

THE ASSOCIATION BETWEEN PRE-KINDERGARTEN TEACHERS' USE OF
CLASSROOM STRATEGIES AND STUDENTS' SOCIAL-EMOTIONAL
DEVELOPMENT

by

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ABSTRACT

Caitlin J. Simmons. The association between pre-kindergarten teachers' use of classroom strategies and students' social-emotional development. (Under the direction of DR. JAMES R. COOK)

Considerable research has documented the effects that high-quality preschool programs can have on children's early learning and cognitive development, including language, literacy, reading and math skills (Magnuson, Meyers, Ruhm, & Waldfogel, 2004; Weiland & Yoshikawa, 2013; Yoshikawa et al., 2013; Xiang & Schweinhart, 2002). Quality preschool programs have also been associated with improvements in students' social-emotional skills, which are essential for school readiness and later success (Yates et al., 2008). There is also evidence that preschool programs can help to reduce disparities for children with varying sociodemographic characteristics associated with poorer academic performance (Gormley & Gayer, 2005; Magnuson et al., 2004; Magnuson, Ruhm, & Waldfogel, 2007; Weiland & Yoshikawa, 2013). Due to the importance of quality early childhood education programs for students' academic success, many different interventions and curricula have been designed to enhance social-emotional development in preschool programs. The present study examined one of these curricula, Teaching Strategies GOLD (TS GOLD), which seeks to prepare children for kindergarten by providing research-based resources to be used in classroom settings. Specifically, the present study examined the association between pre-kindergarten teachers' use of TS GOLD classroom strategies and students' social-emotional development.

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CHAPTER 1: INTRODUCTION

1.1 Relevant Theory and Research

Considerable research has documented the effects that high-quality preschool programs can have on children's early learning and cognitive development. For instance, attending a quality preschool program is associated with improvements in language, literacy, reading and math skills (Magnuson, Meyers, Ruhm, & Waldfogel, 2004; Weiland & Yoshikawa, 2013; Yoshikawa et al., 2013; Xiang & Schweinhart, 2002) for enrolled children compared to those who do not attend a preschool program. These skills have been associated with improved academic performance and achievement test scores (Henry, Ponder, Rickman, Mashburn, Henderson, & Gordon, 2004) as well as school readiness, which refers to the skills, knowledge, and behaviors associated with success in elementary school (Gormley, Gayer, Phillips, & Dawson, 2005).

Results have been mixed regarding the duration of these positive effects, with some researchers documenting that they last into kindergarten or grade school, and multiple studies finding that these gains fade over time (see, e.g., Yoshikawa et al., 2013). As one case in point, Magnuson, Ruhm, and Waldfogel (2007) found that a prekindergarten program was associated with higher reading and math skills, but that these effects were diminished by the end of first grade. Other investigators have found that academic gains in preschool persisted into first grade (von Suchodoletz, Trommsdorff, Heikamp, Wieber, & Gollwitzer, 2009), and some found evidence of effects lasting through fifth grade (Claessens, Duncan, & Engel, 2009; Li-Grining, Votruba-Drzal, Maldonado-Carreno, & Haas, 2010). Of particular salience, a review by Yoshikawa and colleagues (2013) concluded that, while the positive effects of preschool

on achievement test scores appear to diminish by elementary school, long-term effects on a range of outcomes, such as graduation rates, criminal activity, and teenage pregnancy, remain. Similarly, other studies have found long-term effects of preschool including a higher likelihood of receiving a 4-year post-secondary education (Barnett, 1993; Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002), higher employment compensation in adulthood (Barnett, 1993), and lower rates of criminal activity (Barnett, 1993; Duncan & Magnuson, 2011).

Quality preschool programs, defined by a variety of elements including engaging and emotionally supportive interactions, effective curriculum implementation, and factors such as class size (Yoshikawa et al., 2013), have been associated with improvements in students' social-emotional development. Social-emotional development is defined as the capacity to form secure relationships with peers and adults; experience, regulate, and express emotions in socially and culturally appropriate ways; and learn by exploring the environment (Center on the Social Emotional Foundations for Early Learning, 2008). Early development of social-emotional skills is essential for school readiness and later success; however, children often enter school without the social-emotional skills they need to be successful (Yates et al., 2008). Students in preschool programs have shown decreases in aggression (Arnold, Kupersmidt, Voegler-Lee, & Marshall, 2012), higher attentiveness (Gormley Jr., Phillips, Newmark, Welte, & Adelstein, 2011), higher initiative and social relations (Xiang & Schweinhart, 2002), increases in persistence and emotion regulation (Li-Grinnig et al., 2010), and improvements in executive functioning and emotion recognition (Weiland & Yoshikawa, 2013).

Studies have also indicated that preschool children's social-emotional development is related to academic achievement independent of the child's general intelligence (Blair & Razza, 2007; von Suchodoletz et al., 2009). Students with greater social-emotional skills such as self-regulation have demonstrated greater school readiness, better emergent vocabulary, and higher early math and literacy abilities in kindergarten (Blair & Razza, 2007; Gawrilow et al., 2014; McClelland, Cameron, Connor, Farris, Jewkes, & Morrison, 2007; Ponitz, McClelland, Matthews, & Morrison, 2009). Furthermore, this early academic skill development is crucial, as longitudinal data have suggested that math skills at school-entry (age five or six years) are a significant predictor of academic achievement in later grades (Duncan et al., 2007) and may even predict academic achievement into early adulthood (Entwisle, Alexander, & Olson, 2005). In a similar vein, Li-Grining and colleagues (2010) found that students with greater social-emotional skills (i.e., persistence, emotion regulation, and attentiveness) in kindergarten had higher rates of academic growth through fifth grade compared to their peers, resulting in increased differences in academic performance between children as elementary school progressed. Such findings highlight the importance of early development of social-emotional skills for improving a child's academic trajectory.

There is also evidence that preschool programs can help to reduce disparities for children with varying sociodemographic characteristics associated with poorer academic performance. For instance, multiple studies have shown that preschool students who receive free or reduced cost lunch (an indicator of household income) evidence the largest gains in academic skills compared to their classmates representing other income groups (Gormley & Gayer, 2005; Magnuson et al., 2004; Magnuson, Ruhm, &

Waldfogel, 2007; Weiland & Yoshikawa, 2013). Racial and ethnic minority students, particularly black and Hispanic children, also show greater academic gains in preschool than their white peers (Gormley & Gayer, 2005; Weiland & Yoshikawa, 2013). English Language Learners (ELL), who typically have lower reading achievement than their native English-speaking peers (August & Shanahan, 2006), have also been shown to benefit from participation in preschool programs (Kieffer, 2008). As one case in point, a recent study (Wilson, Dickinson, & Rowe, 2013) found that a literacy- and language-focused prekindergarten program helped ELL students reach national norms on language skills, setting them up to begin kindergarten at the same or similar level as their native English-speaking peers. This research suggests that quality preschool programs may provide a mechanism for reducing achievement and income gaps associated with race, ethnicity, and income.

While the evidence for positive outcomes of preschool programs is promising, there is a high degree of variability across preschool programs – programs differ meaningfully in such areas as curriculum, program length, and staffing (Bryant et al., 2002) and also exhibit substantive differences in program quality (Mashburn et al., 2008). The existing research is clear that enrollment in high quality preschool programs has been related to gains for children (Manning & Patterson, 2006; Mashburn et al., 2008; Votruba-Drzal, Coley, & Chase-Lansdale, 2004); however, many preschool programs cannot be characterized as “high quality” and do not adequately foster the development of the academic and social-emotional skills necessary for their students to succeed in future schooling (Diamond et al., 2013). One recent review of outcomes associated with preschool concluded that the use of curricula focused on specific aspects of learning (e.g.,

language, math, social-emotional development) provided a significant enhancement to children's learning and development (Yoshikawa et al., 2013).

Many different interventions and curricula have been designed to enhance social-emotional development in preschool programs. The Collaborative for Academic, Social, and Emotional Learning (CASEL; casel.org) tracks effective, evidence-based programs which promote social-emotional learning in academic (preschool through high school) settings. CASEL's goal is to support social-emotional learning initiatives in schools, districts, and states nationwide. The organization has published a guide to evidence-based programs at the preschool and elementary school levels and continues to update their list of effective programs on their website. In order to be identified by CASEL, a program must meet three criteria: 1) be well-designed, classroom-based, and targeting specific areas of social and emotional competence, 2) provide training and other implementation support for teachers and other staff, and 3) show evidence of efficacy through at least one evaluation (CASEL, 2013).

CASEL's program guide provides insight into important elements of programs which promote social-emotional development at the preschool level, as well as differing approaches used in classroom settings. All or almost all the programs use particular classroom approaches to teaching social-emotional skills: explicit skills instruction and integration with academic curriculum areas. Explicit skills instruction involves providing teachers with lesson plans to be used in their classrooms which specifically focus on social and emotional skill building (e.g., making friends, working with others, etc.). Integration with academic curriculum areas consists of embedding social-emotional instruction into the teaching of core academic subjects (e.g., asking students to problem

solve or take different perspectives while reading a book). Other similarities among programs include providing opportunities for students to practice social and emotional skills (during classroom lessons as well as applying skills to real-life situations) and using assessment tools to monitor implementation and/or student behavior.

Fewer than half of the programs identified by CASEL promote social-emotional skills through teacher instructional practices, which involve specific classroom management strategies to create a positive classroom environment and actively engage students in supporting social-emotional development (e.g., involving students in decision-making). It may be that this approach to social-emotional development is better suited to older students; a higher proportion of programs at the elementary school level employed this approach than at the preschool level (CASEL, 2013). Programs also differ in the extent to which they engage contexts outside of the classroom (i.e., school, family, community) to reinforce social-emotional skills. About half of the programs use a school-wide approach (e.g., collaboration among classrooms); all of the programs include at least some effort to engage families (e.g., regular homework assignments to be completed with family members); and none of the programs employed efforts to promote interactions between students and community members. The CASEL guide provides a helpful overview of program and classroom practices associated with preschool students' social-emotional development.

One curriculum that works specifically with early childhood educators and provides research-based resources to be used in classroom settings is Teaching Strategies GOLD (TS GOLD; Teaching Strategies, n.d.). TS GOLD seeks to prepare children for kindergarten, and it aligns resources for educators with specific objectives for

development within ten areas: social-emotional, physical, language, cognitive, literacy, mathematics, science and technology, social studies, the arts, and English language acquisition. TS GOLD includes two main components: an assessment system for teachers to track students' progress in the 10 development areas, and specific strategies that can be used in the classroom which align with the development areas. Teachers can use the online assessment system to assess students' progress as well as access strategies designed to target particular TS GOLD objectives (e.g., teachers can search for a strategy that targets the 'Regulates own emotions and behaviors' objective in the social-emotional domain and use that strategy to improve student's emotion regulation skills).

The TS GOLD assessment system has been widely evaluated and has demonstrated interrater reliability, internal consistency, and construct validity (Kim, Lambert, & Burts, 2013; Kim & Smith, 2010; Lambert, Kim, & Burts, 2015; Lambert, Kim, Taylor, & McGee, 2010). Teacher ratings using the tool have been found to accurately track the growth and development of children, and classroom averages varied in the expected direction based on the demographic composition of classrooms (Lambert et al., 2015). The TS GOLD classroom strategies have received less research attention; while the TS GOLD resources are evidence based (Teaching Strategies, n.d.), there are no studies which specifically examine the strategies' effectiveness in the classroom. One study suggested that the TS GOLD assessment tool may help teachers identify activities to use in the classroom but did not specifically reference or assess the strategies provided by TS GOLD (Lambert et al., 2015).

The social-emotional domains targeted by TS GOLD are 1) regulates own emotions and behaviors, 2) establishes and sustains positive relationships, and 3)

participates cooperatively and constructively in group situations. Each objective contains two to four sub-objectives which address more specific skills related to the broader domain, and some TS GOLD strategies may target these sub-objectives. TS GOLD teaching strategies provide explicit skills instruction in social-emotional domains, a technique shown to be a common element of effective social-emotional learning programs at the preschool level (CASEL, 2013). Additionally, prior research has shown that curricula which focus on specific aspects of learning contribute significantly to children's growth (Yoshikawa et al., 2013).

While a number of studies have evaluated the effectiveness of the TS GOLD assessment system, the current review did not identify any prior studies that examined the relationship between the use of TS GOLD strategies and students' social-emotional development in preschool classrooms. The present study aims to do so. Given the documented variability in PreK program curricula, quality, and the degree to which social-emotional needs are addressed (Bryant et al., 2002; Diamond et al., 2013; Mashburn et al., 2008), TS GOLD strategies may serve as a helpful resource for preschool teachers to use in their classrooms to address these needs. Research to support their effectiveness would facilitate their targeted implementation.

1.2 The Context of the Present Study

Data for this study were collected as part of a broader, multi-year partnership among the early childhood education programs of Charlotte-Mecklenburg Schools (CMS), the CMS Office of Accountability, and the Community Psychology Research Lab (CPRL) at UNC Charlotte (UNCC). The present study grows out of a

multicomponent evaluation and intervention to improve the social-emotional development of preschool children.

The preschool program of focus is Bright Beginnings (BB), a publicly-funded program in Mecklenburg County, NC. BB serves children who, on the basis of a multi-step screening process, are found to be developing behind their same-age peers (e.g., on language, cognitive development, social-emotional maturity) and are at risk of not being ready for kindergarten.

This larger project was funded by the Institute of Education Sciences (IES) and was developed as a result of a program evaluation of BB previously conducted by the CPRL; one of the main recommendations of that evaluation was to assess the social-emotional development of students and provide teachers with feedback regarding each child's social-emotional functioning. This IES-funded project included the implementation of this recommendation as a prime aim, with the goal of assessing whether providing teachers with feedback about students' functioning, as well as TS GOLD strategies to improve social-emotional development, led to students' social-emotional gains over the course of the academic year. Teachers were also encouraged to work with their coaches, who provide support for curriculum implementation for all BB teachers, to use the social-emotional feedback and TS GOLD strategies in the classroom. Students' social-emotional development was assessed using the Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999), which measures four domains of social-emotional development: initiative, self-regulation, attachment and relationships, and behavior concerns.

1.3 Research Questions

The present study examined the relationship between the particular TS GOLD strategies that teachers used in their classrooms and students' social-emotional development over the course of one academic year. The specific research questions addressed by this study are below:

RQ1: Is the use of particular TS GOLD strategies in preschool classrooms associated with higher overall social-emotional scores for students?

RQ2: Is the use of strategies meant to address particular social-emotional domains (initiative, self-regulation, attachment and relationships, behavior concerns) associated with greater student growth in those domains compared to other social-emotional domains?

CHAPTER 2: METHODS

Data for this study were collected as part of a broader intervention to improve social-emotional development of Bright Beginnings students conducted by the Community Psychology Research Lab at UNC Charlotte (UNCC).

2.1 Participants

As a part of this effort, 69 Bright Beginnings (BB) teachers received feedback about their students' functioning; they were also provided with recommendations regarding a number of TS GOLD strategies that could be used to help them improve social-emotional functioning in their students. The participants included in this study were the subset of BB teachers who completed a survey about their use of DECA feedback ($N = 32$) and the students in their classrooms for whom parental consent was received ($N = 302$). Fifty-seven percent of students in the study were male ($n=171$), and 43% were female ($n=131$). The student sample was 50.7% Hispanic ($n=153$), 33.4% Black ($n=101$), 9.9% Asian ($n=30$), and 6% White ($n=18$). The average yearly family income for students included in the study ranged from \$0 to \$166,250 ($M=33,394.68$; $SD=29,229.80$). Teachers and students included in the study represented 20 different schools within Charlotte-Mecklenburg Schools (CMS).

2.2 Measures

In addition to student demographic information (sex, race, household income) provided to the CPRL by BB administrators, the following measures were administered to teachers and were used in the present study.

2.2.1 Students' Social-emotional Development

Students' social-emotional competencies were measured using the Devereux Early Childhood Assessment for Preschoolers (DECA; LeBuffe & Naglieri, 1999). Teachers completed this 37-item assessment of child social-emotional functioning for each of the students in their classroom at two time points, once at the beginning of the academic year and once at the end. On this measure, teachers rate the frequency of student behaviors, both positive social-emotional resources and behavioral concerns, based on the prior 4 weeks. Assessments were completed twice over the course of an academic year, once at the beginning and once at the end, to assess changes in social-emotional development for each child over time. Each item uses a 5-point Likert scale, and subscales assess Protective Factors (Initiative, Self-Regulation, Attachment; subscale α s = .93, .93, and .82) and Behavior Concerns (α = .84). Scores on these subscales range from 28 to 72, with a norm-based mean of 50 on each subscale and standard deviations of 10. The Initiative, Self-Regulation, and Attachment and Relationships subscales have been found to be reliable and valid measures for culturally diverse students (Bulotsky-Shearer, Fernandez, & Rainelli, 2013). There have been mixed results regarding the Behavior Concerns subscale; some studies have found this subscale may not represent a good fit for diverse samples (Bulotsky-Shearer, Fernandez, & Rainelli, 2013) while others have found the subscale to be reliable for diverse preschoolers (Crane, Mincic, & Winsler, 2011). Because of their salience to the present study, the subscales are described further here:

- *Initiative* – children's ability to take actions to meet their needs (e.g., good problem-solving skills, being responsible, showing self-awareness,

enjoying challenges, and initiating peer interactions). Higher scores indicate more positive functioning.

- *Self-regulation* – children’s ability to express emotion and manage behavior constructively (including frustration tolerance, cooperation with peers, and being patient, respectful, and considerate). Higher scores indicate more positive functioning.
- *Attachment* – children’s ability to promote and maintain positive connections with other children and significant adults by showing affection, trust, and optimism. Higher scores indicate more positive functioning.
- *Total Protective Factors* – this composite score combines the initiative, self-regulation, and attachment subscales. Higher scores indicate more positive functioning.
- *Behavioral Concerns* – assesses behavioral challenges such as aggression, withdrawal, and lack of emotional control. Lower scores indicate more positive functioning.

2.2.2 Teacher Survey – Use of DECA Feedback

The teacher survey was developed in collaboration with CMS Pre-K administrators and was distributed to all teachers who received feedback on their students’ social-emotional functioning based on DECA ratings (about half of BB teachers). The survey contained 27 items and assessed the teachers’ use of DECA feedback to differentiate instruction as well as coach support for the use of feedback. Teachers were provided with a list of the TS GOLD strategies to support social-

emotional development that were included with the DECA feedback and were asked to identify which strategies they employed in their classroom, along with a rating of the usefulness of the strategy.

2.3 Procedure

2.3.1 DECA Data Collection (Time 1)

All BB teachers were asked to complete ratings of social-emotional functioning (DECA; LeBuffe & Naglieri, 1999) for each of their students in November of 2016. Surveys were distributed to all teachers using Qualtrics, and each teacher received a unique link to their DECA surveys, which were populated with the teacher's name, school, and the list of students in their classroom. Teachers were asked to complete a DECA for each student who had been in their classroom at least four weeks, consistent with DECA guidelines; if students had not been in the classroom for that long, teachers were asked not to rate that student. Teachers had four weeks to complete the DECA (DECA links were first emailed on 11/7/16 and closed on 12/4/16) and received two reminder emails to complete the measure. One hundred and fifty-eight teachers completed DECAs for all of their students, a response rate of 87.8%.

2.3.2 DECA Feedback

2.3.2.1 Randomization

Teachers were assigned to two study conditions: one group received social-emotional feedback and one group received no feedback. Assignment to the feedback vs. no feedback condition was determined at the level of the coach; all BB teachers have a coach (who supports curricular implementation and works with teachers to facilitate the

use of early childhood best practices), and each coach works with 10-15 BB teachers.

Selection from among the 13 coaches occurred in collaboration with Pre-K

administrators. Before randomization, four coaches were excluded from the feedback

condition because they were new coaches, per the suggestion of Pre-K administrators.

Four of the remaining coaches were piloting a different curriculum (Creative Curriculum)

in their classrooms, so it was decided that two of the four would be randomly assigned to

the feedback condition to ensure a more representative sample. Of the five remaining

coaches, three were randomly assigned to the feedback condition using a random number

generator. A total of five coaches (and their 69 teachers) were assigned to the feedback

condition. A summary of the selection process is in Table 1 below.

Table 1. Stratified Random Sampling of Coaches for Feedback

Coach	Eligible for Feedback?	Participating in New Curriculum Pilot?	Randomly Selected for Feedback?
Coach 1	Yes	No	Yes
Coach 2	Yes	No	Yes
Coach 3	Yes	No	Yes
Coach 4	Yes	No	No
Coach 5	Yes	No	No
Coach 6	Yes	Yes	Yes
Coach 7	Yes	Yes	Yes
Coach 8	Yes	Yes	No
Coach 9	Yes	Yes	No
Coach 10	No - very new coach	No - ineligible	No - ineligible
Coach 11	No - very new coach	No - ineligible	No - ineligible
Coach 12	No - very new coach	No - ineligible	No - ineligible
Coach 13	No - very new coach	No - ineligible	No - ineligible

2.3.2.2 Feedback Process

Teachers in the feedback condition ($n = 69$) were given feedback on their students' functioning and strategies to support their students' social-emotional development. To maximize the usefulness of the feedback materials, the research team provided both paper and electronic copies to teachers and their coaches. Hard copies of feedback materials were shared with coaches on December 20, 2016 during a planning meeting with their supervisor, the CMS curriculum and instruction specialist. Coaches were asked to distribute these materials and review them with the teachers they coach upon the start of the spring semester in January. Electronic copies were emailed to both teachers and coaches on January 4, 2017, the first school day of the spring semester.

2.3.2.3 Feedback Materials

The DECA feedback distributed to teachers and coaches included a classroom summary and a strategy packet (an example of a classroom summary is provided in the Appendix). The classroom summary consisted of a table depicting each student's level of functioning in the domains assessed by the DECA – Initiative, Self-Regulation, Attachment, and Behavioral Concerns – using a green box to represent strength, a white box to represent typical development, and a red box to represent an area of need. The classroom summary also described overall classroom trends and listed students with similar areas of need to help facilitate differentiation of instruction.

The strategy packet included with the feedback contained research-based strategies to support students' development in the areas of Initiative, Self-Regulation, and Attachment, and reduce Behavioral Concerns. Strategies were selected from Teaching

Strategies GOLD (TS GOLD), which was being used by the BB teachers to assess and support their students' development. The research team worked closely with Pre-K staff and sought the input of coaches to select strategies that teachers would find helpful. The CMS curriculum and instruction specialist provided the UNCC team with a table depicting the alignment of DECA domains and TS GOLD strategy objectives; a modified version is provided below. This information helped narrow the pool of available strategies to those judged to be most relevant to the different domains of the DECA, allowing teachers to more readily identify strategies they might use to address the needs of the children in their classrooms.

Table 2. Alignment of DECA Domains and TS GOLD Strategy Objectives

DECA Domain	DECA Domain: Description and Indicators	TS Gold Objectives
Initiative	<p>Specific themes:</p> <ul style="list-style-type: none"> • Ability to start play or begin an activity • Persistence and problem-solving • Confidence and decision-making • Interest in new activities or experiences <p>Indicators Assessed on the DECA</p> <ul style="list-style-type: none"> • Choose to do a task that was hard for him/her • Try different ways to solve a problem • Try or ask to try new things or activities • Show confidence in his/her abilities • Show an interest in learning new things • Keep trying when unsuccessful (persistence) • Make decisions for himself/herself • Remember important information • Start or organize play with other children 	<p><u>Under Cognitive</u></p> <p>11. Demonstrates positive approaches to learning</p> <ul style="list-style-type: none"> a. Attends and engages b. Persists c. Solves problems d. Shows curiosity and motivation e. Shows flexibility and inventiveness in thinking

Table 2. Alignment of DECA Domains and TS GOLD Strategy Objectives (continued)

Self-Regulation	<p>Specific themes:</p> <ul style="list-style-type: none"> • Getting along with others • Recognizing and expressing strong emotions in safe ways • Coping with transition and change • Managing energy level and behavior in positive ways <p>Indicators assessed in the DECA</p> <ul style="list-style-type: none"> • Handle frustration well • Control his/her anger • Show patience • Accept another choice when his/her first choice is not available • Cooperate with others • Share with other children • Listen to or respect others 	<p><u>Under Social-Emotional</u></p> <p>1. Regulates own emotions and behaviors</p> <ul style="list-style-type: none"> • Manages feelings • Follows limits and expectations • Takes care of own needs appropriately <p>3. Participates cooperatively and constructively in group situations</p> <ul style="list-style-type: none"> a. Balances needs and rights of self and others b. Solves social problems
Attachment/Relationships	<p>Indicators assessed on the DECA:</p> <ul style="list-style-type: none"> • Show affection for familiar adults • Seem happy or excited to see his/her parent of guardian • Ask adults to play with or read to him/her • Act in a way that makes adults smile or show interest in him/her • Look forward to activities at home or school • Trust familiar adults and believe what they say • Appear happy when playing with others • Show a preference for a certain adult • Seek help from children/adults when necessary 	<p><u>Under Social-Emotional</u></p> <p>2. Establishes and sustains positive relationships</p> <ul style="list-style-type: none"> a. Forms relationships with adults b. Responds to emotional cues c. Interacts with peers d. Makes friends
Behaviors Concerns	Problems with aggression, withdrawal, attention, and/or the control of extreme emotions.	Not mentioned

The UNCC CPRL team worked from this list to identify an initial set of TS GOLD strategies that aligned with the DECA domains and their corresponding TS Gold Objectives, paying special attention to those that required few additional materials and

that could be easily integrated into regular classroom activities. This list of strategies was provided to Pre-K administrative staff for review and removal of any strategies deemed not feasible for teachers. A small number of coaches and teachers and a staff psychologist also provided feedback on the feasibility and utility of the strategies for use in the classroom, and the final list of TS GOLD strategies was assembled based on this feedback. The final strategy packet consisted of four to six different strategies that teachers could use to address each of the areas assessed by the DECA (19 strategies total).

2.3.2.4 DECA Data Collection (Time 2)

All BB teachers were asked to complete the DECA for each of their students at the end of the year to assess social-emotional development. Surveys were once again distributed using Qualtrics, and all teachers received a unique link to a survey that was populated with their classroom roster. Teachers had two weeks to complete the DECA (DECA links were first emailed on 5/8/17 and closed on 5/22/17) and received three reminder emails to complete the ratings. One hundred and sixty-five teachers completed DECAs for all of their students, a response rate of 91.2%.

2.3.2.5 Teacher Survey – Use of DECA Feedback

The teacher DECA Feedback survey was distributed using Qualtrics on 5/22/17 to all teachers who received DECA feedback (69 teachers). Teachers were given two weeks to complete the survey (the survey was closed on 6/5/17) and received one reminder email. Forty-one teachers at least partially completed the survey, a response rate of 59.4%. One of the teachers did not provide enough data to be included in the study, and

one teacher indicated that she did not receive DECA feedback and was therefore ineligible to be included in the study. Seven additional teachers who completed the survey did not have any students in their classroom for whom parental consent was received and were therefore ineligible to be included in the study. A total of 33 teachers were included in the study, 47.8% of those who received feedback.

CHAPTER 3: ANALYTIC APPROACH

Multilevel modeling was used to assess teacher use of TS GOLD strategies on students' social-emotional development. Due to the multilevel nature of the data (i.e., students nested within classrooms), it is appropriate to use a multilevel modeling approach to account for variability due to classroom membership (variation across groups) in addition to individual-level variability. Using multi-level modeling allows for variation in the intercepts and slopes for the relationship between the predictor and outcome across classrooms rather than using a fixed mean value as one would in an ordinary least squares (OLS) regression. However, Heck, Thomas, and Tabata (2013) explain that if there is no significant variation in the slopes in your model, a fixed slope model should be used. Initial models predicting random slopes found that none of the slopes for Level 1 predictors in this study varied significantly across classrooms, so models using fixed slopes were used for all analyses.

3.1 Research Question 1

To investigate whether the use of particular TS GOLD strategies was associated with greater DECA gains, frequencies were first run on the number of teachers who endorsed using each of the 19 strategies. Only strategies that were endorsed by at least 16 teachers (roughly half of the total sample of responding teachers) were included in analyses to ensure appropriate sample size and statistical power. To operationalize the use of strategies for analyses, a dichotomous variable was created for each TS GOLD strategy. For each variable, a code of 0 indicated that the teacher did not use the strategy and a code of 1 indicated that the teacher did use the strategy.

A single analysis was run for each strategy included in analyses to examine how each strategy individually contributed to change in DECA scores. Step 1 for each model consisted of control variables (i.e., students' sex, race, household income, and DECA scores at the beginning of the year), and Step 2 consisted of the variable representing teacher use of each strategy. The outcome variables were the DECA Total Protective Factors score and the Behavior Concerns score at the end of the academic year.

3.2 Research Question 2

To determine whether the use of TS GOLD strategies within a particular domain was associated with teacher-rated DECA scores in that domain, teacher use of TS GOLD strategies was operationalized in two different ways: a dichotomous variable indicated whether a teacher used any strategies in a particular domain (0 = teacher did not use any strategies in the domain, 1 = teacher used at least one strategy in the domain), and a continuous variable indicated the total number of strategies the teacher used in each domain (count of the number of strategies used in the domain). A total of eight variables were used to measure teacher use of TS GOLD strategies: four dichotomous variables (one for each DECA domain) and four continuous variables (one for each DECA domain). This allowed for examining whether using more strategies in a domain predicted greater growth in that domain relative to the use of any strategies at all in a given domain.

Before any linear models were analyzed, bivariate correlations were run among the predictor variables (the two variables representing teacher use of TS GOLD strategies for each strategy) and the outcome variables (Initiative, Self-Regulation, Attachment/Relationships, and Behavior Concerns scores at the end of the year). To

reduce the total number of analyses, a potential predictor variable was dropped from subsequent analyses if it was not correlated with any of the outcome variables.

Additionally, to maximize parsimony of the final models, any control variables (i.e., sex, race, household income, and DECA scores at the beginning of the year) that were not correlated with the outcome variables were dropped from further analyses.

Eight multilevel models were run for each DECA domain: each predictor variable (the two variables representing teacher use of TS GOLD strategies for each domain) was regressed onto each of the four DECA domains (with DECA scores in that domain as the outcome variable). In all analyses, Step 1 consisted of control variables. In Step 2, the dichotomous variable or the continuous variable measuring teacher use of TS GOLD strategies for the domain of interest was entered (in separate analyses). For each model, regression coefficients were interpreted to examine the direct effect of teacher use of strategies on DECA scores in each domain, and to compare the effects of the dichotomous measure and the continuous measure of teacher use of strategies.

CHAPTER 4: RESULTS

4.1 Preliminary Analyses

IBM SPSS Statistics 25 was used to conduct all analyses for this study. Table 3 displays descriptive statistics examining Time 1 and Time 2 scores on each social-emotional domain assessed on the DECA for the full sample of students. Paired samples *t*-tests showed significant differences between mean scores at Time 1 and Time 2 on all DECA domains ($p < .01$), indicating that, overall, participating students improved on all social-emotional domains.

To account for differences in social-emotional scores due to student characteristics, student gender, race/ethnicity, and Time 1 scores in the DECA domain of interest were included as control variables in all analyses. Student race/ethnicity was dummy coded using Hispanic as the reference group, because those of Hispanic descent represented the largest proportion of the total sample of students, relative to other racial or ethnic groups. Students' yearly family income was not correlated with scores on any DECA subscales and was therefore not included as a control variable. Table 4 shows descriptive statistics for scores at Time 1 and Time 2 on all DECA subscales by student race/ethnicity and by gender. At Time 1, female students had significantly higher scores than male students on all DECA subscales ($p < .01$ for Initiative, Self-Regulation, Total Protective Factors, and Behavior Concerns; $p < .05$ for Attachment and Relationships), and at Time 2 female students had significantly higher scores on all DECA subscales except Attachment and Relationships ($p < .01$ for Behavior Concerns; $p < .05$ for Initiative, Self-Regulation, and Total Protective Factors). At Time 1, White students had significantly higher Attachment and Relationships scores than Asian students ($p < .05$).

There were no other significant differences between racial/ethnic groups on any DECA subscales at Time 1 or Time 2.

Tables 5 and 6 show the number of teachers who endorsed using each of the TS GOLD strategies, as well as correlations between teacher use of each strategy and scores on each DECA subscale at Time 1 (Table 5) and Time 2 (Table 6). Ten out of 19 strategies were endorsed by at least half the sample of teachers (i.e., 16 or more teachers) and were, in turn, eligible to be retained for subsequent analyses. The set of strategies endorsed by at least half the sample of teachers included four Initiative strategies, one Self-Regulation strategy, one Attachment and Relationships strategy, and four Behavior Concerns strategies.

To determine whether students' social-emotional scores varied significantly due to classroom membership, intraclass correlation coefficients (ICC) were calculated by running a null multilevel model for each of the DECA subscales. Heck, Thomas, and Tabata (2013) state that an ICC of .05 or higher is an indication of substantial clustering of scores within Level 2 factors, indicating that the outcome varies significantly as a result of the nest or grouping of participants. The ICCs for each DECA subscale are presented in Table 7 (ICC range: .31 to .59). The variability explained by classroom-level factors was greater than 5% across all social-emotional outcome variables, confirming that a multilevel modeling analysis was needed to control for Level 2 variability for all DECA subscales.

4.2 Research Question 1

Multilevel models were used to examine whether the use of particular TS GOLD strategies was associated with greater DECA gains on the Total Protective Factors and

Behavior Concerns subscales. Strategies endorsed by fewer than half the total sample of teachers (9 strategies in total), and strategies (from the remaining 10 strategies) not correlated with the outcome were dropped from analyses. Based on these decision rules, four multilevel models were run: two were run to predict Total Protective Factors scores using two strategies (Initiative strategy 5 and Behavior Concerns strategy 1), and two multilevel models were run to predict Behavior Concerns scores using two strategies (Initiative strategy 5 and Attachment & Relationships strategy 4). Student gender, race/ethnicity, and Time 1 scores in the social-emotional domain of interest were included as control variables in all analyses.

Results of the multilevel models for this research question are presented in Table 8. For all models, Time 1 scores in the domain of interest were a significant predictor of Time 2 scores in that domain ($b = .56$ to $.63$, $p < 0.01$). Student gender was a significant predictor of Behavior Concerns scores ($b = -2.90$, $p < .01$) such that female students' expected growth (i.e., reflecting reduced behavior problems) was 2.90 points higher than male students; gender did not predict Total Protective Factors scores. Student race/ethnicity was predictive of social-emotional scores such that African American students' expected growth was 1.69 points lower in Total Protective Factors ($b = -1.69$, $p < .05$) and 2.90 lower in Behavior Concerns ($b = -2.90$, $p < .01$) compared to the reference group (Hispanic students), indicating that African American students improved less than Hispanic students in overall social-emotional strengths, but showed a greater reduction in behavior problems than Hispanic students at the end of the year. Teacher use of TS GOLD strategies was not predictive of social-emotional scores in any of the models.

4.3 Research Question 2

Multilevel models were used to examine whether the use of TS GOLD strategies targeting specific social-emotional domains was associated with greater DECA gains in that domain (compared to the other social-emotional domains). Descriptive statistics for the dichotomous and continuous variables measuring teacher use of strategies in each DECA domain are presented in Table 9. In all DECA domains, at least 25 teachers endorsed using at least one strategy; the mean number of strategies used by each teacher in each domain ranged from 1.91 to 3.00; teachers reported using the most strategies designed to improve Initiative ($M = 3.00$, $SD = 1.38$) and the fewest to enhance Self-Regulation ($M = 1.91$, $SD = 1.41$). Correlations among the variables measuring teacher use of strategies in each DECA domain and scores on each DECA subscale at Time 1 and Time 2 are presented in Tables 10 and 11. Variables not correlated with the outcome of interest were dropped from further analyses.

Results of multilevel models for use of strategies in each domain predicting end of year social-emotional scores are presented in Tables 12 through 15; each table summarizes results for a different DECA subscale. In all models, Time 1 scores in a domain were predictive of Time 2 scores in that domain ($b = .44$ to $.61$, $p < .01$). In the Initiative domain, using a least 1 Initiative strategy was predictive of less growth on the Attachment and Relationships subscale ($b = -10.30$, $p < .05$) such that students in classrooms where the teacher used at least one Initiative strategy were expected to grow 10.30 points less than students in classrooms where the teacher used zero Initiative strategies. The total number of Initiative strategies used was also predictive of less growth on the Attachment and Relationships subscale ($b = -1.59$, $p < .05$). None of the

strategies were associated with improvements in their specific social emotional domain; in addition, there were no indications that the use of the strategies resulted in any improvements in any social-emotional domains.

CHAPTER 5: DISCUSSION

5.1 Discussion of Results

This study examined the effect of using TS GOLD strategies in pre-k classrooms on students' social-emotional outcomes. One prime research question investigated whether particular TS GOLD strategies were associated with greater overall social-emotional ratings for students. This study does not provide support for the use of particular strategies (instead of others) to improve students' social-emotional scores.

A second main research question investigated whether TS GOLD strategies targeting a specific social-emotional domain were associated with greater growth in that domain compared to the other social-emotional domains assessed, i.e., to what degree is there specificity in the effects. Overall, study findings do not provide support for the use of TS GOLD strategies to target improvement in particular social-emotional domains; the only significant effect was the use of Initiative strategies predicting less growth on the Attachment and Relationships subscale, an unexpected finding. In addition, the dichotomous variable for teacher use of Initiative strategies was predictive of less Attachment and Relationships growth than the continuous variable. While there was a large difference between the betas for the dichotomous and continuous variables for teacher use of Initiative strategies, neither of them was predictive of students' growth in Attachment and Relationships.

The results of this study appear to conflict with what would have been expected based on the elements of curricula associated with positive student social-emotional outcomes in the literature. Effective social-emotional learning programs identified by CASEL commonly use explicit skills instruction to target development in preschool

classrooms (CASEL, 2013). Since the TS GOLD strategies used in this study are designed to target specific skills within larger social-emotional objectives (Teaching Strategies, n.d.), they might be expected to have a positive effect on student learning. An element of preschool curricula shown to significantly improve student learning is having focused curricula on specific learning domains, such as social-emotional development (Yoshikawa et al., 2013). While the TS GOLD strategies also focus on specific domains of learning, it is possible that they would be more effective as part of an overall curricula focused on social-emotional development (i.e., the use of TS GOLD strategies alone may not amount to what is defined as a curriculum for a preschool classroom).

It is important to note that students in this study improved significantly on all DECA subscales from Time 1 to Time 2, so this negative effect size does not reflect a decrease in scores, rather that students in classrooms where Initiative strategies were used improved less on Attachment and Relationships than students in other classrooms. Additionally, the use of Initiative strategies was significantly negatively correlated with students' Attachment and Relationships scores at Time 1, indicating that students in classrooms where Initiative strategies were used had significantly lower Attachment and Relationships scores at the beginning of the year. While there is no clear explanation for this relationship, it does point to an important question related to reasons why teachers chose to implement particular strategies in the classroom. While we would expect teachers to use strategies to target the social-emotional domains in which their students struggled most (i.e., we would expect a negative correlation between the use of strategies in a domain and Time 1 scores in that domain), this pattern did not arise in the data. This suggests that teachers may have selected strategies not based on students' social-

emotional needs but on other unknown factors, which could influence the effectiveness of the intervention overall.

Also of note is that the groups of teachers who did and did not use Initiative strategies were not equal. Only three teachers said they did not use any Initiative strategies, while 29 teachers said they used at least one Initiative strategy. These unequal groups could explain the large effect size for the dichotomous variable of strategy use ($b = -10.30$) which compared the three teachers who didn't use any strategies to the 29 teachers who used at least one, limiting the variability in the responses that could be captured. The effect size for the continuous variable ($b = -1.59$), which was much smaller, captured a greater variability in the number of strategies teachers used. These groups of teachers (teachers who did or did not use Initiative strategies) may also be unequal in terms of the activities used in the classroom other than TS GOLD strategies. This study did not collect information from teachers about other strategies/activities they used other than TS GOLD strategies, but it is likely that preschool teachers have access to other activities and curricula focused on social-emotional development. Teachers who did not endorse the use of TS GOLD strategies may be using other activities in their classroom that are associated with greater growth in Attachment and Relationships.

A number of factors may have contributed to the nonsignificant results of this study. One consideration when examining these results is the degree to which pre-k coaches were involved with the selection and implementation of TS GOLD strategies in the classroom. While coaches and teachers were encouraged to discuss the classroom summary and strategy packet and determine which strategies to use based on the specific social-emotional needs of their students, the degree to which this occurred was not

measured. It is likely that there was variability in the degree to which coaches worked with teachers to select and implement strategies and, as a result, variability in the factors that influenced teachers' decisions to use (or not use) different strategies. As previously mentioned, the selection of strategies for reasons other than supporting specific social-emotional needs in the classroom may affect how well the intervention supported social-emotional growth. Additionally, students in classrooms where the teacher had the support of a coach in the implementation of the strategies may have shown more social-emotional growth.

The degree of implementation of the strategies in the classroom was also not measured in any systematic way in this study. Teachers who endorsed using the same strategy may have implemented it differently in their classrooms, and some teachers may have implemented the strategies with greater fidelity than others. It is possible that the degree of implementation of the strategies in the classroom may be more predictive of social-emotional scores than a measure of whether or not the teacher used the strategy. This study also did not measure the number of times teachers used each strategy throughout the year or the number of students they used each strategy with; a strategy used one time may not have very much effect on social-emotional scores, while a strategy used repeatedly throughout the year or with a larger number of students may lead to greater gains.

Lastly, a survey of teachers at the end of the year found that teachers felt the TS GOLD strategies provided to them were often too low-level to be helpful (i.e., they did not support higher-level growth in the desired social-emotional domains). Since these strategies were provided to teachers midway through the year, it is possible that students

had already made some progress in social-emotional development, and the use of these low-level strategies (designed to help foster foundational skills and competencies) was therefore not predictive of growth. Greater gains may have been observed if strategies had been provided to teachers at the beginning of the year.

5.2 Limitations

There are several limitations to this study. The results of this study may not be generalizable to other populations of preschool students, as students in the Bright Beginnings preschool program are accepted based on their need. Bright Beginnings students are found to be developing behind their same-age peers based on a variety of screening assessments, and therefore may not be comparable to students in preschool programs which use different selection procedures. Bright Beginnings classrooms are also located within schools in a large, urban school district, which may serve a different population of students than programs in other environments. This population of students may have different needs and therefore this may affect the types of strategies and curricula that are most effective for supporting their growth and learning.

The number of participants included in this study is relatively low compared to the overall number of students and teachers involved in the larger project, due to the response rate to the teacher survey and the receipt of parental consent for students. This limited the analyses that could be done with appropriate sample sizes (i.e., the number of teachers that endorsed using each strategy). This lower sample size may also have contributed to the uneven groups (e.g., number of teachers who used a strategy vs. did not use a strategy; number of teachers who used a strategy within a social-emotional domain

vs. used no strategies within that domain), potentially skewing results and making it difficult to make comparisons between groups.

The variables used to measure teacher use of TS GOLD strategies were also not ideal. This specific method was employed in the context of a larger study with different aims. Nevertheless, measuring the use of strategies using dichotomous variables limited the variability in our outcome that could be captured (compared to a continuous measure). Additionally, the continuous variables for the total number of strategies used in each domain had to be capped at four due to the different number of strategies in each domain, which also limited the variability these continuous variables could capture.

All the measures used in this study were teacher report, which introduces the potential for bias in our results. Teachers may have endorsed more strategies that they actually used due to social desirability bias; this bias may also have resulted in inflating social-emotional ratings of students in some cases, potential skewing results. Teacher report of their use of TS GOLD strategies was also retrospective at the end of the year rather than tracked throughout the year, which could result in inaccuracies.

5.3 Future Directions

These results suggest a number of future directions for examining the association between the use of TS GOLD strategies and students' social-emotional functioning. Given the lack of research examining the effectiveness of using TS GOLD strategies in pre-k classrooms, as well as the conclusions and limitations of this study, more research is needed to determine the effect that TS GOLD strategies have on students' social-emotional growth. Additional research is also needed to examine whether particular TS GOLD strategies can be used to target growth in particular social-emotional domains.

Due to the importance of improving social-emotional development in preschool and its association with school readiness and long-term success (Yates et al., 2008), as well as the variability in program quality and curriculum implementation documented in the literature (Bryant et al., 2002; Mashburn et al., 2008), research supporting the targeted use of curricula to support social-emotional development in preschool classrooms is needed.

Since TS GOLD strategies appear to use elements of curricula that have been effective for developing social-emotional skills in preschool (CASEL, 2013; Yoshikawa et al., 2013), it would be useful to compare the effectiveness of TS GOLD strategies to other social-emotional curricula which use similar elements. The CASEL database contains a variety of different programs and curricula focused on social-emotional development in preschool classrooms and documents the type of curricula they use (CASEL, 2013). Comparing different social-emotional curricula could help determine which is the most effective as well as help determine what elements of curricula and their implementation are associated with the greatest social-emotional growth.

This study highlighted the importance of measuring strategy implementation rather than simply teacher report of whether or not a strategy was used. Measuring implementation could occur using observations of classrooms, or by soliciting input from coaches. A systematic measure of the degree to which coaches were involved in the selection of strategies and their support for strategy implementation could also explain differences in the degree to which strategies lead to social-emotional gains for students. Soliciting this input from coaches would also reduce the bias of collecting all information from teachers as a single source.

Based on teacher feedback, providing the TS GOLD strategies earlier in the year could lead to more gains for students. Including different strategies that can support different levels of social-emotional growth as students develop throughout the year could also improve the usefulness of the strategies and their effect on students' social-emotional gains. Lastly, tracking teachers' use of strategies throughout the year would provide a more accurate measure of teacher use compared to a retrospective measure at the end of the year.

Table 3

Descriptive statistics for Devereux Early Childhood Assessment (DECA) social-emotional subscales at Time 1 and Time 2

	Time 1				Time 2			
	Min.	Max.	Mean	Std. Deviation	Min.	Max.	Mean	Std. Deviation
Initiative	28	72	49.19	10.24	33	72	56.97**	9.38
Self-Regulation	28	72	54.46	10.09	31	72	59.63**	9.07
Attachment/Relationships	28	72	46.92	10.10	30	72	53.43**	10.43
Total Protective Factors	28	72	49.38	10.32	33	72	56.78**	9.81
Behavior Concerns	28	72	49.28	10.26	28	72	44.97**	10.64

N = 302 for all DECA subscales. ** improvement from Time 1 to Time 2 at $p < .01$.

Table 4

DECA mean scores for selected demographic groupings at the beginning of the year (Time 1) and end of the year (Time 2)

	N	Initiative		Self-Regulation		Attachment/ Relationships		Total Protective Factors		Behavior Concerns	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Female	131	51.22**	58.43*	56.56**	61.10*	48.32*	54.73	51.44**	58.37*	46.75**	42.01**
Male	171	47.64	55.85	52.84	58.50	45.85	52.44	47.81	55.57	51.22	47.24
White	18	52.72*	58.39	54.22	58.33	50.50	53.89	52.11	57.44	50.67	45.33
A.A.	101	49.64	56.01	54.62	58.26	47.06	52.70	49.78	55.68	49.57	46.96
Hispanic	153	48.92	57.51	54.44	60.54	47.24	54.26	49.29	57.54	48.91	44.10
Asian	30	46.97	56.60	54.13	60.37	42.73	51.37	46.87	56.27	49.37	42.47

Note. * $p < .05$; ** $p < .01$. T1 = Time 1. T2 = Time 2. A.A. = African American. Behavior Concerns is reverse scored, such that lower scores indicate more positive functioning.

Table 5

Correlations among teacher use of specific TS GOLD strategies and beginning-of-year (Time 1) DECA scores

Strategy Use	N Teachers Used	Beginning-of-Year DECA Scores				
		Initiative	Self- Regulation	Attachment & Relationships	Total Protective Factors	Behavior Concerns
Initiative 1	20	-.12*	-.06	-.20**	-.14*	.04
Initiative 2	15	-.03	.20**	-.09	.02	-.02
Initiative 3	21	-.03	.02	-.15*	-.06	.09
Initiative 4	20	-.01	.03	-.09	-.02	.03
Initiative 5	24	-.18**	-.02	-.20**	-.15**	.25**
Self-Regulation 1	9	.07	.09	.04	.07	.02
Self-Regulation 2	17	-.02	.00	-.07	-.03	.131*
Self-Regulation 3	10	-.15*	-.09	-.19**	-.16**	.16**
Self-Regulation 4	10	-.11	-.10	-.21**	-.15**	.19**
Self-Regulation 5	11	-.17**	-.04	-.22**	-.16**	.15**
Self-Regulation 6	6	-.06	.00	-.16**	-.08	.05
A & R 1	12	-.05	.03	-.14*	-.06	-.06
A & R 2	15	-.13*	.03	-.25**	-.14*	.11
A & R 3	12	-.10	.02	-.15**	-.09	.09
A & R 4	25	-.11	.00	-.18**	-.11	-.09
Behavior Concerns 1	20	.13*	.06	.12*	.12*	.13*
Behavior Concerns 2	16	.02	.07	-.07	.01	.06
Behavior Concerns 3	21	.16**	.13*	.10	.14*	-.02
Behavior Concerns 4	21	.04	.06	-.03	.03	.11*

Note. * $p < .05$. ** $p < .01$. Strategy Use = TS GOLD strategies contained in the strategy packet. A & R = Attachment and Relationships. Behavior Concerns is reverse scored, such that lower scores indicate more positive functioning.

Table 6

Correlations among teacher use of TS GOLD strategies and end-of-year (Time 2) DECA scores

Strategy Use	N Teachers Used	End-of-Year DECA Scores				
		Initiative	Self- Regulation	Attachment & Relationships	Total Protective Factors	Behavior Concerns
Initiative 1	20	-.02	-.01	-.09	-.04	.03
Initiative 2	15	-.04	.04	-.09	-.04	.04
Initiative 3	21	.01	.01	-.11	-.02	.02
Initiative 4	20	.02	.05	-.03	.01	-.07
Initiative 5	24	-.23**	-.07	-.28**	-.22**	.21**
Self-Regulation 1	9	.00	.08	-.02	.02	.02
Self-Regulation 2	17	.02	.00	-.04	.00	-.07
Self-Regulation 3	10	-.18**	-.09	-.18**	-.16**	.09
Self-Regulation 4	10	-.17**	-.15**	-.22**	-.19**	.26**
Self-Regulation 5	11	-.16**	-.12*	-.27**	-.19**	.10
Self-Regulation 6	6	-.07	-.03	-.23**	-.11	-.07
A&R 1	12	-.01	.06	-.06	.00	-.04
A&R 2	15	-.13*	-.01	-.25**	-.15*	.15*
A&R 3	12	.04	.09	-.04	.03	.02
A&R 4	25	-.04	.06	-.13*	-.05	-.13*
Behavior Concerns 1	20	.19**	.16**	.21**	.20**	-.09
Behavior Concerns 2	16	.03	.02	-.07	.00	-.01
Behavior Concerns 3	21	.07	.02	.01	.03	-.04
Behavior Concerns 4	21	.04	.00	-.04	.00	.02

Note. * $p < .05$. ** $p < .01$. A&R = Attachment and Relationships. Behavior Concerns is reverse scored, negative effect sizes reflect a greater reduction in problem behaviors. Strategies endorsed by fewer than 16 teachers dropped from analyses; strategies not correlated with the outcome also dropped from analyses.

Table 7

Summary of intraclass coefficients for social-emotional outcomes

	Initiative	Self- Regulation	Attachment / Relationships	Total Protective Factors	Behavior Concerns
ICC	.36	.31	.59	.43	.35

N (students) = 302 and N (classrooms) = 32 for all DECA subscales. ICC = Intraclass coefficient (i.e., the amount of variance explained by class-level factors).

Table 8

Full results from multilevel models predicting end-of-year social-emotional functioning (i.e., DECA subscales)

	Predicting DECA Total Protective Factors <i>B (SE)</i>	Predicting DECA Behavior Concerns <i>B (SE)</i>
Model: Initiative 5		
Average Intercept	31.01 (2.79)**	14.00 (3.12)**
Time 1 Score	.56 (.03)**	.62 (.04)**
White	-1.49 (1.50)	.21 (1.64)
Asian	.51 (1.16)	-2.22 (1.27)
African American	-1.69 (.42)*	2.78 (.84)**
Gender (Female = 1)	1.14 (.70)	-2.90 (.77)**
Strategy: Initiative 5	-2.74 (2.12)	1.28 (2.59)
Model: Attachment & Relationships 4		
Average Intercept	-	17.10 (2.77)**
Time 1 Score	-	.63 (.04)**
White	-	.31 (1.64)
Asian	-	-2.19 (1.27)
African American	-	2.76 (.84)**
Gender (Female = 1)	-	-2.90 (.77)**
Strategy: Attachment/Relationships 4	-	-3.51 (2.08)
Model: Behavior Concerns 1		
Average Intercept	27.62 (2.40)**	-
Time 1 Score	.56 (.04)**	-
White	-1.58 (1.51)	-
Asian	.49 (1.16)	-
African American	-1.69 (.77)*	-
Gender (Female = 1)	1.17 (.70)	-
Strategy: Behavior Concerns 1	-1.71 (1.80)	-

Note. * $p < .05$. ** $p < .01$. Reference group for student race/ethnicity = Hispanic. Behavior Concerns is reverse scored, negative effect sizes reflect a greater reduction in problem behaviors.

Table 9

Descriptive statistics for teacher use of TS GOLD strategies within each social-emotional domain

Strategy Use	Used 0	Used 1+	Mean	Std. Deviation
Initiative: At least 1	3	29		
Initiative: Total number used			3.00	1.38
Self-Regulation: At least 1	7	25		
Self-Regulation: Total number used			1.91	1.41
Attachment & Relationships: At least 1	6	26		
Attachment & Relationships: Total number used			2.20	1.51
Behavior Concerns: At least 1	7	25		
Behavior Concerns: Total number used			2.62	1.55

Note. N (classrooms) = 32. Maximum number of strategies used limited to 4 for each domain; one Initiative strategy dropped and 2 Self-Regulation strategies dropped.

Table 10

Correlations among teacher use of TS GOLD strategies within each social-emotional domain and beginning-of-year (Time 1) DECA scores

Strategy Use	Beginning-of-Year DECA Scores				
	Initiative	Self-Regulation	A&R	Total Protective Factors	Behavior Concerns
Initiative: At least 1	-.28**	-.20**	-.33**	-.30**	.18**
Initiative: Total number used	-.13*	-.01	-.23**	-.14*	.13*
Self-Regulation: At least 1	-.13*	-.20**	-.14*	-.17**	.25**
Self-Regulation: Total number used	-.11	-.05	-.19**	-.13*	.16**
Attachment & Relationships: At least 1	-.10	-.04	-.19**	-.12*	-.05
Attachment & Relationships: Total number used	-.12*	.02	-.23**	-.13*	.02
Behavior Concerns: At least 1	.16**	.08	.19**	.16**	.16**
Behavior Concerns: Total number used	.10	.09	.03	.09	.09

Note. * $p < .05$. ** $p < .01$. A&R = Attachment and Relationships. Behavior Concerns is reverse scored, negative effect sizes reflect a greater reduction in problem behaviors.

Table 11

Correlations among teacher use of TS GOLD strategies within each social-emotional domain and end-of-year (Time 2) DECA scores

Strategy Use	End-of-Year DECA Scores				
	Initiative	Self-Regulation	A&R	Total Protective Factors	Behavior Concerns
Initiative: At least 1	-.32**	-.26**	-.40**	-.35**	.25**
Initiative: Total number used	-.12*	-.05	-.21**	-.14*	.09
Self-Regulation: At least 1	-.15*	-.14*	-.16**	-.15**	.02
Self-Regulation: Total number used	-.14*	-.07	-.23**	-.15**	.04
Attachment & Relationships: At least 1	-.07	-.01	-.17**	-.10	-.04
Attachment & Relationships: Total number used	-.05	.06	-.14*	-.05	.01
Behavior Concerns: At least 1	.12*	.04	.15*	.11	.00
Behavior Concerns: Total number used	.09	.05	.02	.06	-.03

Note. * $p < .05$. ** $p < .01$. A&R = Attachment and Relationships. Behavior Concerns is reverse scored, negative effect sizes reflect a greater reduction in problem behaviors. Variables not correlated with the outcome dropped from analyses.

Table 12

Full results from multilevel models for use of Initiative strategies predicting end-of-year social-emotional functioning

	Predicting DECA Initiative <i>B (SE)</i>	Predicting DECA Self-Regulation <i>B (SE)</i>	Predicting DECA A&R <i>B (SE)</i>	Predicting DECA Behavior Concerns <i>B (SE)</i>
Model: Initiative (at least 1)				
Average Intercept	35.37 (3.38)**	31.83 (3.18)**	41.87 (4.28)**	10.54 (3.98)*
Time 1 Score	.54 (.04)**	.60 (.04)**	.44 (.04)**	.59 (.04)**
White	-1.29 (1.52)	-2.70 (1.39)	-1.95 (1.54)	.28 (1.70)
Asian	.44 (1.18)	.44 (1.08)	.22 (1.19)	-2.36 (1.31)
African American	-1.52 (.78)	-2.31 (.71)**	-.42 (.78)	2.63 (.86)**
Gender (Female = 1)	.95 (.71)	.80 (.64)	1.33 (.70)	-3.15 (.79)**
Initiative (used any)	-5.19 (2.75)	-4.86 (2.48)	-10.30 (3.78)*	6.46 (3.54)
Model: Initiative (total)				
Average Intercept	31.59 (2.62)**	-	35.17 (2.73)**	-
Time 1 Score	.54 (.04)**	-	.45 (.04)**	-
White	-1.20 (1.53)	-	-1.80 (1.54)	-
Asian	.41 (1.19)	-	.22 (1.19)	-
African American	-1.50 (.77)	-	-.42 (.78)	-
Gender (Female = 1)	.94 (.71)	-	1.32 (.70)	-
Initiative (total)	-.41 (.55)	-	-1.59 (.77)*	-

Note. * $p < .05$. ** $p < .01$. A&R = Attachment and Relationships. Behavior Concerns is reverse scored, negative effect sizes reflect a greater reduction in problem behaviors. Dashed line indicates no correlation with the outcome.

Table 13

Full results from multilevel models for use of Self-Regulation strategies predicting end-of-year social-emotional functioning

	Predicting DECA Initiative <i>B (SE)</i>	Predicting DECA Self- Regulation <i>B (SE)</i>	Predicting DECA A&R <i>B (SE)</i>	Predicting DECA Behavior Concerns <i>B (SE)</i>
Model: Self-Regulation (at least 1)				
Average Intercept	32.68 (2.61)**	27.98 (2.60)**	36.38 (3.21)**	-
Time 1 Score	.54 (.04)**	.60 (.04)**	.45 (.04)**	-
White	-1.12 (1.53)	-2.61 (1.40)	-1.78 (1.54)	-
Asian	.38 (1.18)	.37 (1.08)	.18 (1.19)	-
African American	-1.52 (.78)	-2.31 (.71)**	-.41 (.78)	-
Gender (Female = 1)	.93 (.70)	.79 (.65)	1.31 (.70)	-
Initiative (used any)	-2.78 (1.93)	-1.00 (1.78)	-5.15 (2.73)	-
Model: Self-Regulation (total)				
Average Intercept	31.70 (2.29)**	-	2.00 (.40)**	-
Time 1 Score	.54 (.04)**	-	.61 (.88)	-
White	-1.15 (1.53)	-	-.69 (2.30)	-
Asian	.42 (1.18)	-	-1.67 (.82)*	-
African American	-1.52 (.78)	-	-.70 (.17)**	-
Gender (Female = 1)	.93 (.70)	-	.03 (.71)	-
Initiative (total)	-.71 (.55)	-	-.47 (.41)	-

Note. * $p < .05$. ** $p < .01$. A&R = Attachment and Relationships. Behavior Concerns is reverse scored, negative effect sizes reflect a greater reduction in problem behaviors. Dashed line indicates no correlation with the outcome.

Table 14

Full results from multilevel models for use of Attachment and Relationships strategies predicting end-of-year social-emotional functioning

	Predicting DECA Initiative <i>B (SE)</i>	Predicting DECA Self-Regulation <i>B (SE)</i>	Predicting DECA A&R <i>B (SE)</i>	Predicting DECA Behavior Concerns <i>B (SE)</i>
Model: Attachment/Relationships (at least 1)				
Average Intercept	-	-	35.69 (3.42)**	-
Time 1 Score	-	-	.45 (.04)**	-
White	-	-	-1.81 (1.54)	-
Asian	-	-	.20 (1.19)	-
African American	-	-	-.39 (.78)	-
Gender (Female = 1)	-	-	1.31 (.70)	-
Initiative (used any)	-	-	-4.11 (2.97)	-
Model: Attachment/Relationships (total)				
Average Intercept	-	-	33.54 (2.86)**	-
Time 1 Score	-	-	.45 (.04)**	-
White	-	-	-1.87 (1.54)	-
Asian	-	-	.19 (1.19)	-
African American	-	-	-.40 (.78)	-
Gender (Female = 1)	-	-	1.32 (.70)	-
Initiative (total)	-	-	-.60 (.77)	-

Note. ** $p < .01$. A&R = Attachment and Relationships. Dashed line indicates no correlation with the outcome.

Table 15

Full results from multilevel models for use of Behavior Concerns strategies predicting end-of-year social-emotional functioning

	Predicting DECA Initiative <i>B (SE)</i>	Predicting DECA Self-Regulation <i>B (SE)</i>	Predicting DECA A&R <i>B (SE)</i>	Predicting DECA Behavior Concerns <i>B (SE)</i>
Model: Behavior Concerns (at least 1)				
Average Intercept	31.11 (2.48)**	-	33.53 (2.87)**	-
Time 1 Score	.55 (.04)**	-	.45 (.04)**	-
White	-1.18 (1.53)	-	-1.85 (1.54)	-
Asian	.37 (1.18)	-	.20 (1.19)	-
African American	-1.52 (.78)	-	-.41 (.78)	-
Gender (Female = 1)	.93 (.71)	-	1.32 (.70)	-
Initiative (used any)	-1.03 (1.99)	-	-.54 (.71)	-
Model: Behavior Concerns (total)				
Average Intercept	-	-	-	-
Time 1 Score	-	-	-	-
White	-	-	-	-
Asian	-	-	-	-
African American	-	-	-	-
Gender (Female = 1)	-	-	-	-
Initiative (total)	-	-	-	-

Note. ** $p < .01$. A&R = Attachment and Relationships. Dashed line indicates no correlation with the outcome.

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APPENDIX A: EXAMPLE OF DECA FEEDBACK

Ms. Smith's Classroom: Students' Social-Emotional Development

In November, you completed the Devereux Early Childhood Assessment (DECA) of social-emotional development for each of your students. The table shows whether your ratings of each student indicated need or strength in each area of development assessed by the DECA. **Please review this summary with your literacy coach and refer to your packet of Classroom Strategies for Strengthening Students' Social-Emotional Development to identify a few teaching strategies that could benefit your classroom.**

Specific aspects of children's social emotional development assessed by the DECA include:

- **Protective Factors:**
 - **Initiative:** ability to think and act to meet his/her needs.
 - **Self-regulation:** ability to appropriately express emotion and manage behavior.
 - **Attachment/Relationships:** ability to develop and maintain mutual, positive connections with other children and significant adults.
 - **Overall Protective Factors:** Overall social and emotional well-being; average of Initiative, Self-regulation, and Attachment/Relationships scores
- **Behavioral Concerns:** wide variety of problem or challenging behaviors.

Additional information about the DECA is available on **page 3** [DECA results key] if you are interested.

This table can be used to identify needs and strengths for specific students, as well as your classroom as a whole. **Red** indicates an area of need, white (no color) indicates a typical or average score, and **green** indicates a strength.

Classroom Summary

Ms. Smith	Initiative	Self-Regulation	Attachment/Relationships	Protective Factors Overall	Behavioral Concerns
Student 1					
Student 2					
Student 3					
Student 4					
Student 5					
Student 6					
Student 7					
Student 8					
Student 9					
Student 10					
Student 11					
Student 12					

Common areas of need among students in your classroom are listed below to guide identification of strategies to meet those needs.

Number (and percentage) of students who have demonstrated need in the following areas:

Protective Factors Overall:	0	student(s)	-	0%
Initiative:	1	student(s)	-	8%
Self-regulation:	0	student(s)	-	0%
Attachment/Relationships:	1	student(s)	-	6%
Behavioral Concerns:	3	student(s)	-	25%

Students with similar areas of need

These students have demonstrated need in Initiative:

1. Student 6

These students have demonstrated need in Self-Regulation:

- None

These students have demonstrated need in Attachment/Relationships:

1. Student 2

These students have demonstrated Behavior Concerns:

1. Student 5
2. Student 6
3. Student 10

DECA Results Key

Listed below are the areas of social emotional development measured by the DECA, as well as an explanation of what a score of “strength,” “typical,” or “area of need” means.

Area	Score	Description of what child demonstrates
Protective Factors Overall	Area of need	Below average in social and emotional development.
	Typical	Average in social and emotional development
	Strength	Exceptional in social and emotional development.
Initiative	Area of need	Below average development in his/her self-awareness, responsibility, engagement in learning, and problem solving.
	Typical	Average levels of self-awareness, responsibility, engagement in learning, and problem solving skills.

	Strength	Exceptional levels of being responsible, self-aware, engaged in learning, and solves problems at an above average level.
Self-regulation	Area of need	Below average development in handling frustration and negative emotions, demonstrating patience, cooperation, respect, and consideration of others.
	Typical	Average levels of handling frustration and negative emotions, and demonstrating patience, cooperation, respect, and consideration of others.
	Strength	Exceptional development in handling frustration and negative emotions, and demonstrating patience, cooperation, respect, and consideration of others.
Attachment/ Relationships	Area of need	Below average development in one or more areas: acting affectionate, trusting, optimistic, and happy; developing relationships with adults and other children; and/or effectively gaining positive attention.
	Typical	Average levels of seeking out adults and other children, gaining positive attention, and showing adequate affection, trust, optimism, and happiness.
	Strength	Exceptional development in seeking out adults and other children, effectively gaining positive attention, and being affectionate, trusting, optimistic, and happy.
Behavioral Concerns	Area of need	More than average problems with aggression, withdrawal, attention, and/or the control of extreme emotions.
	Typical	Developmentally appropriate level of aggression, withdrawal, attention, and/or control of extreme emotions.
	Strength	N/A

APPENDIX B: EXAMPLE OF STRATEGY PACKET

Classroom Strategies for Strengthening Students' Initiative

1. Here's the Plan (Initiating play with others)

TS GOLD Objectives - 1a. Manages feelings; 2c. Interacts with peers; 3a. Balances needs and rights of self and others; 3b. Solves social problems

Also: 8a. Comprehends language; 9b. Speaks clearly; 10a. Engages in conversations; 10b. Uses social rules of language; 11e. Shows flexibility and inventiveness in thinking; 14b. Engages in sociodramatic play

Why is this Important:

Children enjoy working together on a project. Use this opportunity to help them learn how to think through what they are going to do and how they are going to do it.

Questions To Consider:

1. In what ways does this child initiate play with other children?
2. How much guidance does he need from an adult as he plays with others?
3. What ideas does this child have for multiple friends?

What To Do:

1. Observe child's interactions with others while engaging in pretend play. Support his relationships with other children.
2. Put out props or make suggestions that encourage pretend play. Mostly watch child play with other children without leading their play; e.g., put out puppets and see how the children use them, or encourage them to make their own puppets.
3. Ask questions that prompt this child and the others to plan what they will do. *What could you do with these puppets? What kinds of things would you need to do to perform a puppet show?*
4. Let the children take the lead. Make comments about what you see them doing.
5. Encourage child to play in other creative ways with his playmates. Ask questions, and guide the children when necessary to help them get started. *What will you need for this activity? How much space do you need at the table for everyone to sit?*

2. Tags and Toes (Problem solving)

TS GOLD Objectives - 1a. Manages feelings; 11b. Persists

Also: 1c3. Dressing; 8b. Follows directions

Why is this Important:

When this child repeats an effort to accomplish a task, she displays the patience and persistence necessary for problem solving.

Questions To Consider:

1. In what ways does this child persist to accomplish the task?
2. How does she manage her feelings when trying to take care of a task on her own?
3. What does she do to indicate that she needs help?

What To Do:

1. Demonstrate to this child how she can put on her coat by herself. Lay the coat at her feet with the tag touching her toes. Have her put her hands in the sleeves and flip the coat over her head. This child should now be wearing the coat.
2. Offer several demonstrations if necessary. Talk about the steps as you show her. *Now I will keep my hands in the sleeves and flip the coat up and over my head.*
3. Allow this child time to practice this skill for as long as she chooses.
4. Offer positive feedback for any repeated attempts she makes, with or without success. If she chooses to try a different way to put on her coat, encourage her to explore that, too.
5. If this child feels frustrated or loses interest, do not force her to continue. Encourage her to try again at a later time.

3. Building Responsibility (Following routines without direction)

TS GOLD Objectives - 1b. Follows limits and expectations; 1c. Takes care of own needs appropriately; 3a. Balances needs and rights of self and others; 11b. Persists

Also: 8b. Follows directions; 9a. Uses an expanding expressive vocabulary; 12b. Makes connections; 29. Demonstrates knowledge about self

Why is this Important:

Once you have taught children how to follow simple routines, observe how much of the routine they have internalized. For example, instead of reminding children how to get ready to go home, observe how they put papers into their backpacks and put on their coats. They will want to show you all that they know.

Questions To Consider:

1. What tasks is this child able to complete with little or no assistance?
2. How does he respond to cues that remind him of what needs to be done?
3. In what ways does this child try to be independent throughout his day?

What To Do:

1. Children love to help and be independent. Allowing this child to help with a chore fosters in him a sense of responsibility and independence.
2. If this is a new chore in your classroom, remind this child to do it for the first few times. See how long it takes before he begins to do it without being asked. With other children modeling this routine, he should follow it without prompting.
3. Encourage this child to be more independent. He should eventually be able to follow routines or responsibilities without reminders from you.
4. During a group time, talk with the children about daily routines. *How do we get ready to go home? What do we do at snack? How do we choose where we want to play during choice time?*

4. Let's Go (Following routines)

TS GOLD Objectives - 1b. Follows limits and expectations; 1c. Takes care of own needs appropriately; 8b. Follows directions

Also: 1c1. Eating and drinking; 1c2. Toileting and personal hygiene; 1c3. Dressing; 4a. Walks; 7a. Uses fingers and hands; 12b. Makes connections

Why is this Important:

Offering reminders that lead this child through classroom routines helps him become independent in the classroom and remember routines even before he is able to participate on his own.

Questions To Consider:

1. In what ways does this child take initiative to follow routines?
2. What assistance does this child need during the routine?
3. How well does this child recognize and respond to reminders of the next step in the routine?

What To Do:

1. Invite this child to join you in a series of classroom routines (e.g., getting his coat, preparing for snack, putting on shoes, etc.). Take his hand and lead him through each routine: *"Now that we are finished listening to the story, it is time to go outside. Let's go get your jacket."*
2. Offer constant feedback about what he is doing and what he will be doing next: *"You are washing your hands so that you can have your lunch. Now let's go to your cubby to get your lunchbox. Then we will sit at the table."* Instead of leading him to each routine and then completing it for him, approach each step slowly so that he has a chance to work independently.
3. Maintain a sequence of routines in the classroom so that this child can anticipate what to do next: always wash hands, then get lunchbox; or have circle time, then go outside to the playground.
4. Offer no more assistance than is necessary, but remain close enough so that he knows you will help if needed.
5. Acknowledge child's efforts and achievements as he attends to routines with little or no assistance.

5. Look at What I Can Do! (Performing tasks on his/her own)

TS GOLD Objectives - 1b. Follows limits and expectations; 1c. Takes care of own needs appropriately; 10a. Engages in conversations; 29. Demonstrates knowledge about self

Also: 1c2. Toileting and personal hygiene; 1c3. Dressing; 7a. Uses fingers and hands; 7b. Uses writing and drawing tools; 9a. Uses an expanding expressive vocabulary; 9d. Tells about another time or place; 14a. Thinks symbolically; 17b. Uses print concepts; 18b. Uses emergent reading skills

Why is this Important:

Children are learning new things every day, and they love to talk about what they can do. This activity helps children recognize their abilities while improving their conversational skills.

Questions To Consider:

1. What tasks is this child able to complete on her own?
2. How does she describe herself and the tasks she can do?
3. In what ways does she represent her achievements through drawing?

Materials:

- drawing paper
- crayons
- chart paper and marker

What To Do:

1. During a group time, encourage the children to talk about the kinds of things they can do, such as washing their hands, putting on their coats, and brushing their teeth.
2. Comment on some of the things you have seen child do. *I saw you put on your shoes before we went outside. You washed your hands before lunch.*
3. I Invite each child to talk about the things that he or she can do. Write down the words *I can....* on a piece of chart paper. As the children tell you what they can do, write down their words.
4. After each child shares, read their comments back to them. Support and appreciate each of their strengths, and be sure to avoid comparing their abilities.
5. Invite children to draw pictures of the different things they can do. Ask child to tell you about what she has drawn. Write down her words near her picture.
 Invite child to display her picture somewhere in the room.

Classroom Strategies for Strengthening Students' Self-regulation

1. Create a Quilt (Interacting with peers)

TS GOLD Objectives - 2c. Interacts with peers; 3a. Balances needs and rights of self and others; 3b. Solves social problems; 11e. Shows flexibility and inventiveness in thinking

Also: 7a. Uses fingers and hands; 7b. Uses writing and drawing tools; 8b. Follows directions; 11a. Attends and engages; 14a. Thinks symbolically; 17a. Uses and appreciates books; 21a. Understands spatial relationships; 21b. Understands shapes; 23. Demonstrates knowledge of patterns; 28. Uses tools and other technology to perform tasks; 33. Explores the visual arts

Why is this Important:

With adult guidance, children can learn how to work with others on a collaborative project. This activity builds children's sense of self-worth by allowing them to use their creativity to contribute to a greater whole.

Questions To Consider:

1. How does this child sustain positive interactions with others during this experience?
2. In what ways is she able to grasp and manipulate the materials to create a quilt?
3. How long does she remain engaged with this activity?

Materials:

- small squares of paper (3" x 3" or 6" x 6")
- crayons
- tape
- pictures of quilts, or children's books with quilts in the story (e.g., *Sweet Clara and the Freedom Quilt* by Deborah Hopkinson and *The Quilt Story* by Tony Johnston and Tomi dePaola)

What To Do:

1. Gather the materials and place them on a table .
2. Invite this child to make a quilt with you and some other children.
3. Show her the pictures of the quilts, or read one of the quilt-related stories together.
4. Explain that this child may decorate squares of paper and then help you tape all of the decorated squares together to make a quilt.
5. Encourage her efforts and talk about what you see. *I see you have chosen to make a red square with a green circle in the middle, like the one in this picture.*
6. Talk about the work that the other children are doing. *Molly is making a green square, too. Jeremy is making a square that is blue with yellow stripes.*
7. After this child and the others are finished, ask her to help you tape all of the squares together to make a quilt.
8. Display the quilt in the room . Encourage her to show the quilt to her family members at the end of the day.

2. Others Have Feelings, Too (Understanding that others have emotions)

TS GOLD Objectives - 2b. Responds to emotional cues; 11a. Attends and engages; 30. Shows basic understanding of people and how they live

Also: 8a. Comprehends language; 9a. Uses an expanding expressive vocabulary; 9b. Speaks clearly; 10a. Engages in conversations; 18a. Interacts during read-alouds and book conversations

Why is this Important:

Sharing books that depict other children reacting to familiar situations helps young children develop an understanding that others have feelings that are separate from their own.

Questions To Consider:

1. In what ways does this child interact during the story?
2. What feelings does he recognize and discuss?
3. How does he relate and describe his own feelings?

Materials:

- books with children experiencing a variety of emotions (such as *When Sophie Gets Angry* by Molly Bang, *The Chocolate-Covered-Cookie Tantrum* by Deborah Blumenthal, and *When I Miss You* by Cornelia Maude Spelman)

What To Do:

1. Sit with this child next to you or in your lap.
2. Show child the cover of the book. Briefly describe what the book is about. *This book is about someone who misses her mommy.*
3. Read the book with this child. Ask him questions about the characters' feelings. *Why do you think she is sad?*
4. Ask additional questions that help this child relate to the story. *What do you do when you feel sad?*
5. Ask simple questions to engage him in the story. *Where is Sophie?* Then ask some complex questions to stretch his thinking, even if he can't answer them fully. *Why do you think she feels that way?*
6. Pay attention to this child's reactions to the pictures and the storyline.
7. When you are finished, place the book where this child can look at it on his own at a later time.

3. Coming and Going (Transitioning at the beginning/end of the day)

TS GOLD Objectives - 1a. Manages feelings; 1b. Follows limits and expectations; 1c. Takes care of own needs appropriately

2a. Forms relationships with adults; 2c. Interacts with peers; 29. Demonstrates knowledge about self

Also: 8b. Follows directions; 12b. Makes connections; 34. Explores musical concepts and expression

Why is this Important:

Arrival and departure times can be the most significant transitions of the day for many children. Arrival sets the tone for the day, and departure is the last experience each day. Making these transitions positive and consistent helps children remember the sequence of these routines and learn to perform them independently.

Questions To Consider:

1. How does this child handle separations when he enters the classroom?
2. How long does it take him to appear comfortable with people in the classroom?
3. What routines does he recall and attend to at the beginning of each school day?

What To Do:

1. Observe this child during arrival and departure times. Does he appear to feel comfortable with familiar adults? Does he want to begin new activities when it is time to leave? Does he interact easily with other children?
2. Use songs to celebrate arrivals and departures (e.g., *Where is this child?* to the tune of "Where is Thumbkin?" or *Good-bye, this child!* to the tune of "Goodnight Ladies.") Singing these songs will give him a sense that his coming and going are occasions for fun. Enlist the help of children who are more comfortable with the arrival routine to comfort and guide the more anxious children through arrival time.
3. Create a schedule for children who would like to be special "greeters" on the Welcome Crew in the morning. Invite this child to take on this important task. If his parents can bring him fifteen minutes prior to arrival time, encourage him and any other greeters to welcome classmates into the classroom with a sign, a song, or other greeting.
4. If this child and the other greeters cannot come early, encourage them to be on the Good-Bye Crew in the afternoon, waving and singing a special song to their classmates and helping them pack their things to leave for the day.

4. My Changing Day (Transitioning between activities)

TS GOLD Objectives - 1a. Manages feelings; 12b. Makes connections; 30. Shows basic understanding of people and how they live

Also: 8a. Comprehends language

Why is this Important:

When it's time to transition from one activity to another, children may not understand that the first activity will be available again later. They often feel anxious during transitions. Consistency in daily routines can help children feel more comfortable with transitions.

Questions To Consider:

1. How difficult is it for this child to move from one part of his day to the next?
2. How does he respond to reminders of upcoming change?
3. In what ways can he transition from one routine to the next without assistance?

What To Do:

1. Announce transitions before they occur, and give this child tangible stopping points. *You may have two more paintbrush dips before we start to clean up. Or, You may finish the book you're reading now, and then we'll move to group time.*
2. Prepare this child for changes in routine. For example, talk about a field trip on the days leading up to the event.
3. Follow a daily schedule that has a variety of experiences (such as small group, choice time, and large group) so that this child becomes accustomed to regular transitions.
4. Post a pictorial schedule and refer to it regularly as an indicator of what will be happening next.
5. Make a countdown calendar for this child so he can mark the days preceding a special event. On the day before the event, discuss with child in detail how the event will unfold.

5. One Person Table (Focusing on a task)

TS GOLD Objectives - 1a. Manages feelings; 1b. Follows limits and expectations; 11a. Attends and engages

Why is this Important:

Providing a space for this child to work alone allows him to focus on a task without distraction.

Questions To Consider:

1. How does this child sustain his attention while sitting at the table?
2. How is he able to avoid distractions?
3. How much adult direction does he need to concentrate on a specific task?

Materials:

- small table and chair

What To Do:

1. Find a small table and chair, and designate the space as the One Person Table. Make a sign with a picture of one child working. The table should be in a quiet area where children can concentrate fully on their work.
2. Explain the use of the table to this child. *When you want to play with something or work on something by yourself, you can bring it to the One Person Table so that you can concentrate.*
3. You may want to model the use of the table so that this child understands its purpose. *I have to fill out our lunch order. I'm going to sit at the One Person Table to do it so that I can concentrate on my work.*
4. When this child is working on an individual project encourage him to sit at the One Person Table.
5. The table should never be used to isolate this child in a negative way. He should associate it with quiet and peaceful play time.
6. Make the table available to this child whenever he seeks out a quiet activity. You can encourage his use of the table by occasionally putting a new puzzle, book, or small set of manipulatives on it that this child would like to explore.

6. Bike Signs and Signals (Interacting with peers)

TS GOLD Objectives - 1b. Follows limits and expectations; 2c. Interacts with peers; 3a. Balances needs and rights of self and others; 30. Shows basic understanding of people and how they live

Also: 4. Demonstrates traveling skills; 8a. Comprehends language; 14b. Engages in sociodramatic play; 17b. Uses print concepts

Why is this Important:

Pedaling and steering a tricycle requires a great deal of coordination and skill. Providing many opportunities for a child to practice his growing skills will help him become a successful rider. Using signs can help children learn how to follow rules and expectations.

Questions To Consider:

1. How well does this child understand and follow expectations while riding?
2. How well does he control and move the tricycle through the designated space?
3. In what ways does he interact with others to share the space?
4. How well does he recognize the signs?

Materials:

- tricycle and safety helmet (as appropriate)
- traffic cones, masking tape, or sidewalk chalk
- stop signs

What To Do:

1. Outline an area on the floor or ground outside designated as the road. Use the masking tape, traffic cones, or chalk to mark lanes and intersections. Place stop signs near intersections.
2. Invite this child to go for a drive with you. While acting as the traffic cop overseeing the roads, have this child ride a tricycle around the designated area.
3. Explain the rules of the road, such as staying in the lane and stopping at stop signs. Allow plenty of room for him to practice pedaling, stopping, and turning. *When you see the red sign, you know it means to stop. Here is the word STOP.*
4. Point out the lines on the road and explain what they mean. *The lines of cones show us where the road is. It's important to stay on the road.*
5. Offer encouragement as this child practices riding his tricycle. *You stopped at the stop sign. That's important because you need to make sure no other bikes are coming through the intersection.*
6. Continue the activity for as long as this child is interested. You may decide to create a parking space for the tricycle using masking tape or cones.

Classroom Strategies for Strengthening Students' Attachment/Relationships

1. Familiar Faces (Comfort with adults in school)

TS GOLD Objectives - 1a. Manages feelings; 2a. Forms relationships with adults; 11a. Attends and engages; 30. Shows basic understanding of people and how they live

Also: 8a. Comprehends language; 9b. Speaks clearly; 9c. Uses conventional grammar; 12a. Recognizes and recalls; 17b. Uses print concepts

Why is this Important:

As children develop trusting relationships with important adults in their lives, they are more easily able to interact with new people and in new environments. Familiarizing children with the adults they will encounter regularly helps them feel comfortable in your program.

Questions To Consider:

1. How comfortable is this child with the adults in school?
2. In what ways does this child recognize and describe the people in the photos?
3. How does he follow along with the book as you read?

Materials:

- construction paper (or other heavyweight paper)
- photos of adults who work at the school
- marker
- lamination supplies
- tape
- fasteners such as a stapler, brads, or rings

What To Do:

1. Tape a photo of each person to its own sheet of paper.
2. Talk with this child about the people who work at your school (teachers, assistants, aides, volunteers, lunch helpers, custodians, etc.). Show him the photos of the adults at school.
3. Ask this child what each person does in the program. Record his ideas in a sentence or two under the adult's picture. *This is Mr. Mitchell. He makes good food for us to eat.*
4. When finished, laminate the pages and bind the book together.
5. Read the book regularly with this child to help him become more familiar with the adults at school.

2. Familiar Pictures (Connections with family members)

TS GOLD Objectives - 1a. Manages feelings; 2a. Forms relationships with adults

Also: 8a. Comprehends language; 9d. Tells about another time or place; 11a. Attends and engages; 12a. Recognizes and recalls; 12b. Makes connections

Why is this Important:

When helping children manage their feelings, consider using pictures to provide connections to home or familiar people. This will help children learn ways to soothe themselves when they are upset.

Questions To Consider:

1. In what ways does this child feel comforted by the pictures?
2. How does he interact with you during this experience?
3. At what times of the day does this child need to be comforted?

Materials:

- photos of this child and his family

What To Do:

1. Display photographs of this child and his family at child's eye level around the room. Keep any additional photos in an envelope and store it in his cubby.
2. Watch for moments when this child is upset, sad, stressed, or frustrated, such as during arrival and departure.
3. Use the pictures to help this child feel secure. *I see that you are sad that your daddy is leaving for work. Let's find a picture of him to make you feel better. See? Your daddy will be here on the wall all day long, and you can look at this picture if you miss him. Let's say bye-bye to Daddy and let him go to work.*
4. Take time throughout the day to talk about the pictures on the wall or in this child's cubby. *I see you looking at the picture of your mommy. She is at work now, but she's going to come and get you this afternoon. You love your mommy. She is so special.*
5. Talk about family, fun, and special moments with this child as a way to help him think about other familiar people in his life.

3. Comfort Zone (Connections with home)

TS GOLD Objectives - 1a. Manages feelings; 2a. Forms relationships with adults

Also: 8a. Comprehends language

Why is this Important:

As children learn to manage their feelings when they are stressed, tired, or afraid, they may take comfort in special objects from home. Hugging a favorite stuffed toy or blanket can provide them with a soothing connection to home.

Questions To Consider:

1. How does this child's comfort object help him soothe himself?
2. In what ways does he indicate that he wants the object?

Materials:

- This child's favorite comfort object

What To Do:

1. Encourage this child's family to bring in this child's comfort objects from home such as a blanket, pillow, or favorite stuffed toy. Talk with this child's family member about any word, sound, or action that this child uses to identify his comfort object.
2. Store the special item in a place that is accessible to this child.
3. Observe this child for cues that he is tired, stressed, or afraid and would like to have his special comfort object.
4. As you respond to this child's cues, offer him the familiar item and talk about his feelings. *It is really hard to say goodbye to Daddy. That makes you so sad. Hugging your bunny feels really good right now.*
5. Include the comfort object in routines, such as naptime, transition times, the beginning and end of the school day, or any time that this child feels stressed. Never use the object as a reward or punishment; instead, offer it to this child when he requests it.

4. My Turn, Your Turn (Sharing with peers)

TS GOLD Objectives - 1a. Manages feelings; 1c. Takes care of own needs appropriately; 2b.

Responds to emotional cues; 2c. Interacts with peers; 3a. Balances needs and rights of self and others; 3b. Solves social problems

Also: 6. Demonstrates gross-motor manipulative skills; 8b. Follows directions; 11d. Shows curiosity and motivation; 29. Demonstrates knowledge about self

Why is this Important:

When children first enter school, they begin to learn that other children have needs and desires, too. Some children might need adult guidance as they try to understand the concepts of turn taking and sharing.

Questions To Consider:

1. How is this child able to manage her feelings and take turns with the materials?
2. In what ways does she interact with another child using the same materials?
3. How does she follow your directions for taking turns?

Materials:

- toys or games for children to share

What To Do:

1. Invite this child and another child to sit at a table where you have placed a marble run toy or some puzzles. Try to find a toy that motivates and interests this child. Give half of the materials (marbles, puzzle pieces) to her, and the other half to the other child. Let them take turns, and continue to remind them whose turn it is.
2. If this child steps out of turn, touch her arm gently and ask, *Do you remember whose turn it is?* Use words of encouragement and enthusiasm whenever she waits for her turn. *You are waiting very patiently for a turn to add a puzzle piece.* After a few activities that require turn-taking or sharing, she may begin to practice this on her own. Observe her progress and continue to encourage her efforts.
3. When you take the children outside, observe how this child takes turns in a different environment. You can reinforce the turn taking with swings, riding equipment, or sand toys. She might need reminders to wait for her turn. *In two minutes, it will be your turn on the bicycle.* If another child wants a turn, you might say, *Caroline would like a turn. Why don't you swing for two more minutes, and then it will be her turn.*

Classroom Strategies for Reducing Students' Behavior Concerns

1. Let's Do This Instead (Redirecting attention)

TS GOLD Objectives - 1a. Manages feelings; 1b. Follows limits and expectations; 2a. Forms relationships with adults; 3a. Balances needs and rights of self and others; 11a. Attends and engages

Also: 8a. Comprehends language

Why is this Important:

It is important to help children learn to regulate their own behavior. This involves teaching children what else they can do when they first make an unacceptable choice.

Questions To Consider:

1. In what ways does this child respond to redirection?
2. How well does she attend to a new activity?
3. How does she comprehend your explanation for redirection?

What To Do:

1. When this child is engaged in a behavior that is unacceptable, look for an opportunity to offer her an acceptable alternative. You can redirect this child by stopping the current behavior and then offering an acceptable choice.
2. Stop the unacceptable behavior immediately if it could harm this child or someone else. Use a steady, calm tone when you speak. *Throwing rocks could hurt someone's body.*
3. Give this child an alternative, using expressions to make the acceptable choice sound appealing. *Let's throw these colored balls instead. Which one would you like to hold?*

2. Offer a Solution (Resolving conflicts)

TS GOLD Objectives - 1a. Manages feelings; 1b. Follows limits and expectations; 1c. Takes care of own needs appropriately; 2b. Responds to emotional cues; 2c. Interacts with peers; 3a. Balances needs and rights of self and others; 3b. Solves social problems; 8b. Follows directions

Also: 8a. Comprehends language; 9a. Uses an expanding expressive vocabulary; 10a. Engages in conversations; 29. Demonstrates knowledge about self

Why is this Important:

Children eventually learn to use thinking skills to resolve conflicts. Until children can come up with their own solutions, they will need suggestions from an adult. Offering solutions to a conflict when children are distressed will help them manage their emotions and begin to understand that conflicts can be resolved.

Questions To Consider:

1. How does this child respond to your suggestion?
2. How does she manage her feelings during this experience?
3. In what ways does she interact with others to solve the conflict using your solution?

What To Do:

1. When you offer a solution to a conflict, observe how this child responds to your involvement. Does your presence calm her? Notice if she is agreeable to your suggested solution.
2. Get down on this child's level. Make eye contact and offer a gentle touch to let her know you are there to support her.
3. Explain the situation in simple words and name this child's feelings. *This child, you are frustrated because you would like to play with a truck like Mica's.*
4. Enforce the rule or limit, if necessary. Holding this child's hands gently, say, *We need to be kind and safe. I cannot let you hit Mica. That hurts his body.* Offer a solution. *Here is another blue truck just like Mica's that you can use.*
5. Observe how this child responds. If she does not respond immediately to your solution, you may want to offer her a choice of two solutions and let her decide. *Would you like to play with the blue truck or would you like to use the bulldozer?* Remember to remain calm. Your calm, caring presence will keep a conflict from escalating by helping this child manage her emotions and encouraging her to focus on resolving the problem.

3. Active Listening (Verbalizing feelings)

TS GOLD Objectives - 1a. Manages feelings; 2c. Interacts with peers; 3b. Solves social problems

Also: 8a. Comprehends language

Why is this Important:

Using active listening with children lets them know that their feelings are being understood, even if they can't verbalize them yet. When a child displays a strong emotion, active listening teaches him language that will help him eventually verbalize his feelings. This strategy also supports children's development of empathy, helps diffuse emotional situations, and lets him know that you care.

Questions To Consider:

1. In what ways does this child express his feelings?
2. How does this child respond to your words and expressions?
3. Is this child able to better express his emotions with assistance?

What To Do:

1. When this child shows strong emotions, get down to his eye level. Make eye contact and offer a gentle touch to let him know that you are listening.
2. If this child is not able to express himself verbally, you may have to talk about what you see and assess his feelings about the situation. *You are frowning at Michael's pile of play dough. Are you trying to tell him that you would like to have some of his play dough to play with?*
3. If this child talks, repeat his words in language he can understand while reflecting his tone. *You want that truck! You really want that truck* (Say this as you scrunch up your nose and furrow your brow.)
4. Name and explain this child's feelings. *You are angry because Tommy has that truck.*
5. Help this child put his feelings and needs into words, if possible.

4. Use Your Words (Resolving conflicts)

TS GOLD Objectives - 1a. Manages feelings; 2b. Responds to emotional cues; 2c. Interacts with peers; 2d. Makes friends; 3a. Balances needs and rights of self and others; 3b. Solves social problems

Also: 8a. Comprehends language; 9b. Speaks clearly

Why is this Important:

Social conflicts can arise daily in a child's life, but children may not know how to express themselves in these situations. You can model appropriate dialogue and conflict resolution techniques to help children get through social issues such as sharing and making friends.

Questions To Consider:

1. How does this child respond to social conflict?
2. In what ways does he express unhappiness or anger?
3. How is he able to copy your words and expressions to show how he feels?

What To Do:

1. Look for opportunities on the playground to demonstrate to this child how to express feelings in acceptable ways.
2. Watch how this child deals with frustration or anger in social situations, and support his learning by helping him think of how he can express his emotions appropriately. *I see that you are upset that John knocked down your castle. Say this to him: "I don't like it when you knock my castle down."*
3. Use expression in your voice and face as you model the correct behavior. Encourage this child to match the tone of your voice when he repeats your words.
4. If needed, get down to this child's eye level to support him as he expresses himself. Step back when you notice this child feeling more comfortable standing up for himself.