DELPHI STUDY
IRB ID: PRO-FY2024-273
Exempt Approval: February 8, 2024

The University of Memphis Institutional Review Board, FWA00006815, has reviewed your submission in accordance with all applicable statutes and regulations as well as ethical principles.

Approval of this project is given with the following obligations:

1. When the project is finished a completion submission is required
2. Any changes to the approved protocol requires board approval prior to implementation
3. When necessary submit an incident/adverse events for board review
4. Human subjects training is required every 2 years and is to be kept current at citiprogram.org.

If applicable, please upload a copy of the IRB Approval Letter to your Cayuse Proposal Record.

For any additional questions or concerns please contact us at irb@memphis.edu or 901.678.2705

Thank you,
James P. Whelan, Ph.D.
Institutional Review Board Chair
The University of Memphis.
Appendix F

Letter of Support From Collaborating School

January 26, 2024

Dear University of [Redacted] Internal Review Board,

I am writing this letter of support for Linda Payne’s doctoral dissertation research study with the working title, Effectiveness of Social and Emotional Learning Practices for Middle School Students with ASD as Rated by Educators: A Delphi Study. [Redacted] is in support of this research project with the understanding that participation among our employees is voluntary and will require a signed consent form from each participant, as Linda Payne has indicated. Data collection will be in the form of online surveys of [Redacted] employees and may begin after IRB approval.

Sincerely,
Appendix G

APA Permission to Reprint Letter

March 7, 2024

Linda Payne
University of Memphis
3720 Alumni Ave
Memphis, TN 38152
lapayne2@memphis.edu

Permission Request #PL20734

Dear Linda,

I am responding to your request to reproduce the items listed below in “Effectiveness of Social and Emotional Learning Practices for Middle School Students with ASD as Rated by Educators: A Delphi Study,” a dissertation, published by University of Memphis:

From Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision: Autism Spectrum Disorder Diagnostic Criteria

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Sincerely,

Samantha Kralstein
Licensing Coordinator