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Drama-Based Strategies in the Elementary Classroom: Increasing Social Perspective-Taking and Problem-Solving

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Drama-Based Strategies in the Elementary Classroom: Increasing Social Perspective-Taking and Problem-Solving

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Dedication

This document is dedicated to the memory of my father, Dr. Raymond S. Rodgers, who instilled in me a passion for scholarship, debate, and Cajun cooking. He was dedicated to his field and inspired his students to seek out knowledge, whether it was First Amendment law or the ingredients of the "Holy Trinity." He taught me to question, to maintain a healthy skepticism, and to be courageous when cooking an extra-dark roux.

Daddy, thank you for your love, guidance, commitment to my education, and unfailing confidence. I could not have done this without you.

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Drama-Based Strategies in the Elementary Classroom: Increasing Social Perspective-Taking and Problem-Solving

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Built from a diverse background of theatre-based education and social change theories, drama-based instruction (DBI) employs active, kinesthetic learning strategies to engage students in classroom activities. Much of DBI is grounded in scaffolding students through a Describe, Analyze, and Relate (DAR) thinking process. DAR requires students to consider information in a systematic way, leading them through the steps of Bloom's Taxonomy and moving from lower-order to higher-order thinking skills. Examining information at this deeper level is a process similar to the automatic thought-stopping mechanism of Cognitive-Behavioral Therapy (CBT). As in CBT, rather than making hasty assumptions, students are guided through steps that allow them to analyze details and to examine stimuli thoroughly. Yet the context of DBI is different from many CBT therapeutic settings because DBI is situated in a classroom environment. DAR is delivered as a whole-class intervention with peer interaction occurring throughout the thinking and questioning process. Social perspective-taking involves one individual's efforts to discern the thoughts and feelings of another individual, a skill that has been linked to more effective problem solving. When teachers offer structured exposure to

thought-stopping and perspective-taking processes, students gain practice with social perspective-taking and problem-solving skills.

The current study proposed a multiple baseline, single-case design to explore how practice using the Describe, Analyze, Relate (DAR) questioning technique affects students' capacity to engage in social perspective-taking and social problem-solving. The school in this study participated in a year-long, campus-wide initiative to train teachers in how to use DAR across subjects and grade levels. Two fourth grade teachers, one fifth grade teacher, and one visual arts teacher were identified as demonstrating proficiency in the DAR technique. In each of the three core teachers' classes, a letter was sent home explaining the project and requesting opt-in from interested parents. From those who responded, students with special education placements were removed, then two students were randomly selected per class. The researcher met individually with the selected participants to conduct repeated measures of the Interpersonal Negotiating Strategies Interview for baseline, intervention, and follow-up phases of the study over the course of the 2012-2013 school year. Additionally, participants' teachers were asked to complete the Social Skills subscale of the Behavior Assessment System for Children for each phase of data collection. Post-intervention interviews were conducted with the teachers to assess for their perceptions of the DAR strategy and DBI-based pedagogy in general. Visual analysis was used to assess the effectiveness of the treatment on student social perspective-taking and problem-solving. Overall, the quantitative results of the current study did not conclusively link DAR with social perspective-taking and problem-solving. However, the qualitative data from teacher interviews yielded positive feedback related to

the utility of DAR questioning on improving higher-order thinking in their students. Further research is necessary to clarify and deepen understanding of this effect.

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CHAPTER 1

> "Arts integration is the practice of using arts strategies to build skills and teach classroom subjects across different disciplines. When implemented effectively and with rigor, students receive both high quality arts instruction and subject matter instruction in reading, math, science, and other subjects within an integrated lesson plan. …The possibilities for learning other subjects through the arts are limitless…" (President's Committee on the Arts and the Humanities, 2011, pp. 39)

The President's Committee on the Arts and the Humanities (PCAH) report (2011) emphasizes the need for effective, consistent arts integration in schools across the United States. The report emphasizes the numerous empirically supported benefits of arts integration, including increases in student academic motivation and engagement, higher standardized testing scores in math and reading, and a narrowing of the achievement gap between students of lower and higher socio-economic status. It also acknowledges, however, that more research is necessary to fully understand the impact of arts integration in schools. The report notes the importance of learning more about the arts' role in developing "21st Century Skills", which include "problem solving, critical and creative thinking, dealing with ambiguity and complexity, integration of multiple skill sets, and the ability to perform cross-disciplinary work" (PCAH, 2011, pp. 28). The focus of the current study is on a form of arts integration known as drama-based instruction.

Drama-based instruction, or DBI, refers to a set of pedagogical techniques that are grounded in non-performative aspects of theatre. It includes an array of theatre exercises such as interactive games, improvisation, and role-play to activate and engage students in

a variety of curricular areas (Cawthon & Dawson, 2011). Drama-based instruction is considered to be a professional development model for teachers and includes ongoing training and support for its implementation (Cawthon & Dawson, 2011; Dawson, Cawthon, & Baker, 2011). As an emerging field of pedagogy and professional development, steps should be taken to empirically assess the utility of DBI. It holds the potential to benefit students on a broad scale and should be evaluated for its strengths and weaknesses in a number of areas. Previous research in the field of drama-based instruction has included analyses of its utility as a professional development model for teachers (Dawson, et. al, 2011; Cawthon & Dawson, 2009) and its ability to activate student classroom engagement (Cawthon, Dawson, & Ihorn, 2011). The current study seeks to further the base of knowledge surrounding drama-based instruction by investigating its ability to advance students' higher-order thinking and social skill development.

In the United States, students spend an average of six hours per day, five days per week, 180 days per year together in a school setting (Gresham, 2002, p. 406). During that time, they engage in hundreds of thousands of social interactions. Students work, play, eat, and live together for approximately 5,400 hours by the end of their fifth grade year (Gresham, 2002, p. 406). In many ways, schools function as microcosms of society; they include a broad swath of students from various racial, ethnic, religious, and cultural backgrounds (Gresham, 2002, p.406; Lortie, D, 1975). Given this context, schools serve as an excellent environment for teaching skills far beyond strictly academic knowledge.

During this time students must also develop the '21st Century Skills' emphasized in the PCAH report (2011). This initiative emphasizes that students should be challenged to develop higher order thinking skills that translate to their social and emotional lives and will carry them into healthy adulthood. The current study focuses on two specific skills, social perspective taking and social problem-solving, within the larger context of student outcomes.

Developing appropriate social perspective taking skills allows students to better regulate their negative emotions (Bengtsson & Arvidsson, 2011), utilize more effective problem solving (Gillespie & Richardson, 2011), and experience greater academic success, social relatedness, and social engagement (Gehlbach, 2011). Research demonstrates that social problem-solving skills are easily generalized to new situations, help prevent challenging behavior, and allow children to repair ruptures in their peer relationships more quickly (Joseph & Strain, 2010). Students who do not successfully develop social problem solving skills often utilize more aggressive solutions to interpersonal problems (Crick & Dodge, 1994) and ultimately experience peer rejection, criminality, and poor mental health as a result (Broidy, et al., 2003). Thus student proficiency in social perspective taking and problem-solving becomes a valuable goal, one which schools are well-suited to help achieve. Given that schools function as a microcosm of society and require students to spend large portions of time together, they are an ideal environment for practicing necessary social skills.

Typically, child and adolescent social skills are formally taught in two ways: on an individual, remedial basis or in a group setting based upon a common pathology (e.g. group therapy to treat depression, anxiety, anger management) (Kendall, 2006; LeCroy, 2007). Many of the extant programs for teaching such skills are based upon Cognitive Behavioral Therapy (CBT) and involve a structured program for skill development (Kendall, 2006). Few structured, programmatic approaches exist to teach social skills to students in a class-wide setting (Kendall, 2006). Drawing from Response to Intervention (RTI) literature, the commonly accepted approach to teaching social skills mimics Tiers II and III—children receive focused, targeted help when they have not shown adequate development. What the current psychological service model neglects, however, is that students are not always receiving a base level of support for developing social skills in the first place. By employing a preventive Tier I model, it may be possible to 'weed out' children who would otherwise develop more serious problems requiring intensive support. Therefore, the current study explores the potential application of the Describe, Analyze, Relate questioning procedure as a whole-class, Tier I intervention for CBT-style higher-order thinking skills—specifically social perspective-taking and social problem-solving. The RTI framework is applied to DAR as an explanation for *how* DAR works, whereas CBT theory offers background for *why* it is hypothesized to work. Essentially, the current study hypothesizes that DAR functions as a Tier I, CBT-style exercise in social perspective-taking and social problem-solving.

Given the background of the related theoretical frameworks, the present study examines the effects of participation in DAR-based lessons on late elementary students' (1) social perspective-taking and (2) social problem-solving. It was hypothesized that each of the two dependent variables would increase over the course of the treatment and would be sustained or further increase at the final data probe point.

CHAPTER 2

Review of the Literature

OVERVIEW

The Describe, Analyze, Relate (DAR) questioning strategy investigated in the current study is drawn from drama-based pedagogical techniques, which emphasize nontraditional methods for engaging learners (DBI Handbook, 2008; Cawthon & Dawson, 2009; Cawthon, Dawson, & Ihorn, 2011). DAR is founded upon tenets of Bloom's Taxonomy, with a goal of guiding students to increasingly more complex ways of thinking about a topic. The following review of the literature will discuss ways in which examining information more deeply allows students to engage in a process similar to the automatic thought-stopping mechanisms of Cognitive-Behavioral Therapy (CBT). Further, this review will examine DAR as a potential Response to Intervention (RTI)-style Tier I intervention. Finally, this document will provide a discussion of the social perspective-taking and problem-solving literatures and their relation to the DAR strategy.

DAR AND DRAMA-BASED INSTRUCTION

Drama-Based Instruction Context

Drama-based instruction (DBI) has evolved as a discipline from several different foundations and comes from the integration of multiple philosophies using drama and theatre as the basis for learning (Cawthon & Dawson, 2009; Nicholson, 2005). By

employing techniques developed from theatre activities, children may explore a wide variety of topics using active, kinesthetic learning strategies. Such methods stand in contrast with the lecture-based model of instruction, a top-down approach to pedagogy (Anderson, 1994; Mayberry & Lazarus, 2002). In the traditional model, teachers function as active transmitters of knowledge, while students passively receive information (Anderson, 1994; Gergen, 1995; Mayberry & Lazarus, 2002). In contrast, drama-based instruction strategies are based upon the constructivist philosophies of Lev Vygotsky (Dawson, Cawthon, & Baker, 2011), which emphasize the idea that knowledge is constructed as a result of each individual's experience of the world (Steffe & Gale, 1995). Further, drama-based instruction is predicated upon the constructivist belief that knowledge is built in a social context and is dependent upon interactions with others (Cawthon & Dawson, 2011). Drama-based instruction seeks to introduce a collaborative, dialogic learning environment in which students co-construct knowledge in lieu of a lecture-based, top-down classroom (Cawthon, Dawson, & Ihorn, 2011; Dawson, Cawthon, & Baker, 2011).

Drama-based instruction exists in a broader context of progressive philosophies of learning (Cawthon & Dawson, 2009; Cawthon & Dawson, 2011; Dawson, Cawthon, & Baker, 2011). The terms "applied theatre" and "applied drama" refer to a movement which gained traction in the 1990s (Nicholson, 2005). These terms are used to classify forms of dramatic practice that exist largely outside of conventional theatre (Nicholson, 2005). Rather, applied theatre/drama is conceptualized as a "participatory, dialogic and

dialectic" (Nicholson, 2005, p. 38) process focused on the betterment of communities, individuals, societies, and organizations (Nicholson, 2005; Taylor, 2003). Taylor (2003) points out that theatre can offer individuals opportunities to "interrogate some issue, confront a problem, and analyze their own relationship to the world in which they live" (p. 4). In her writing about the connections between applied drama and education, Nicholson (2005) emphasizes the "strong ties" between the two disciplines (p. 38). She notes the activity-based nature of both drama and pedagogy and emphasizes that both fields are highly contingent upon the cultural contexts in which they are embedded. Framed in terms of collaborative, culturally aware problem-solving, the connection between drama-based forms of processing and the goals of contemporary education are well aligned.

Drama-based instruction exists as a natural extension of applied drama. Applied drama emphasizes that no one-size-fits all program exists for all participants and that the individual characteristics of a community, school, classroom, and student should be taken into account when planning for learning (Nicholson, 2005). Thus, drama-based instruction includes a wide array of strategies for use in classrooms to serve the unique learning needs of students, teachers, and curricula (Bowell & Heap, 2001; Cawthon & Dawson, 2011; DBI Handbook, 2008). Drama-based instruction strategies include a range of activities designed to fulfill many goals including those that "hook" students' attention, provide an entry point for a topic, facilitate critical analysis of and reflection on information, and assess student learning (Cawthon & Dawson, 2009; Cawthon,

Dawson, & Ihorn, 2011). To clarify, the purpose of drama-based instruction is arts *integration* and not arts *education*. Whereas arts education refers to the teaching of art curriculum, arts integration is used to describe an approach to teaching in which students gain knowledge about both art curriculum and another subject area (i.e. science, math, social studies) (Silverstein & Layne, 2010). Thus, arts integration involves instruction that incorporates the arts to meet the curricular objectives of the arts discipline as well as the core curriculum.

A sample lesson plan for a drama-based lesson is included in Appendix A. The purpose of the lesson is to provide an introduction to study of the American Civil Rights movement of the 1950s and 1960s. It begins with the presentation of a photograph of Rosa Parks (Appendix B) and a process of questioning related to that image. (A detailed, contextualized description of the questioning process is provided in the following section of this chapter.) The lesson invites students to consider that the provided image is not a realistic depiction of Ms. Parks' iconic act of civil disobedience and then asks them to create together a frozen "stage picture" of how they envision the moment when Ms. Parks refused to relinquish her seat on the bus. The teacher uses the scene as an opportunity to question the characters' motivations and draw attention to issues and viewpoints the students may not have considered. Finally, the lesson shifts to a writing activity to further deepen students' understanding of the challenges of the era. Students select

characters from the stage image generated by the group and write a journal entry from the character's point of view.[1]

Central to this lesson and to DBI as a whole is effective questioning (Bowell & Heap, 2001; DFS Workshop, Summer 2010; Morgan & Saxton, 2006). In their book, *Asking Better Questions*, Morgan and Saxton (2006) identify three general functions of questions: those that elicit information, those that influence understanding, and those that invite reflection. They emphasize that each of these types of questions is necessary in the learning process, but questions most often asked in classrooms are of the first type: information eliciting (Morgan & Saxton, 2006). They argue that in order for children to integrate learning into their views of themselves and the world, it is critical to ask them questions that allow them make connections to the material and think about the connections being made (Morgan & Saxton, 2006). Often, appropriate questioning is a keystone of a drama-based lesson as it offers students an opportunity to reflect on their experiences, connect their learning to broader truths, integrate the information with prior knowledge, and critically evaluate knowledge gleaned from the activity (DFS Workshop, Summer 2011; Morgan & Saxton, 2006). Other arts-based instruction programs utilize similar inquiry to process and deepen learning. For example, the Visual Thinking Strategies model emphasizes the need for group discussion led by a facilitator in order to fully interpret and understand works of visual art (Yenawine, 2003). The works of

[1] Further lesson plans are available on the DBI website: http://www.finearts.utexas.edu/tad/special_programs/outreach_programs/drama_for_schools/lesson_plans.cfm

Maxine Greene and the Lincoln Center Institute utilize inquiry about visual art in an effort to enhance students' ability not only to observe works of art, but to *interpret* them, as well (Holzer, 2009). Questioning, and the discussions it inspires, provides students with greater learning opportunities than an activity presented in isolation (DFS Workshop, 2011, Morgan & Saxton, 2006). Yet, a summary of research on teacher questioning behavior indicates that teachers ask questions in a haphazard manner; questions may be frequent, but lacking in depth or higher-order thinking skills (Anderson, 1994; Walsh & Sattes, 2005). The current study presents DAR as a procedure which structures the delivery of questions to access deeper, more complex thought processes.

What is DAR?

The Describe, Analyze, Relate (DAR) questioning strategy developed within drama-based instruction is a technique to encourage higher-order thinking (DFS Handbook, 2008). In DAR, students are guided through a process which asks them to first describe an object or image, then analyze it for its possible meanings, and finally relate information about the object to their own lived experiences or prior knowledge of topics related to the object (DFS Handbook, 2008; DFS Workshop, Summer 2011). To engage students in the critical thinking process, a teacher or other facilitator presents a series of questions designed to assess student perceptions, explore them deeply, and draw student attention to unaddressed aspects of the object (DFS Workshop, 2011; DFS Handbook, 2008). Facilitators guide students through the process step by step, gently redirecting students when they jump prematurely to a later step in the sequence (DBI

Workshop, Summer 2010). Scaffolding of critical thinking skills is necessary for elementary-aged students given their tendency to view the world in concrete terms (Carrigan, 2007; Kuhn, 1999). Instead of observing an artifact and making a declarative statement about what it is, teachers use DAR to understand *why* students perceive the object as they do, *how* the object might be used, and of *what* the object might be made. Further, DAR asks students to use objective data about the artifact to support their claims and then proceed from a group-established basis of knowledge about the item.

As an illustration of DAR, consider a teacher who is presenting a lesson on the Civil Rights movement of the 1950s and 1960s in the United States. Prior to this lesson, the students have studied U.S. history and comprehend issues related to antebellum slavery, the Civil War, Reconstruction era in the American South, and Jim Crow laws. The teacher has begun to introduce the Civil Rights era and students have a basic understanding of the issues integral to the movement. The purpose of this lesson is to familiarize students with the Montgomery bus boycott and concepts of nonviolent protest. The teacher introduces the lesson by presenting a photograph of Rosa Parks seated on a bus (see Appendix B). Students have an opportunity to study the image before the teacher begins the DAR process.

Describe. The purpose of the Describe phase is for students to carefully study details of an image or artifact. The information generated in this phase provides evidentiary basis for later stages of the process. In the case of the previously presented Civil Rights lesson, questions in the Describe stage might include the following: What do

you see? What do you notice about this photograph? What types of clothing are the people wearing? What do you notice about the people in this photograph? What objects do you see? If students offer interpretations of the image, the teacher will ask questions to focus students' attention on the details that support their assumptions. For example, if a student were to say "They're on a bus," the teacher would ask "How do you know they're on a bus? What do you see that gives you that impression?" This type of redirection is critical, as it highlights the importance of having a fact-based foundation for students' interpretations and further analysis.

Analyze. The purpose of the Analyze phase is to interpret the details of the image or artifact to understand the meaning it conveys. Students are encouraged to use details to support their conclusions about the object. In the Civil Rights lesson, questions in the Analyze stage might include the following: Who might these people be? What might be going on in this photograph? What might the woman in the picture be thinking? What might the man in the picture be thinking? How might they be feeling? What might have happened immediately before this photo was taken? What might have happened immediately after this photo was taken?

Relate. The purpose of the Relate phase is for students to incorporate information from the image or artifact with their prior knowledge. Students draw on their own experiences and previous understanding of a subject to integrate the new information. They may evaluate the quality or the authenticity of the new object based on their prior knowledge and lived experiences. In this stage, questions about the Rosa Parks photo

might include the following: What do we know about the time period depicted in this photograph? What event might be portrayed by this photo? Do you think this image is an accurate portrayal of what really happened when Rosa Parks refused to move to the back of the bus? If not, what would a more realistic image look like? When might this photograph have been taken in the Civil Rights movement? How might this image be different if Ms. Parks had given up her seat on the bus?

The questions are sequenced in a way that allows students to use 'data-driven decision-making.' Ideally, students will proceed through the DAR steps using information from each earlier phase to inform the inferences they make in the next. Initially students may struggle with this aspect of the process. For example, when asked to Describe an object, students often inadvertently jump directly to the Analyze step (DFS Workshop, Summer 2010). Having never been asked to break down the steps of decision-making, they may automatically begin analysis of the object without deeply considering what they see. For example, when presented with the previously mentioned photo of Rosa Parks, students may declare that Ms. Parks looks "mad." When students make these types of inferences, the teacher should ask questions to determine how they have come to that conclusion (e.g. "What about this person makes you think that she is mad?" "What are her facial expressions?" "What is her body doing?"). Essentially, students must provide justification for their responses. Then the teacher may focus on the details students name before moving on to the next phase (e.g. "So, you notice that her head is bowed down and her hands are in her lap."). By identifying the details that

support the inference that Ms. Parks looks "mad" in the Describe phase, the teacher may then ask other students if they agree or disagree with that inference or if there is another possible explanation for why Ms. Parks might be seated with her hands in her lap and her head bowed down (DFS Workshop, 2010). Thus, the teacher uses the DAR framework to guide, redirect, and probe more deeply into the sources of the inferences that students make about the object.

The whole-class context of DAR allows students to practice group inference-making and gives them the opportunity to experience other children's perspectives and opinions. Children learn that others may not view an image exactly as they do. Ms. Parks looks sad to one child, angry to another, and tired to yet a third. Fusco (2012) suggests that effective questioning strategies foster classroom environments conducive to students critically considering novel ideas. Fusco (2012) asserts that when teachers utilize quality questioning, students "begin to search inwardly for more information, piggyback on the ideas of their classmates' responses, and establish more of a community atmosphere" (p. 12). Morgan and Saxton (1991) emphasize that "[q]uestioning generates the kind of talk and communication which can lead to learning…" (p. 75). They go on to discuss the ways in which students' prior knowledge influences their processing of new information and the ways in which ideas generated in classroom discourse are integrated into those existing knowledge structures.

The importance of engaging in the group questioning process has been established in a number of ways. Morgan and Saxton (1991) summarize the benefits of classroom-

based discourse generated by effective questioning. They state that students use their prior knowledge and experience to evaluate and integrate new information. Further, productive classroom discussion gives students opportunities "to be responsible for the organization of that discourse (who speaks and when, who asks questions and so on) and it allows them to participate in controlling the process (what ideas are introduced and developed)" (Morgan & Saxton, 1991, p. 76).

DAR and Bloom's Taxonomy

The DAR questioning strategy draws on the cognitive objectives identified in Bloom's Taxonomy (DFS Handbook, 2008) and offers students opportunities to practice the skills necessary for successful movement through the taxonomy. Bloom's Taxonomy is a system for organizing and identifying levels of learning based on increasingly complex modes of thinking. It contains six classes of cognitive objectives for education: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation (Bloom, 1956). The current study suggests that the stages of DAR correspond with the cognitive objectives identified by Bloom, as described below.

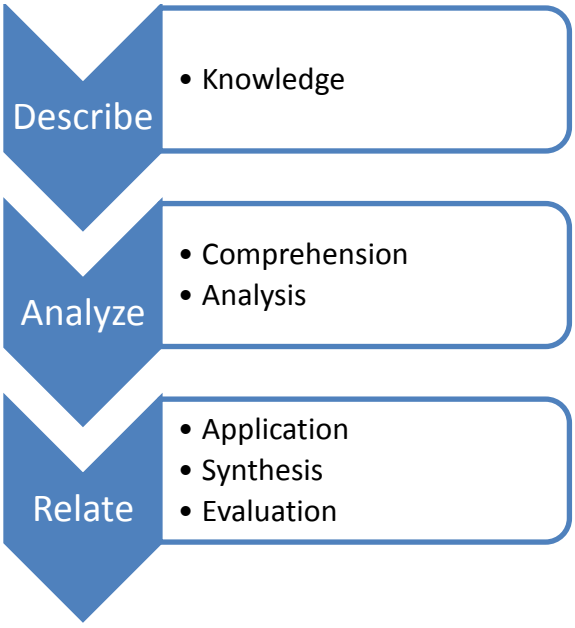


Figure 1: Visual Model of Describe, Analyze, Relate and Bloom's Taxonomy

Describe: *Knowledge* refers to the ability to recall or recognize particular pieces of information about a topic. According to Bloom's hierarchical model, Knowledge is the most basic objective with the least complex functioning (Bloom, 1956). The Describe phase of DAR requires students to call upon this most basic cognitive skill and serves as an introduction for the higher order thinking that will take place later in the process. At this stage, drawing on the Knowledge aspect of the task allows the group and its individuals to clarify and crystallize what is present. It provides a foundation for further discussion and critical thinking. With a common, clear understanding of the facts, students can proceed to higher levels of thinking. Using an example from the Rosa Parks lesson, it is important for students to jointly identify characteristics such as the race and

gender of the two people pictured, as well as their body positioning and location. After identifying the necessary elements of the image, students may move on to understanding their meaning.

Analyze: *Comprehension* objectives are those that require learners to expand on the information in some way, either by translating, interpreting, or extrapolating from the knowledge they have. Learners must gain understanding of the meaning and purpose of the information (Bloom, 1956). *Analysis* refers to the process of breaking down information into its component parts and discovering relationships between those parts. This process deepens comprehension of the subject and allows learners to begin evaluating the information (Bloom, 1956). In the Analyze phase of DAR, students are asked to use Comprehension and Analysis skills to interpret details of the stimulus and begin making meaning of it. For example, students engaged in the Rosa Parks lesson might use the information generated in the Describe phase to interpret the moods of the pictured individuals, to make guesses about the time period depicted, and to make sense of the scene in general.

Relate: Application, Synthesis, and Evaluation objectives are achieved in the DAR process during the Relate phase. *Application* occurs when students recall and employ learned principles to solve novel problems or understand unfamiliar scenarios (Bloom, 1956). For example, in the Rosa Parks lesson, the teacher might ask students to reflect on their knowledge of Jim Crow laws governing African Americans' seating on public buses and then apply it to the case of Ms. Parks. Students would note that African

Americans were required to sit behind Whites, which presents a conundrum, as Ms. Parks is seated in front of a White man in the photograph. *Synthesis* objectives involve combining the component parts of information to generate patterns or systems that were not previously apparent. Divergent thinking is required for the learner to move beyond the information presented to formulate novel ideas about the topic (Bloom, 1956). Teachers might encourage synthesis processes in students by using the example of Ms. Parks to talk about other ways in which discrimination occurred during this time period and how it is still manifested today.

Finally, *Evaluation* objectives are met in the Relate phase when learners are able to employ the all of the previously mentioned skills in order to arrive at some judgment about the value or benefit of the presented information. This process represents the deepest, most complex level of cognitive skills (Bloom, 1956; Bloom, et al., 1971). In the DAR process, Evaluation occurs when teachers ask students to assess an artifact's authenticity, utility, or purpose. For example, a teacher leading the Rosa Parks lesson might ask students whether they believe the presented image is an accurate portrayal of Ms. Parks' historic act of resistance. Further questions might address what a more authentic image would look like, as well as ways the image might look different if Ms. Parks had given up her seat that day. In an effort to understand the motivations of the photographer and the reasons for this type of photography, the teacher could ask questions about where this photo might have been seen in the 1960s, who might have seen it, and who might have taken it. The conversations sparked by the Relate phase of

the DAR process would provide the group with a basis for further higher-order exploration of the topic. For example, the teacher might have students create a 'stage picture' portraying a more realistic image of the day Ms. Parks refused to give up her seat on the bus. Continuing the lesson and maintaining student higher-order processing, the teacher might ask students to select one of the people portrayed in the stage picture and have each student write a journal entry from the point of view of that character.

Anderson (1994) notes the historical basis for the belief within the academic community that different teaching methods are necessary for students to learn at the varying levels of the taxonomy. Traditionally, it is understood that pedagogy which emphasizes one-way communication (e.g. lectures) achieves the lower-order learning goals while dialogic pedagogies are more effective at realizing the higher-order objectives (Anderson, 1994). Further, students are more likely to reach higher-order learning objectives when lessons include "real-world" experiences instead of those that rely solely on classroom-based activities (Anderson, 1994). Thus, students are more likely to learn at a higher level when teachers include lessons that involve a bidirectional flow of information and reflect practical, real-world problems and situations. By utilizing the DAR structure, teachers engage students in similarly dialogic processes. Further, DAR allows teachers to provide opportunities for students to connect new information to prior knowledge and real-world situations.

Empirical evidence suggests that while teachers ask a large number of questions during class time, the questions tend to access lower-order thinking (Anderson et al,

1994; for a summary, see Walsh & Sattes, 2005). Studies suggest that teachers tend to ask short questions which require recall of information (Anderson, 1994; Walsh & Sattes, 2005). In return, students typically ask very few content-related questions of their teachers (Anderson, 1994). Another problem teachers experience with questioning relates to *who* answers them (Walsh & Sattes, 2005). Walsh and Sattes (2005) point out that teachers often rely on volunteers to answer questions, which typically leaves out many students. In one study, volunteer students spoke three times as often as their classmates, meaning that 25 percent of the students never spoke at all (Sadker & Sadker, 1985). Given these challenges to effective classroom questioning, a more structured approach to questioning may be beneficial in helping teachers to plan and structure their classroom discussion time (QUILT approach in Walsh & Sattes, 2005; Questioning Cycle in Fusco, 2012). DAR provides a framework for the questioning structure necessary to achieve higher-level cognitive goals. DAR can improve the overall process of questioning by making it more meaningful for learners.

The original taxonomy proposed by Bloom (1956) identifies three types of knowledge, which can be accessed by the six objectives outlined above. In the years since Bloom's Taxonomy was introduced, researchers have studied and recalibrated the three types of knowledge, adding a fourth category (Anderson, et al, 2001). The first type, *factual knowledge*, refers to the basic components of a discipline or area. Facts are specific, isolated elements of information and terminology (e.g. vocabulary words, the alphabet, punctuation symbols, names, places, and events) (Anderson, et al, 2001; Bloom,

1956). *Conceptual knowledge* represents the second type of knowledge identified by Bloom (1956) and involves an understanding of the relationships between facts, including an ability to categorize and classify them (e.g. parts of sentences, periods of geologic time, fundamental laws of physics, implications of national trade policies on the economy, and the overall structure of Congress) (Anderson, et al, 2001; Bloom, 1956). The third and final type of knowledge identified by Bloom is an understanding of how to complete tasks, or *procedural knowledge* (Anderson, et al, 2001). This type involves an ability to sequence steps, use algorithms, engage in subject-specific methodology, and determine the appropriate time to use certain procedures (e.g. solve quadratic equations, perform a high jump, conduct literary criticism, determine which type of essay to write, and select an appropriate method for solving algebraic equations) (Anderson, et al, 2001; Bloom, 1956). The fourth and newest category is *metacognitive knowledge*, which refers to students' understanding of aspects of cognition (Anderson, et al, 2001). Theorists emphasize a distinction between *knowledge* of cognition and the monitoring, control, and regulation of cognition (Anderson, et al, 2001; Bransford, Brown, & Cocking, 1995). Paris and Winograd (1990) characterize these distinct skills as "self-appraisal" versus "self-management" (pp. 17).

Metacognitive knowledge—and the distinction between an *understanding* of cognition (self-appraisal) and the *use* of cognitive strategies (self-management)—is germane to the discussion of the current study. The proposed DAR questioning strategy seeks to impart knowledge at the metacognitive level, offering students an opportunity to

examine their own understanding of possible strategies for problem solving, thinking, and learning. Anderson and colleagues (2001) emphasize that students must gain self-appraisal skills in order to engage in self-management, which has important implications for social as well as academic development. Thus, teaching students to recognize their cognitions can impact their ability to regulate their thought processes more effectively.

Further, Paris and Winograd (1990) characterize metacognition as knowledge that can be shared among people, meaning that "individuals can report it to others, use it to direct another's performance, or use it to analyze and manage their own thinking" (pp. 25). The DAR questioning process links with this theoretical idea of metacognition in that it gives teachers a forum through which to assess students' metacognition about a subject. When teachers have a firm understanding of the processes their students use to problem-solve and reach conclusions, they can begin to make those processes explicit, helping students to refine and critically examine their utility.

Ultimately, DAR provides practice with each type of knowledge: factual, conceptual, procedural, and metacognitive. The first two types of knowledge are relatively straightforward in the DAR process, while the latter two are more subtle. Students become jointly aware of the factual aspects of the object under study—they see that Rosa Parks has her hands folded in her lap, is seated on a bus in front of a white man, and is looking out of a window. These facts are agreed upon by the group and form a foundation for further analysis and discussion. Students are then challenged to think collaboratively about what they see and to draw upon prior knowledge and personal

experience to interpret the concepts represented by the image. They note that at some point in the United States, Black individuals were not allowed to sit in front of Whites on public buses. That Ms. Parks is so seated in this image indicates that some change has occurred, a realization which forms the basis for further discussion, inquiry, and research.

The metacognitive and procedural aspects of the DAR process occur on a more nuanced level. In the early stages of DAR with groups of students, teachers must work carefully to structure and scaffold the activity. They provide more prompts for the types of information being sought and ask students to break down the steps more fully. They might have to remind students frequently to describe the physical features present, rather than interpret the emotions of the people or the overall meaning of the image. At this stage in the group's experience with DAR, the teacher is drawing attention to why students make certain conclusions and what evidence they use for those decisions. In this way, teachers make students' cognitions explicit and draw them into the metacognitive realm. As students become comfortable with self-appraisal of their own cognitions, they also begin to self-manage by structuring their thinking in a more procedure-based way. The scaffolded steps of the DAR process offer a model for how students can problem-solve novel information using data-driven decision making. Using the foundation of metacognitive self-appraisal, they acknowledge the need to engage in certain steps to solve a problem, receive guidance in first describing what is present, analyze possible meanings, and ultimately make a decision based upon that information.

DAR AS AN INTERVENTION

The current study proposes that DAR may function as an intervention for skills that are not otherwise readily taught in schools. Barnes and Harlacher (2008) suggest that "the words 'intervention' and 'instruction' are interchangeable, as each refers to the curriculum the student is exposed to and the manner in which that curriculum is delivered" (p. 425). Essentially Barnes and Harlacher's definition highlights the importance of an intervention's *content* and *structure*. With this definition in mind, DAR is conceptualized as an intervention with critical thinking skills as its content and a whole-class delivery structure. The following sections will outline ways in which the two critical components of the DAR intervention—its structure and content—function using extant frameworks from education and psychology. The DAR structure is framed in terms of Response to Intervention and the critical thinking content is likened to the processes of Cognitive-Behavioral Therapy. These conceptual frameworks offer a framework for a novel intervention and suggest reasons why DAR will be effective in altering students' critical thinking skills.

Structure: Response to Intervention

Response to Intervention (RTI) is a problem-solving programming initiative designed to support all students academically and behaviorally and to provide additional interventions to at-risk students (Gerzel-Short & Wilkins, 2009; Fuchs & Fuchs, 2006). Its focus is on obtaining information about student progress through a series of interventions of increasing intensity based on student academic need (Fuchs, Mock,

Morgan, & Young, 2003; Gerzel-Short & Wilkins, 2009; VanDerHeyden, Witt, & Barnett, 2005). RTI seeks to reduce avoidable special education referrals by providing all students access to high-quality learning opportunities based on their level of need (Fox, et al., 2010). The RTI model is revolutionary in its use of ongoing assessments and tiered intervention, as opposed to more traditional models of special education identification (VanDerHeyden, Witt, & Barnett, 2005; Fuchs & Fuchs, 2006). Given that traditional models utilize a one-time assessment of a student's skills following a referral from the child's teacher or parent, the RTI approach allows teachers and special education professionals to gain a deeper, dynamic understanding of all students' functioning (VanDerHeyden, Witt, & Barnett, 2005; Fuchs & Fuchs, 2006).

By its nature, RTI is a multi-tiered model and may include from two to four levels of instruction (Barnes & Harlacher, 2008; Fuchs & Fuchs, 2006; Fuchs, Mock, Morgan, & Young, 2003). Each tier offers an increasingly intense level of instruction for students who demonstrate greater need for support (Barnes & Harlacher, 2008; Fuchs & Fuchs, 2006). Initially, all students receive a core program of evidence-based instruction delivered in the whole-class setting, or Tier I support (Barnes & Harlacher, 2008; Fox, et al., 2010). Their progress is monitored and students who do not respond to the first tier of empirically supported instruction receive a more intensive academic intervention (Barnes & Handler, 2008, Fuchs & Fuchs, 2006; Fox, et al, 2010). Typically, students needing Tier II support are grouped together and receive additional instruction apart from students who are making adequate progress (Barnes & Harlacher, 2008; Gerzel-Short &

Wilkins, 2009). Students who still do not make progress or whose progress is determined to be insufficient are provided with an even greater level of instructional support at the Tier III level (Barnes & Harlacher, 2008; Fuchs & Fuchs, 2006). Typically, students who proceed to the highest tier without demonstrating satisfactory academic progress are referred for psychoeducational evaluation and subsequent special education services (Barnes & Harlacher, 2008; Fuchs & Fuchs, 2006).

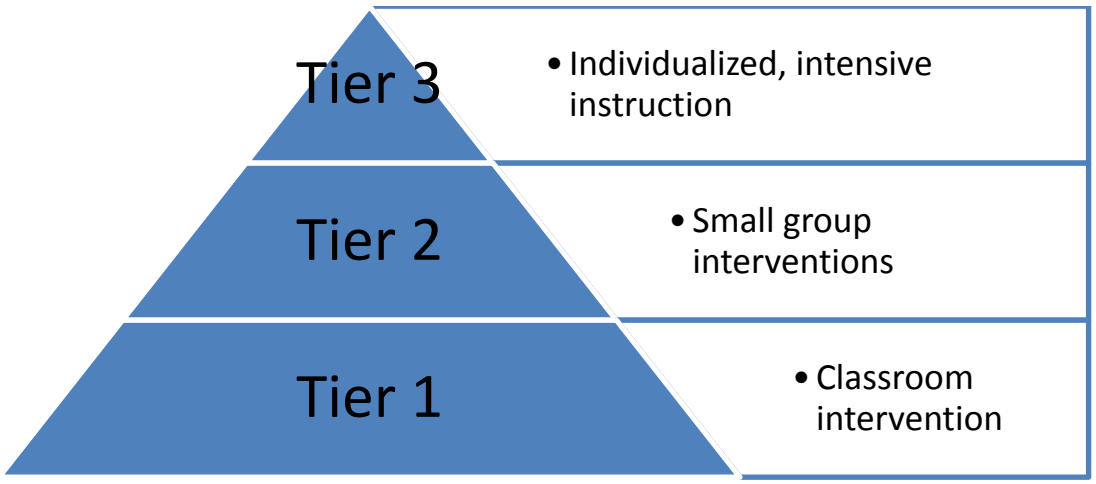


Figure 2: Response to Intervention Tier Model

Previous models of psychoeducational assessment revolved around an IQ-achievement discrepancy model, meaning that students' eligibility for special education services was determined by a clear divide between students' measured intelligence and their actual academic progress (Fuchs & Fuchs, 2006). Thus, students who received suboptimal instruction were classified as having a learning disability without first

guaranteeing that their education had been adequate for their expected academic progress (Fuchs & Fuchs, 2006). A goal of RTI is to address the possibility that student learning difficulties may be due in part to instructional issues in the classroom (Fuchs & Fuchs, 2006). It is intended to provide all students with high quality, evidence-based instruction in a systematic and well-documented way (Fuchs & Fuchs, 2006; Barnes & Harlacher, 2008; Fox, et al, 2010). Theoretically, students who continue to struggle while receiving maximally effective intervention demonstrate atypical learning needs, making an assessment for underlying learning difficulties appropriate (Barnes & Harlacher, 2008; Fuchs & Fuchs, 2006).

Drama-based instruction offers a professional development model for training teachers in an effective Tier I intervention for higher-order thinking skills (Dawson, Cawthon, & Baker, 2011). Drama-based professional development allows teachers to engage in learning in the same ways they hope to engage their students (Dawson, Cawthon, & Baker, 2011; Cawthon & Dawson, 2009). One of the goals of the training program is to empower teachers to integrate drama-based pedagogy into their work with all students (Dawson, Cawthon, & Baker, 2011; Cawthon & Dawson, 2009). By training teachers in a set of skills to utilize with diverse age groups and across multiple curricular domains, this professional development model can be maximally effective across a broad cross-section of students (Dawson, Cawthon, & Baker, 2011; Cawthon & Dawson, 2009). Importantly, this type of drama-based professional development has demonstrated a dramatic increase in student engagement (Cawthon, Dawson, & Ihorn, 2011), indicating

its ability to reach the majority of students—including those who do not typically participate in large group activities. Thus, the current study proposes that when the drama-based DAR strategy is presented as a class-wide intervention, it functions as a Tier I intervention for higher order thinking skills, specifically multiple perspective taking and social problem-solving.

Method: Cognitive Behavioral Therapy

The present study proposes that the mechanisms of change provided by DAR function similarly to the change agents at work in the cognitive-behavioral therapy (CBT) theoretical orientation. Whereas the RTI model provides a structure for the *delivery* of DAR as an intervention, CBT provides the content for understanding *why* change occurs as a result of the questioning technique. The following section provides background about the mechanisms of CBT relevant to the hypothesized functions of DAR in order to establish the hypothesized relationship between the two methodologies.

CBT is a therapy technique that emphasizes the connections between thoughts, mood, and behavior (Beck, 1995; Kendall, 2006). It is based on the theory that positive changes to clients' mood and behavior can be achieved when clients realistically examine and alter the dysfunctional and distorted thoughts which are the source of psychological disturbances (Beck, 1995; Kendall, 2006). CBT practice relies on the cognitive processing of behavioral events, as well as altering behavioral events to demonstrate changes in thoughts and emotional states (Beck, 1995; Kendall, 2006).

Internalized self-talk refers to the process of using inner dialogue to regulate thoughts, emotions, and behaviors rather than relying on external control from others to do so (Kendall, 2006; Ronen, 2007). Children develop self-talk as a gradual extension of the guidance provided by adults (Ronen, 2007). As adults instruct and demonstrate appropriate behaviors, thoughts, and emotional responses, children begin to emulate those skills and apply them to their own cognitive processes (Ronen, 2007). Successful acquisition of these skills allows children to develop more effective cognitive skills, including stopping automatic thoughts (Ronen, 2007).

The term "automatic thoughts" refers to the stream of consciousness thinking that individuals experience in specific situations throughout the day (Beck, 1995; Kendall, 2006). All human beings experience these rapid cognitive events, though they may not be fully aware of their occurrence (Beck, 1995). Automatic thoughts exist as a running commentary about, or immediate reactions to, events that occur (Beck, 1995). They are momentary reflections of individuals' more permanent, deeply held beliefs about a topic or an experience (Beck, 1995). Automatic thoughts become problematic when they emphasize negative beliefs individuals hold about themselves or others (Kendall, 2006). For example, a child who is playing with peers and trips over another child's foot may have two different reactions to that event. In one case, she may think "Oops! My friend and I were going to the same place and accidentally tripped each other." This automatic thought would reflect a healthy, non-blaming, unaggressive attribution of the other child's behavior. Alternately, the child might respond to the same event by thinking

"Hey! He stuck his foot out and tripped me on purpose!" In this case, the child's automatic thought likely reflects a negative perception that others are working against her (Kendall, 2006).

Often, the goal of cognitive-behavioral therapy is to stop thoughts that are maladaptive or unhelpful in favor of encouraging clients to examine their interpretations of events more deeply (Beck, 1995; Kendall, 2006). By looking critically at the details of a situation, clients can determine if their thoughts are accurate given the reality of that event (Beck, 1995). Critical thinking is an integral part of recognizing and altering automatic thoughts (Gambrill, 2007). In adult CBT, therapists often employ Socratic questioning, guided imagery, or role playing to achieve this therapeutic goal (Beck, 1995; Holmbeck, et al., 2006). In CBT with children, alternate methods must be used to access children's thoughts and feelings (Ronen, 2007).

It is important to emphasize that the previously mentioned therapeutic techniques are common with adults (Beck, 1995; Kendall, 2006). Treating children and adolescents via CBT modalities can be rather more challenging, as children's cognitive capacities are still developing and may not provide the sophistication necessary to engage in abstract discussion about their thinking (Kendall, 2006; Ronen, 2007). For example, making automatic thoughts explicit is a process which may require cognitive skills that children have not yet developed (Kendall, 2006).

Finding developmentally appropriate ways to engage children in CBT processes is an important goal. During the middle childhood years, children's primary developmental

tasks revolve around the acquisition of self-control and the formation of an individual identity (Ronen, 2007). Therapy at this stage of development is most effective when it focuses on social skills training, problem-solving skills, and training in self-control methods such as self-talk and self-reinforcement (Ronen, 2007). Further, Ronen (2007) discusses the importance of integrating an understanding of children's information processing skills with CBT treatments. She introduces the Dodge model as a way to plan for a therapeutic entry point (Ronen, 2007). In the Dodge model, children go through four primary steps before engaging in behavior: first, they encode information about their surroundings; second, they construct an interpretation based on the information from the situation; third, they conduct a mental search for potential responses to the situation; and finally, they select a response (Crick & Dodge, 1994; Dodge & Pettit, 2003; Ronen, 2007). Ronen (2007) advises that CBT with children should engage with the early steps of the encoding process by teaching children about "how to collect information" (p. 199) even before working with them to interpret social situations. Therein lies a direct connection to the proposed questioning strategy, as DAR first requires students to collaboratively identify the 'objects' present before making subsequent interpretations of the overall situation.

Researchers and practitioners have developed treatment programs that take children's cognitive capacities into account and often include parents, families, or small groups of children with similar diagnoses (see Kendall, 2006; Kendall & Suveg, 2006; Lochman, Powell, Whidby, & Fitzgerald, 2006; Stark, Hargrave, Sander, Custer,

Schnoebelen, Simpson, & Molnar, 2006; Piacentini, March, & Franklin, 2006). Many of the extant individual and small group treatment programs utilize problem-solving and social perspective taking as foundational skills for successful therapeutic change (Kendall, 2006). The extant interventions are largely corrective (Kendall, 2006); few treatments have been developed to address the skill development of large groups of children (e.g. in classroom settings) as a *preventative* measure. This study proposes that DAR offers such a treatment with preventative skill building as its primary goal.

The current study proposes that the mechanisms of change that make CBT successful in stopping automatic thoughts, fostering purposeful internal self-talk, and improving information processing are similar to the mechanisms offered by the DAR process. This study suggests that data-driven decision-making is akin to CBT's automatic thought analysis in its ability to elicit critical analysis of the automatic assumptions that occur on a daily basis. DAR provides a classroom-based, preventative method for this critical skill development.

POTENTIAL EFFECTS OF DAR

Previous sections of this literature review have outlined the DAR process and its connections to the mechanisms of CBT and the intervention delivery of RTI. This review conceptualizes DAR as a whole-class intervention that functions similarly to CBT by offering students opportunities to practice automatic thought stopping and critical thinking skills. The following section offers support for the hypothesis that students will

demonstrate increased social perspective taking and social problem-solving skills following exposure to DAR.

Social Perspective Taking

Gehlbach (2011) defines social perspective taking (SPT) as the "process through which a *perceiver* attempts to discern the thoughts, feelings, motivations, and/or point of view of one or more *targets*" (p. 312). Early research in the area suggested that children as young as four years old are capable of engaging in basic forms of social perspective taking (Marvin, Greenburg, & Mossler, 1976), though it is an ability which continues to develop into adolescence and adulthood (Menna & Cohen, 1997).

Gehlbach (2004) points out that prior studies of SPT focused largely on a unidimensional characterization of the aptitude, while a multidimensional view is more appropriate. He suggests that researchers have identified SPT as either an ability or a propensity. On one hand, SPT has been studied in terms of individuals' ability to *accurately* interpret others' points of view. On the other hand, researchers have investigated the frequency with which individuals attempt to take others' perspectives. Gehlbach points out that these two aspects of SPT are rarely studied simultaneously, making it difficult to draw conclusions from much of the extant research. Study participants who acknowledge frequent SPT may be perceiving often, but incorrectly. Conversely, participants who demonstrate high accuracy on SPT ability tasks may not be motivated to engage those skills often. Gehlbach emphasizes the need to integrate both aspects of SPT when studying the concept, along with a thorough consideration of

features of the perspective-taking situation such as locus, decipherability, and familiarity of the target, as well as temporality, reality, duration, morality, cooperativeness, and distractions of the situation (Gehlbach, 2004).

In spite of his emphasis on investigating the two factors of SPT together, Gehlbach (2004) also acknowledges the potential challenges of measuring both ability and motivation in studies. He suggests that, when necessary, it is possible to investigate only participants' *propensity* toward SPT. He theorizes that children who are engaging in perspective taking more often are practicing the skills more frequently and that "[by] withholding judgment, or entertaining multiple potential explanations, they may have the chance to learn new information rather than leaping to erroneous conclusions" (Gehlbach, 2004, p. 213). Thus, children who engage in SPT more frequently demonstrate greater levels of open-mindedness and cognitive flexibility, even if their conclusions are flawed. Despite this, the current study is limited by the restraints common to other studies of SPT. While ideally this study would include data on both SPT ability and motivation, the available measures that are suitable for the current design only include aspects of ability. Future research would further assess the full breadth of this construct.

Benefits of Social Perspective Taking

Social perspective taking has been linked to a number of positive outcomes. It is related to lower levels of negative emotionality and an improved ability to down-regulate in children (Bengtsson & Arvidsson, 2011), more effective cooperative problem solving (Gillespie & Richardson, 2011), and increased academic success, social relatedness, and

social engagement in children (Gehlbach, 2011). Additionally, studies have demonstrated that increased SPT skills are related to decreased stereotype maintenance (Todd, Galinsky, & Bodenhausen, 2012). Researchers and theorists believe that this decrease in stereotyping is related to a reduction in the "cognitive miser" effect noted by Fiske and Taylor (see Fiske, 1995). This term describes individuals' tendency to conserve their cognitive energies by stereotyping and categorizing rather than examining each separate stimulus. Theoretically, SPT encourages individuals to take fewer mental shortcuts when judging others, more fully considering others' perspectives, thus making fewer generalization errors (Gehlbach, 2004).

Social Problem-Solving

Social problem solving is a complex process involving cognitive, affective, and behavioral systems (D'Zurilla & Sheedy, 1991). D'Zurilla and colleagues (D'Zurilla, 1986; D'Zurilla & Nezu, 1982; D'Zurilla & Sheedy, 1991) identify two major components that must be in place for social problem solving to occur: problem orientation and problem-solving skills. Problem orientation describes the motivational aspect of problem-solving processes and is reflective of each individual's prior experiences with problem solving (D'Zurilla & Sheedy, 1991). Individuals' perceptions and appraisals of novel problem-solving situations are influenced by their previous experience in similar situations, leading people to a general tendency to see problem scenarios as positive opportunities or as negative threats to the self (D'Zurilla & Sheedy, 1991). The second component of problem-solving identified by D'Zurilla and colleagues

is problem-solving skill, which refers to individuals' ability to define a problem, generate potential solutions, decide upon a preferred solution, and implement and evaluate the effectiveness of the selected course of action.

The Dodge model of information processing offers further background into the mechanisms of social problem-solving (Menna & Cohen, 1997). As discussed in previous sections of the current literature review, the Dodge model offers a framework for the method by which children engage in social situations (Dodge & Pettit, 2003; Ronen, 2007). The process begins when children encode, then interpret, elements of the immediate social environment. It continues with a mental search for potential responses to the situation, an evaluation of the identified responses, and ultimately the enactment of a chosen response (Menna & Cohen, 1997; Ronen, 2007; Dodge & Pettit, 2003). These information processing steps align with D'Zurilla and colleagues' problem-solving steps and offer further support for the cognitive actions necessary to engage in social contexts. The identified steps closely mirror the cognitive actions that are scaffolded in the DAR process. Students engage in a purposeful series of collaborative activities intended to draw their attention to the information they encode about a situation or object, make thoughtful inferences, search for potential meanings of the information, and either arrive at a conclusion about that situation or recognize a need to do further research into the topic.

Benefits of Social Problem-Solving

Joseph and Strain (2010) note that preschool-aged children benefit from problem-solving skills for a number of reasons. Notably, problem-solving skills are easy for children to generalize to other situations, help to prevent challenging behavior, and allow children to quickly repair ruptures in peer relationships (Joseph & Strain, 2010). Further, research demonstrates that children who don't acquire appropriate problem-solving skills tend to use aggressive solutions to interpersonal problems (Crick & Dodge, 1994), use aggression more often and with fewer alternate solutions as they get older (Eron, 1990; Tremblay, 2000), and often ultimately experience peer rejection, criminality, and poor mental health as a result of aggressive responses (Broidy et al., 2003).

The skills necessary to engage in problem solving such as planning, sequencing behaviors, and altering problem-solving strategies, are often referred to as executive functioning (Landry, Smith, & Swank, 2009). These skills are essential to social competence due to their ability to help children organize information and process it to adequately interpret social interactions (Landry, et al., 2009).

Figure 3: Visual Model of the Current Research

STATEMENT OF THE PROBLEM

The integration of arts into the core curriculum was identified as a key component of successful education by the President's Committee on the Arts and the Humanities (2011). In its 2011 report, the PCAH emphasized the need for "21st Century Skills" like problem-solving, critical and creative thinking, and the ability to think across disciplines

and notes that arts integration is ideally suited to help students develop those skills (PCAH, 2011). Further, education scholars note that school environments are microcosms of the "real world," making them an ideal environment in which to teach children skills for successful, responsible social interaction (Gresham, 2002). Thus, fostering critical thinking in social interactions is a goal of the current research. Social perspective taking and problem-solving are skills necessary to engage in successful social relationships throughout the lifespan; these skills are correlated with a number of positive outcomes in child- and adulthood (Bengtsson & Arvidsson, 2011; Gillespie & Richardson, 2011; Gehlbach, 2011; Joseph & Strain, 2010; Crick & Dodge, 1994; Broidy, et al., 2003). Studies demonstrate that increased social perspective taking leads to better regulation of negative emotions (Bengtsson & Arvidsson, 2011), more effective problem solving (Gillespie & Richardson, 2011), and greater academic success, social relatedness, and social engagement (Gehlbach, 2011). Students benefit from social problem-solving in the following ways: easily generalizing problem-solving skills to new situations, preventing challenging behavior, and more readily repairing peer relationships (Joseph & Strain, 2010). Yet social perspective taking and problem-solving are not taught in an organized, cohesive way to the general population of children. Instead, children who demonstrate difficulty with these skills tend to receive instruction in these areas via either group or individual therapy. In the Response to Intervention model, academic skills are taught first to all children and then provide more focused support as

children demonstrate need. The current study proposes that, through DAR, social skills may be provided at the class-wide level as a Tier I intervention.

Cognitive-Behavioral Therapy has been established as an effective treatment for teaching the higher order thinking skills necessary to engage in SPT and SPS (Kendall, 2006). These skills are developed using higher-order critical thinking, which is stimulated in part by effective questioning. Thus, if a goal of education is to prepare students for future social interactions, the development of effective questioning is central to that end. Emphasis on a system for questioning will allow teachers to adapt to the unique needs of their classrooms and also to create consistent opportunities for higher-order thinking. The Describe, Analyze, Relate questioning strategy offers such a model. DAR provides a manner in which to deliver SPT and SPS skill-building opportunities to large groups of students using the mechanisms of CBT and the framework of Tier I RTI. It provides a forum through which teachers can engage students in structured questioning that activates higher-order thinking. By utilizing a basic framework for questioning, DAR may be applied in diverse situations and can deepen students' thinking about a wide range of topics.

Purpose of the Study

The present study explores the impacts of the drama-based instructional strategy known as Describe, Analyze, Relate on the social skills development of upper elementary school students. This project occurred in the context of an ongoing, active partnership between a drama-based instruction program and a local school. The study used a multiple

baseline, single case design to investigate the effects of the DAR strategy over a semester-long time frame. The goal of the current project was to gather data on the social skills that may be developed in conjunction with the content-related learning of the lesson itself. The findings are applicable to both the arts integration and Tier I intervention fields.

RESEARCH HYPOTHESES

Research Question 1: What is the impact of the Describe, Analyze, Relate questioning strategy on the social problem-solving skills of upper elementary school students?

Hypothesis 1

A. Upper elementary students who engage in the Describe, Analyze, Relate questioning procedure will demonstrate increases in their social problem-solving skills.

B. It is further hypothesized that this change will be sustained or will further increase at follow up.

Rationale. While no known previous research has assessed the impact of drama-based instructional strategies on children's social problem-solving skills, Cognitive-behavioral therapeutic contexts use similar questioning processes to develop higher-order thinking, leading to increases in problem-solving skills (Kendall, 2006). CBT enhances children's ability to problem-solve by having them break down their assumptions and carefully consider social situations, rather than jump to hasty conclusions and engage in maladaptive behavioral responses to problematic situations (Kendall, 2006). The

expectation is for a similar outcome to be achieved by engaging students in data-driven decision making via a structured questioning procedure. With regards to this finding being sustained or enhanced at follow up, it is believed that, as with CBT treatment modalities (Kendall, 2006), greater exposure to and experience with the steps of data-driven decision making will allow students to continue to hone and build their problem-solving skills. Thus, the full impact of the treatment may not be evident until follow up.

Research Question 2: What is the impact of the Describe, Analyze, Relate questioning strategy on the social perspective taking skills of upper elementary school students?

Hypothesis 2

A. Upper elementary students who engage in the Describe, Analyze, Relate questioning procedure will demonstrate increases in their social perspective taking skills.
B. It is further hypothesized that this change will be sustained or will further increase at follow up.

Rationale. While no known previous research has assessed the impact of drama-based instructional strategies on children's social perspective taking, children participating in individual and group cognitive-behavioral therapy often demonstrate improvements in this skill (Kendall, 2006). It is hoped that a similar outcome can be achieved by engaging students in a whole-class structured questioning process. By openly discussing the ways in which different members of the class view an object or

image, students are exposed to alternative viewpoints. By simultaneously engaging in higher-order thinking, students are given opportunities to deeply consider differing points of view. With regards to this finding being sustained or enhanced at follow up, it is believed that, as with CBT modalities (Kendall, 2006), greater exposure to and experience with the perceptions of others will allow students to continue to hone and build their social perspective-taking skills. Thus, the full impact of the treatment may not be evident until follow up.

CHAPTER 3

Method

DESIGN

This study used a multiple baseline, single-case design across six participants. The design included three phases: baseline, intervention, and follow-up. The ordering of participants was determined by the teachers' instructional schedules and the participants served as their own controls. Participant baselines began concurrently and intervention introductions were staggered, with each classroom beginning approximately one week after the previous classroom. This design was intended to protect against history and maturation effects. Ideally it would have been possible to introduce the intervention into each classroom based on the stability of data collected in the baseline phase (Kennedy, 2005). However, the reality of the research setting presented methodological challenges. Teachers implemented the intervention at different time points based on their teaching schedule. This created a natural staggered baseline across participants, albeit not randomly assigned. The teachers who participated in this study previously received training in drama-based instruction and the DAR technique prior to the inception of this study. It is likely that they had already begun incorporating these strategies into their teaching from the beginning of the school year, which challenged the concept of a "pure" baseline. Achieving "baseline purity" when teachers had participated in training prior to the beginning of the study was a challenge to this work. Single case, multiple baseline designs have been determined to be useful when investigating new interventions with

individuals or target populations (Kazdin, 1982; Parker & Brossart, 2006). What this study hoped to do is continue building a basis of research about this topic and demonstrate that longer-term exposure to the DAR strategy is beneficial to students' social skill development. Multiple baselines have also been found to be appropriate for school-based interventions because they allow for the study of the natural variability inherent in the setting (Kennedy, 2005).

The dependent variables of social perspective taking and social problem solving were measured repeatedly. Additionally, pre- and post-treatment qualitative interviews were conducted with the participating teachers. The dependent variable is the Describe, Analyze, Relate questioning process.

Analysis of Power

Power is the probability of discovering a significant effect when that effect actually exists (Allison, et al, 1996) and is conventionally considered to be acceptable at the .80 level (Cohen, 1992). Conducting an analysis of power is a method by which to estimate an appropriate sample size for a given research study (Allison, et al, 1996). In comparison with group designs, single-case research designs present novel factors to consider in estimating power. Multiple baseline designs primarily focus on the number of data observations collected, as well as the number of participants included in the study (Allison, et al, 1996). In single-case designs, measurement collections are generally taken at equal intervals (Christ, 2007), typically with a minimum of three observations per phase (Kennedy, 2005). In regards to sample size, power is greater when the number

of participants is increased. Single-case research designs include two participants at minimum (Kennedy, 2005) and typically study three or four participants (Kazdin, 1982; Hersen & Barlow, 1976). The proposed study included six children in order to protect against participant attrition.

PARTICIPANTS

Six upper-elementary school students from an urban elementary school in the Austin Independent School District (AISD) were recruited for this study. Four participants attended the fourth grade and two attended the fifth grade. Participants were two males and four females; four were Hispanic and two were African-American. This study attempted to include students who reflect the demographic distribution of the school population.

Student participants were selected in the following way: Initially, the lead researcher consulted with participating teachers regarding students in their classrooms who might be a good fit for the current project (i.e. met inclusion criteria and reflected the range of students in the school). A letter describing the research was sent to parents of identified students. The letter included a form to return indicating parental interest in having their child participate in the project and giving informed consent. Two participating students were randomly selected from the returned forms from each of the three classrooms. As mentioned previously, this study attempted to include a sample that is representative of the racial, ethnic, and economic diversity of the school. For the purposes of the current study, students with limited English proficiency and special

education needs were excluded. Given the exploratory nature of the current study, these populations were believed to present potential confounding characteristics and were identified for exclusion as a result.

This elementary school was be chosen due to its relationship with the Drama for Schools (DFS) program, a professional development model for DBI housed at the University of Texas at Austin campus. In the 2012-2013 school year, as part of a broader AISD arts integration initiative, the school participated in a school-wide initiative to train teachers in how to use DAR across subjects and grade levels. All faculty members participated in an initial training at the beginning of the academic year. Following the initial training, a cadre of 10 teachers was identified to participate in further professional development in DBI. Additionally, a small group of six teachers participated in an intensive training in DBI the preceding summer. Participating teachers were selected with the assistance of the project director and other members of the training staff. The study was introduced to the identified teachers as an option for deepening the intensity of their training. Each participating teacher chose to be involved in the current research project. A total of four teachers participated in the current study—two 4th grade teachers, one 5th grade teacher, and the school's visual arts teacher. All four teachers selected for participation in the current study engaged in the Drama for Schools trainings at the beginning of the school year, as well as follow-up trainings throughout the year. Additionally, one of the fourth grade teachers, the fifth grade teacher, and the art teacher received intensive training in DBI the preceding summer.

Here it should be noted that unforeseen challenges arose during the project related to the fifth grade teacher. Due to extenuating circumstances, this teacher was not able to implement DAR as frequently as he hoped. Thus, the lead researcher enlisted the school's visual art teacher to participate in the study to increase the exposure of the fifth grade students to DAR questioning. The visual arts teacher was able to incorporate DAR questioning into her lessons with the fourth and fifth grade classes and then to discuss those experiences with the lead researcher at the end of the project.

MEASURES

Dependent Measures—Single Case Design (Repeated measures)

The Interpersonal Negotiating Strategies Interview (INS)

The Interpersonal Negotiating Strategies Interview (INS; Schultz, Yeates, & Selman, 1989) is a semistructured interview designed to assess children's social perspective taking and problem solving related to a social conflict (Schultz, Yeates, & Selman, 1989; Menna & Cohen, 1997). The INS includes 12 vignettes for children aged seven to 12 (third through seventh grades). In a typical administration, children are presented with four short vignettes about problematic situations between a protagonist and a significant other (i.e. a peer or a teacher) and are asked a standardized set of eight questions after each vignette. Sample vignettes and interview questions are provided in Appendix B. Children's responses are audio recorded, transcribed, and coded for 1) Structural Level, 2) Functional Analysis, and 3) Interpersonal Orientation (Schultz,

Yeates, & Selman, 1989; Menna & Cohen, 1997). Structural Level assesses children's level of sophistication in coordinating social perspectives. Scores range from 0 to 3 where each level indicates "an increasing differentiation and integration in the capacity to view oneself as situated in the broader social context that involves multiple perspectives" (Menna & Cohen, 1997). Functional Analysis assesses children's progression through the four problem solving steps (i.e. defining the problem, generating potential solutions, selecting and implementing a strategy, and evaluating outcomes). Scores range from 0 to 3 and reflect differing levels of problem solving processing from low-level strategies to higher-order methods emphasizing coordination, collaboration, and communication (Schultz, Yeates, & Selman, 1989). Interpersonal Orientation is a categorical variable which assesses children's differing methods for regulating and exerting control over social interaction. The scoring categories are: 1) Self-Transforming, or changing the self in order to meet the perceived needs of the other; 2) Other-Transforming, or attempting to change the other to meet the needs of the self; 3) Collaborative, or balancing the needs of both parties; and 4) Indeterminate, indicating that the child's Interpersonal Orientation is unclear (Schultz, Yeates, & Selman, 1989).

The INS is reported to have moderately high reliability when raters are trained to use the scoring manual (Yeates, Schultz, & Selman, 1990). Interrater correlations for the averaged scores representing each problem-solving step ranged from .74 to .87 and interrater correlations for overall level of INS development were high ($r = .895$) (Yeates, Schultz, & Selman, 1990). Additionally, test-retest reliability has been demonstrated

with the INS using a four month interval. In an elementary school-aged population, the overall INS development scores were significantly correlated (r = .69) (Yeates, Schultz, & Selman, 1991). Internal validity of the INS has been established with studies demonstrating that components of the measure have correlations varying in magnitude from .32 to .45 (Yeates, Schultz, & Selman, 1991). External validity of the INS has linked social problem-solving and perspective taking skills with overall intelligence and better psychosocial adaptation (Yeates, Schultz, & Selman, 1991). Typical administrations of the INS include the presentation of four vignettes, though the current study utilized two vignettes per data collection point because administering four vignettes per data collection would have been excessive given the repeated measures nature of the current study (Bengtsson & Arvidsson, 2011).

Each interview was audio recorded and scored by the lead researcher. Interobserver reliability was gathered on 25% of these recordings, selected randomly. The second rater is a graduate student trained in both assessment administration and scoring. Both raters were trained in the INS scoring procedure to a level equal to or greater than 95% agreement prior to data collection. Interobserver agreement was calculated using a point-by-point agreement method (Kazdin, 1982; Kennedy, 2005) and was found to be 63%. This rate of agreement is lower than the reliability reported by the INS manual, which suggests that even with a standardized scoring procedure and training in this measure, the variables being measured remain fairly subjective. The interpretation of these findings should be considered with this information in mind.

Dependent Measures—Qualitative

Social Validity

Gresham & Vanderwood (2008) discuss social validation as a tool to assess the effectiveness of an intervention, including 1) the social significance of the intervention's goals, 2) the social acceptability of the intervention's process of attaining those goals, and 3) the social importance of the overall effects caused by the intervention. This method is useful in the context of this research as a means to assess the degree to which teachers and students value this type of drama-based instruction in its practical applications.

Behavior Assessment System for Children, Teacher Rating Scales-Child (BASC-2 TRS-C)

The Behavior Assessment System for Children, Second Edition (BASC-2; Reynolds & Kamphaus, 2004) is an integrated system designed to facilitate the differential diagnosis and classification for a variety of emotional and behavioral disorders of children. This instrument is used to gather data across a broad spectrum of childhood functioning. Composite ratings give general indications of difficulties the child seems to be having, while specific scale scores provide summaries of particular types of behavior. These scores are reported as *T*-scores, with a mean of 50 and standard deviation of 10. Clinical composite scores of 70 or above and adaptive composite scores of 30 or below are considered Clinically Significant. For the purposes of the current study, the Social Skills subscale of the BASC-2 TRS-C will be used to assess participants' social

functioning. The Social Skills subscale consists of eight items that are scored using a four-point frequency scale (ranging from 1 – 'Never' to 4 – 'Almost Always').

The Social Skills subscale is completed by teachers and evaluates their perceptions of student behavior. It is scored using a highly standardized, subjective procedure. The measure is included in this study as an assessment of the social validity of the DAR strategy as a social skill development tool.

The BASC-TRS has demonstrated satisfactory reliability and validity in a number of studies (Stein, 2007; Reynolds & Kamphaus, 2004). Specifically, the internal consistency alpha coefficient for the Social Skills subsection of the BASC-TRS was found to be .92 (Rescorla, 2009). The test-retest reliability of the BASC-TRS Social Skills subscale was found to be .86 over an interval of eight to 65 days (Reynolds & Kamphaus, 2004). The interrater reliability of the Social Skills subscale was found to be .46 (Reynolds & Kamphaus, 2004).

Qualitative Interview—DAR Teacher

The DAR-administering teachers were asked to comment on the overall social and intellectual development of the participating students and their own experiences with administering the DAR procedure. See Appendix C for this measure.

Treatment Integrity/Context Measures

Treatment integrity is a measure of the degree to which a treatment is implemented as intended and deals with the accuracy and consistency of the delivery of

the independent variable (Gresham, 1996). Although no standard currently exists for determining treatment fidelity in the DAR process, the teachers chosen for the study received training in the technique at the beginning of the school year and received ongoing training throughout the school year. Additionally, each teacher had access to lesson planning assistance from graduate students in the Drama and Theatre for Youth and Communities program. The following steps were also taken to assess the treatment integrity and to gain an understanding of the context of the participating classrooms.

Classroom Observations

The lead researcher conducted classroom observations of the three classroom groups during the post-DFS training class modeling phase, approximately once monthly for the first three months. Thus, the researcher was able to observe the lessons DAR-administering teachers created with the assistance of the university-based teaching artists. Observations were conducted using an adapted version of the Drama for Schools classroom observation form (Cawthon & Dawson, 2011) and were used to assess instructional fidelity to the DAR procedure and to gain an understanding of the classroom context. Please see Appendix D for an example of the form. The items on the observation form were designed to assess each lesson for the degree to which it included each level of DAR questioning. The items 'Questioning to clarify students' description of an object/image' and 'Redirecting students who make premature conclusions/inferences about an object/image' were intended to access the Describe level questioning. The items 'Questioning to enhance student analysis of an object/image' and

'Questioning students to deepen their understanding' were intended to evaluate the Analyze level of questioning. These two sets of items begin to access the questioning integral to beginning to develop social perspective-taking skill. These items evaluate the extent to which teachers are surveying their students for a variety of ideas about a topic and understanding which of the details students use to support their analyses. Finally, 'Reflecting with students about the activity' and 'Questioning to encourage student reflection on the implications/relevance of an object/image' were used to evaluate the Relate level of questioning. These are the items that evaluate the questioning hypothesized to tap most deeply into the higher-order thinking skill, thus impacting social problem-solving. Related to student activity, the following items were used to evaluate Describe level functions: "Describing an object/image" and "Conversation between students about differing perceptions of an object/image." The following item was intended to evaluate student response to Analyze level questioning: "Analyzing an object/image for possible meanings." Again, these items are designed to evaluate student response to the questioning intended to foster greater social perspective-taking skill. Finally, the items "Reflecting on the implications/relevance of an object/image," "Making connections to personal experience," and "Making connections to other content or projects" were designed to evaluate student response to Relate level questioning. These items are intended to demonstrate the degree to which students interact with higher-order questioning, hypothesized to foster greater social problem-solving skill.

Teacher Check-ins

The lead researcher conducted a bi-weekly check-in with DAR-administering teachers to assess the frequency with which teachers were using DAR and to gain a sense of the depth and breadth of those experiences in the classroom. These brief interviews were conducted in the modality of the teacher's choice: by phone, in person, or via electronic mail. Please see Appendix E for an example of the check-in questionnaire.

PROCEDURE

Protection of Participants

Prior to beginning the study, permission was obtained from the Institutional Review Board at the University of Texas at Austin, from the administration of the school in which this study took place, and from the participants' guardians. Participating students were asked for their assent. Further, this study adhered to the APA's Code of Ethics for research with human subjects (APA, 2002). Pseudonyms are used in place of the real names of the participating children in the following sections of this document.

Recruitment of Participants/Permission

Based on the criteria described previously, a pool of potential participants was identified. A blind name draw was used to randomly select six of these students for participation, two students per participating classroom. Additionally, the lead researcher sought and received students' assent prior to the first data collection point. All identified

students agreed to participate. The unselected students received the whole-class intervention as provided by the teacher of their classroom without completing research measures.

Data Collection

Data were collected by the primary researcher, a doctoral student with extensive training in interviewing and assessment. Interviews with students were conducted during unobtrusive periods of the school day, such as before or during the student's lunch time.

The staggered ordering of classrooms was selected based on the needs of the DAR specialist teachers, who delivered the intervention to each student's whole class as part of an overall lesson plan. As mentioned previously, the DAR specialist teachers who participated in this project were selected based on prior experience with and/or interest in the DAR model. Additionally, these teachers received intensive training in DAR throughout the school year and had ongoing access to lesson planning supports from graduate students from the Drama and Theatre for Youth and Communities program, as well as a video archive of DAR implementation examples.

Baseline. Prior to the commencement of the intervention, each student completed at least three administrations of the INS and each student's lead teacher completed the pre-measure of the Social Skills subscale of the BASC-2. At each of the baseline data collection points, students completed the INS interview with the lead researcher. As mentioned previously, the staggered length of baselines reflected the natural flow of teachers' lesson-planning needs.

Intervention. During the intervention phase, the lead researcher conducted classroom observations of DAR lessons during the lesson modeling phase following DFS training. Students continued to complete two vignettes from the INS interviews biweekly during the two month intervention phase. Due to the fact that each child experienced at least eight data collection points during the study, the 12 INS vignettes were randomly administered so that participants respond to varied vignette prompts.

Follow-up. One month after the two month intervention period, the students met with the lead researcher to complete a final administration of the INS. Teachers were asked to complete the post-measure of the Social Skills subscale of the BASC-2. Additionally, the lead researcher conducted a qualitative interview with the DAR intervention teachers from the participating classrooms to gather further information about each student's social development. The DAR teachers also were asked to reflect on their own experiences administering DAR over the intervention period.

The Describe, Analyze, Relate Questioning Procedure

The proposed intervention is a questioning strategy employed by the drama-based instruction professional development program called Drama for Schools (DFS Handbook, 2006; DFS Workshop, Summer 2010). The intervention is described in detail in the 'What is DAR?' section of the preceding literature review. In this study, teachers were asked to log the frequency with which they used DAR in their classrooms and were asked to comment on their use of the process at two week check-in intervals. Teachers were asked to conduct the intervention a minimum of once every two weeks during the two

month intervention period. Additionally, teachers in the intensive training cadre participated in professional development in DAR at monthly intervals throughout the school year and had access to ongoing lesson-planning support from a drama specialist trained in the DAR technique.

CHAPTER 4

Results

The findings of the current study are reviewed in the following chapter, beginning with a summary of the intervention's treatment integrity. Next, the data analysis procedures are reviewed. Following, each participant's data are analyzed for each dependent variable. Finally, the social validity data are presented. The chapter concludes with a summary of the results across the two research hypotheses.

TREATMENT INTEGRITY

Teacher Training

A total of four teachers participated in the current study: two 4th grade teachers, one 5th grade teacher, and the school's visual arts teacher. All four teachers selected for participation in the current study engaged in the Drama for Schools trainings at the beginning of the school year, as well as follow-up trainings throughout the year. Additionally, three of the selected teachers participated in an intensive training in DBI the preceding summer. Each teacher worked directly with a University-based teaching artist trained in the DAR technique to design lessons throughout the study period.

Teacher Check-ins

Bi-weekly teacher check-ins were conducted with the participating teachers. All four participating teachers reported implementing the DAR questioning strategy predominantly in the DBI lessons constructed with the teaching artists. The DBI lessons

were designed and executed approximately once per month during the intervention period. None of the participating teachers reported using the DAR strategy in any other formally designed lesson plan but each of the grade level teachers reported making informal use of DAR questioning one or two times during the intervention period. One teacher reported using a DAR format of questioning to process with her class a negative social interaction that occurred between students. Overall, teachers reported few DAR interactions in addition to the previously discussed DBI lesson plans that were designed with the assistance of the University-based teaching artists.

It should be noted that the two fourth grade classrooms had the advantage of receiving greater exposure to DAR questioning. The fourth grade teachers implemented their designed lessons twice—once with each classroom group. Thus, these students received double the number of DBI lessons as compared with the fifth grade class, where only one of the fifth grade teaching team participated in the intensive DBI training cadre. Due to the fact that 10 teachers participated in the intensive training cadre, the possibility exists that these students were exposed to DAR with teachers other than the ones identified for the current study. For example, the music teacher also participated in DBI training and may have used DAR with the participating 4^{th} and 5^{th} grade classes. Due to time and resource constraints, other teachers were not asked to participate in the current study.

As mentioned previously, the fifth grade teaching team experienced upheaval during this school year. Due to structural changes to the fifth grade teaching team over

the course of this study, there is evidence to suggest these students did not benefit from having maximal exposure to DAR. Due to this unexpected challenge, the school's art teacher was enlisted as a secondary provider of the intervention. She reported engaging in DAR questioning with the fifth grade class one time during the intervention period. Thus, the fifth grade students in this study (Aaliyah and Mila) are believed to have been exposed to DAR approximately twice in the general education classroom and one additional time in their visual art class.

Classroom Observations

Observations were conducted for each of the DBI lessons designed and implemented by participating teachers with the teaching artists. Each lesson included at least one planned DAR session. Lessons related to varied content areas, including finding the area and perimeter of irregular shapes, using third person voice in text, and examining texture and emphasis in works of art. Overall, teachers were observed to engage easily in the first two steps of the strategy: Describing and Analyzing. In all of the observed lessons, teachers used descriptive questioning to review prior knowledge and vocabulary to begin lessons. Of five observed lessons, teachers were observed to engage in Describe level questioning in approximately 48% of the surveyed time periods. For example, in a lesson dealing with improper fractions, one 4th grade teacher had students describe the elements of a fraction to re-familiarize the class with the proper vocabulary and concepts. In an art lesson related to texture and emphasis, the instructor asked students to describe elements of paintings. Analysis questions tended to occur in

the middle of lessons or near the end as a method for reviewing and ending the lesson. Of five observed lessons, teachers were observed to engage in Analyze level questioning in approximately 41% of the surveyed time periods. For example, in the previously mentioned improper fractions lesson, the teacher asked students to consider and discuss the meanings of fractions and specifically to discuss what different fractions represent. In the art lesson, the teacher asked students to analyze the feeling they imagined each identified image detail might have. Teachers appeared to demonstrate greater difficulty with the third step, Relating. Generally, observed teachers included Relate level questioning near the end of the lesson as a method for reflecting on the activity. As such, Relate level questioning often appeared superficial, overlooked, or rushed as the lesson was coming to a close, particularly if the lesson had exceeded its time limits. Of five observed lessons, teachers engaged in Relate level questioning in approximately only 10% of the surveyed time periods. In the previously discussed improper fractions lesson, for example, the instructor appeared rushed in the final stages of the lesson. She did not ask reflective questions about the learned material or directly address the elements of fractions that might relate to students' lives.

Positive examples of the Relate stage of the questioning process were seen in several lessons where teachers engaged their students in positive discussions about the impact of the curriculum on students' daily lives. For example, in the lesson on texture and emphasis, the instructor encouraged students to examine ways in which texture and emphasis play a role in their day-to-day lives. Students were able to engage in this

conversation and identify examples, particularly as they related to advertising and shopping for consumer goods. In the lesson on area and perimeter, the instructor used questions to encourage student discussion about how they might apply those skills outside of school and in their day-to-day lives.

VISUAL ANALYSIS

Visual analysis of single-case data is typically done by looking at data within the phases and between phases (Kennedy, 2005). Within phases, researchers examine the level of the data, the trend of the data, and the variability. Between phases, researchers examine the immediacy of effect and the overlap between the data points in each phase (Kennedy, 2005). Each of the dependent variables will be analyzed using these methods.

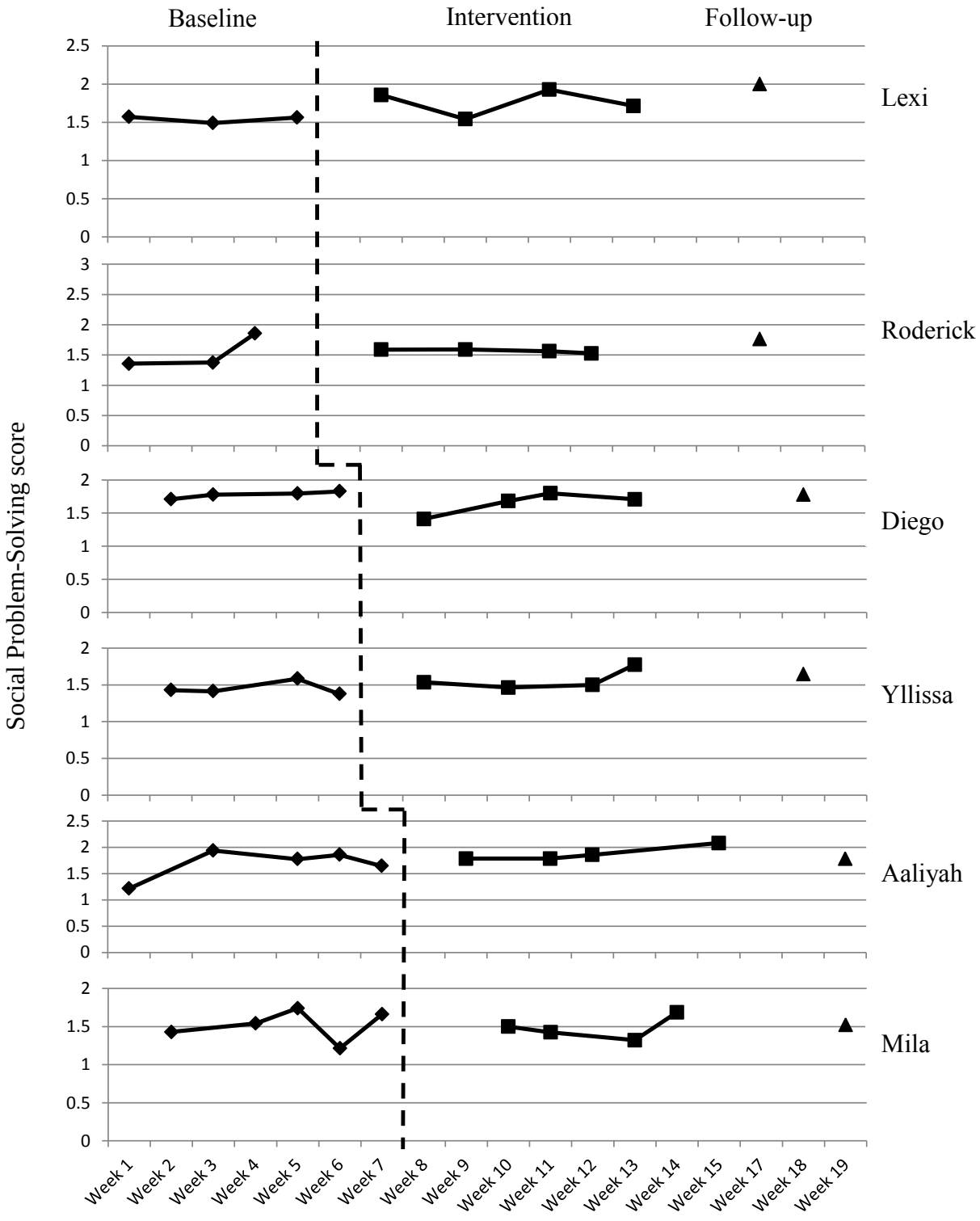
Social Problem-Solving

Participants' social problem-solving skill, as measured by the Interpersonal Negotiating Strategies (INS) interview, is presented in Figure 4. The chart displays data collected during the baseline, intervention, and follow-up phases for the six participating students. Figure 4 displays these data graphically.

Lexi

Lexi demonstrated a stable baseline with a mean of 1.54 points on the INS SPS scale and a standard deviation of 0.04. The trend of these data has a flat slope. In the intervention phase, Lexi's scores have a mean of 1.76 points and a standard deviation of

Figure 4: Social Problem-Solving



0.17. The trend of these data also has a flat slope, though of a higher level than the baseline data. Lexi's follow-up score on the social problem-solving scale was 2.00 points. An examination of the immediacy of effect demonstrates no significant change from baseline to intervention phase. There is a 25% overlap in the data points from the baseline to intervention phases. Overall, these data suggest that Lexi's social problem-solving increased slightly from baseline to intervention, which was maintained at follow-up.

Roderick

Roderick's baseline scores have a mean of 1.53 points on the INS SPS scale and a standard deviation of 0.28. The trend of these data is a medium-magnitude positive slope in the therapeutic direction. In the intervention phase, Roderick's scores have a mean of 1.57 points and a standard deviation of 0.29. The trend of these data is a nearly flat negative slope in the non-therapeutic direction. Roderick's follow-up score was 1.76 points. An examination of the immediacy of effect demonstrates no significant change from baseline to intervention phase. There is a 100% overlap in the data points from the baseline to intervention phases. Overall, Roderick's data suggest no significant change in social problem-solving from baseline to intervention and follow-up phases.

Diego

Diego's baseline scores on the social problem-solving subscale have a mean of 1.78 points and a standard deviation of 0.05. The trend of these data is a nearly flat positive trend in the therapeutic direction. In the intervention phase, Diego's scores have a mean of 1.65 points and a standard deviation of 0.17. The trend of these data is a low-magnitude positive slope. Diego's follow-up score was 1.78 points. An examination of the immediacy of effect demonstrates an initial drop in social problem-solving skills. There is a 50% overlap in the data points from the baseline to intervention phases and the non-overlapping intervention data points are below the baseline. Overall, these data suggest that there was no significant change in Diego's social problem-solving from baseline to intervention and follow-up phases.

Yllissa

In the baseline phase, Yllissa's scores have a mean of 1.45 points and a standard deviation of 0.09. The trend of these data is a nearly flat positive slope. Yllissa's intervention phase scores have a mean of 1.57 points and a standard deviation of 0.14. The trend of these data is a very low-magnitude positive slope. Yllissa's follow-up score was 1.64 points. An examination of the immediacy of effect demonstrates no significant change from baseline to intervention. There is a 75% overlap in the data points from the baseline to intervention phases. Overall, these data suggest that there was no significant change in Yllissa's social problem-solving from baseline to intervention and follow-up phases.

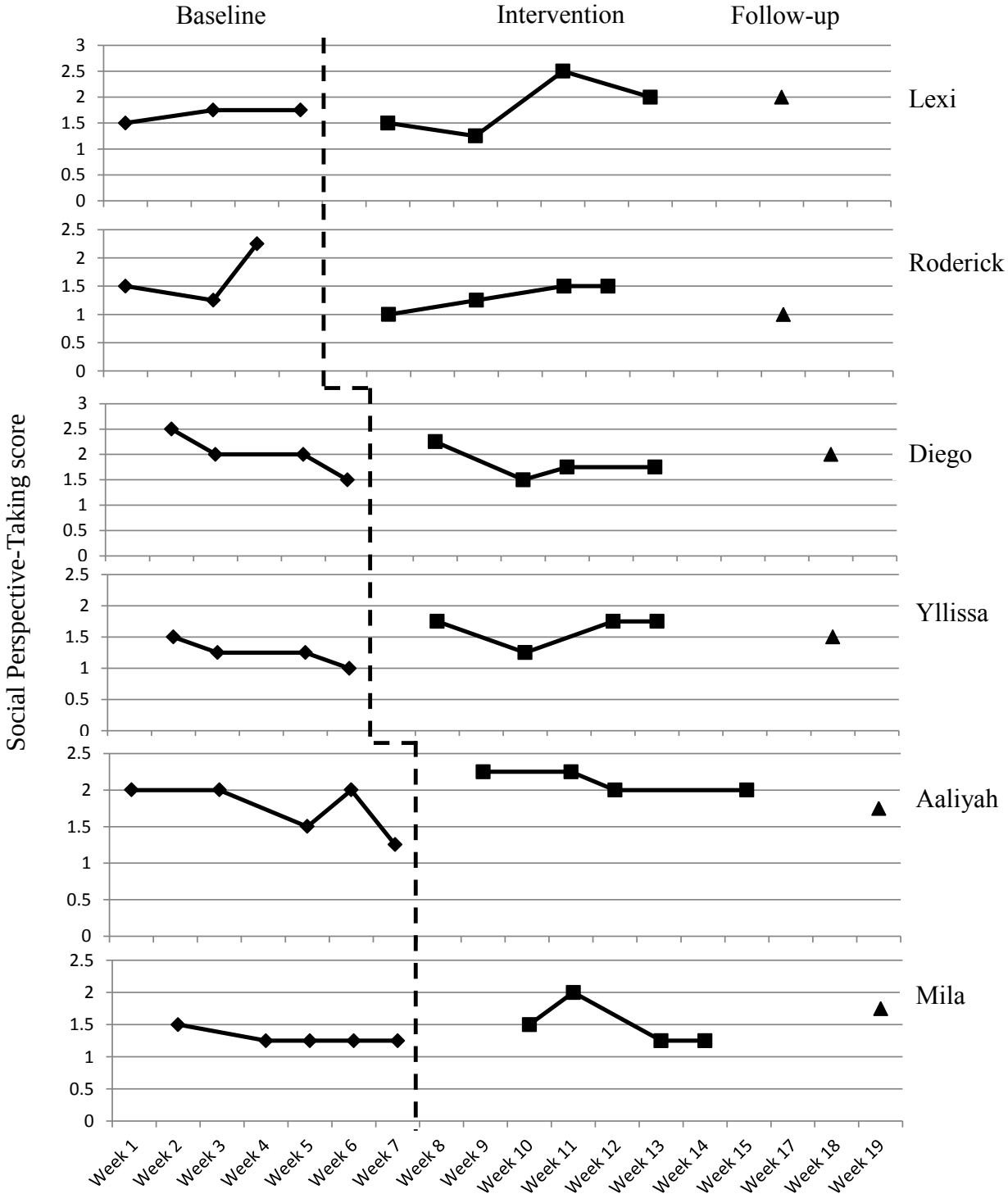
Aaliyah

Aaliyah's baseline scores have a mean of 1.69 points on the INS SPS scale and a standard deviation of 0.29. The trend of these data is a low-magnitude positive slope. Aaliyah's intervention phase scores have a mean of 1.88 points and a standard deviation of 0.14. The trend of these data is a low-magnitude positive slope of a lower level than the baseline data. Aaliyah's follow-up score was 1.79 points. An examination of the immediacy of effect demonstrates no significant change from baseline to intervention. There is a 75% overlap in the data points from the baseline to intervention phases. Overall, Aaliyah's data suggest no significant change in social problem-solving from baseline to intervention and follow-up phases.

Mila

Mila's baseline scores have a mean of 1.52 points and a standard deviation of 0.21. The trend of these data is a very low-magnitude positive slope. Mila's intervention phase scores have a mean of 1.48 points and a standard deviation of 0.16. The trend of these data is a low-magnitude positive slope. Mila's follow-up score was 1.52 points. An examination of the immediacy of effect demonstrates no significant change from baseline to intervention. There is a 100% overlap in the data points from the baseline to intervention phases. Overall, Mila's data suggest no significant change in social problem-solving from baseline to intervention and follow-up phases.

Figure 5: Social Perspective-Taking



Social Perspective-Taking

Participants' social perspective-taking skill, as measured by the Interpersonal Negotiating Strategies (INS) interview, is presented in Figure 5. The chart displays data collected during the baseline, intervention, and follow-up phases for the six participating students. Figure 5 displays these data graphically.

Lexi

Student Lexi demonstrated a stable baseline with a mean of 1.67 points on the INS SPT scale and a standard deviation of 0.14. The trend of these data is a low-magnitude positive slope. Lexi's scores on the Perspective-Taking subscale during the intervention phase have a mean of 1.80 points and a standard deviation of 0.55. The trend of this phase is also positive, with a slightly higher magnitude slope. Finally, Lexi's follow-up probe score was 2.00 points. In examining the immediacy of effect, the data appear to initially drop in the non-therapeutic direction, but are followed by an increase in the therapeutic direction. There is a 50% overlap in data points from baseline to intervention phases. Overall, Lexi's data demonstrated a mild increase in the slope from the baseline to intervention phases and a small increase in the follow-up score, suggesting a slight increase in social perspective-taking from baseline to intervention.

Roderick

Student Roderick demonstrated an unstable baseline with a mean of 1.67 points and a standard deviation of 0.52. The trend of these data is a low-magnitude positive

slope. Roderick's scores on the Perspective-Taking subscale during the intervention phase have a mean of 1.30 points and a standard deviation of 0.23. The trend of this phase is also positive, though of a lower magnitude. Roderick's follow-up score was 1.00 points. In examining the immediacy of effect, the data drop in the non-therapeutic direction and remain at or below the level of the baseline data. There is a 75% overlap in data points between baseline and intervention phases and the non-overlapping data point was below the baseline data. Overall, Roderick's data suggest a slight decrease in social perspective-taking from baseline to intervention and follow-up.

Diego

Diego demonstrated a baseline with a mean of 2.00 points and a standard deviation of 0.41. The trend of these data is a medium-magnitude negative slope. During the intervention phase, Diego's scores have a mean of 1.81 points and a standard deviation of 0.31. The trend of this phase is also negative, though of a lower magnitude. Diego's follow-up score was 2.00 points. In examining the immediacy of effect, the data appear to rise initially, then fall in the non-therapeutic direction. There is a 100% overlap in data points from the baseline to intervention phase. Overall, these data suggest that there was no significant change in Diego's social perspective-taking from the baseline to intervention and follow-up phases.

Yllissa

Yllissa's baseline scores have a mean of 1.25 points and a standard deviation of 0.20. The trend of these data is a low-magnitude negative slope. During the intervention phase, Yllissa's scores have a mean of 1.63 points and a standard deviation of 0.25. The trend of this phase is a low-magnitude positive one. Yllissa's follow-up score was 1.50 points. An examination of the immediacy of effect demonstrates an initial rise in Perspective-Taking scores followed by a drop. There is a 25% overlap in the data points from the baseline to intervention phase. Overall, Yllissa's data suggest a mild improvement in social perspective-taking from baseline to intervention, though this gain was not maintained at follow-up.

Aaliyah

Aaliyah's baseline scores have a mean of 1.75 points and a standard deviation of 0.35. The trend of these data is a low-magnitude negative slope. In the intervention phase, Aaliyah's scores have a mean of 2.13 points and a standard deviation of 0.14. The trend of this phase is also a negative one, though of a lower magnitude. Aaliyah's follow-up score was 1.75 points. An examination of the immediacy of effect demonstrates an initial rise in the data in the therapeutic direction. There is a 50% overlap in the data points from the baseline to intervention phase. Overall, Aaliyah's data suggest a mild improvement in social perspective-taking from baseline to intervention, though this gain was not maintained at follow-up.

Mila

Mila's baseline scores have a mean of 1.30 points on the SPT scale and a standard deviation of 0.11. The trend of these data is a low-magnitude negative slope. In the intervention phase, Mila's scores have a mean of 1.50 points and a standard deviation of 0.35. The trend of this phase is also a negative one, though of a slightly higher magnitude. Mila's follow-up score on the social perspective-taking subscale was 1.75 points. An examination of the immediacy of effect demonstrates an initial rise in the data in the therapeutic direction, followed by a return to baseline levels. There is a 75% overlap in the data points from the baseline to intervention phase. Overall, Mila's data do not suggest a significant improvement in social perspective-taking during the intervention phase, though there was a slight increase at follow-up.

SOCIAL VALIDITY

Qualitative Interview

Qualitative interviews were conducted in order to assess teachers' perceptions of drama-based work in general and with DAR in particular. The two fourth grade teachers and the visual arts teacher participated in these interviews, though the fifth grade teacher was unable to participate. The themes which emerged from these interviews provide context for the DAR questioning strategy within the broader framework of the DBI professional development model. The following themes emerged from these interviews:

Time Challenges

All three interviewed teachers noted difficulties with the implementation of DBI and DAR related to time restrictions. These restrictions were felt in two ways—that standardized testing limits the amount of time that can be spent on more dialogic, student-centered learning and that drama-based lessons often take longer than expected to complete. Related to the first, one teacher reported that "being a tested grade, it was harder to do more hands-on type of learning because the timeframe is so short and those type of activities tend to take up so much time." The two fourth grade teachers noted the difficulty of implementing drama-based strategies when standardized testing remains such a central issue in the school year. They noted the pressures to remain focused on addressing the Texas Essential Knowledge and Skills (TEKS) requirements in a more time-limited manner.

The second time constraint mentioned by all three participating teachers was the tendency for drama-based lessons to take longer than they had expected. Teachers noted that this time crunch often led them to feel that they were "rushing through" lessons, which occasionally limited their ability to fully enact DAR. The art teacher remarked that she was "running out of time to let the kids marinate in a thought." This theme was reflected in the classroom observations—that the DAR process was often rushed through at the end of the class period.

Initial Difficulty

All of the teachers interviewed reflected that they struggled with implementing DBI and DAR in their classrooms in the early stages of the project. In their general use of DBI, they noted difficulties with knowing which strategies to select based on the content of the lessons. One teacher noted that it was "a more calculated decision" to integrate DBI strategies into the curriculum and stated that she was "feeling her way through" that initial process. When interviewed, teachers reported that they were more likely to use strategies they had seen modeled in the trainings and less likely to attempt strategies they only heard described. Specific to their use of DAR, all three teachers reported initial feelings of uncertainty and discomfort related to their own proficiency with the questioning strategy. In particular, they noted the difficulty of the Relate step. One teacher stated that the Describe and Analyze steps were "easier than the Reflection part. That's where I was stumped." Each teacher interviewed reported that early attempts at using DAR felt "stiff," "not natural," and less fluid. Given that each teacher had a minimum of five years teaching experience, each of them noted the difficulty of breaking from their usual "pattern" of questioning. One fourth grade teacher noted that her typical questioning pattern tended to reduce the amount of time spent on Describe-types of questioning, preferring to focus on primarily Analysis and briefly touching on Relate-level questioning. The other two teachers were less specific in their descriptions of their questioning, though both indicated a lower level of Relate-types of questioning

than they would prefer. Thus, attempts at altering these patterns initially felt uncomfortable to the participating teachers.

Gaining Comfort

Following the initial challenge of discomfort with the strategies, all three teachers reported gaining a sense of "flow" with DBI in general and DAR in particular. Generally related to DBI, one teacher noted that she discovered a strategy which seemed to be a good fit for her personality and for her students' learning styles. She noted that it was enjoyable for her to use and "the kids had fun" with it. More specific to DAR, one teacher noted that the previously challenging Reflection-eliciting questions became "more internalized" and easier to implement. Another teacher discussed her realization that DAR questioning fits with inquiry she was already practicing in her classroom, but created a more intentional frame around the work. As mentioned previously, each teacher reported having an established "pattern" to their usual method of classroom questioning that changed with the introduction of the DAR strategy. For one teacher in particular, the change involved more higher-order, Reflection types of questions. Another reported paying more attention to the importance of the Describe step for particular students. That teacher noted "sometimes I skip through the Describe part and go straight to Analyze…but I see some students that would be helpful to process what just happened." Thus, each teacher experienced shifts in her questioning in a direction that previously had been an area of weakness or oversight.

Related to this conversation, the three teachers interviewed also indicated the utility of teaching the DAR strategy to novice educators. One stated "I wish I would have had [DAR] earlier on and starting out—it would have been more natural. I'm glad I'm getting it now." She also noted that first year teachers have a lot to consider in implementing lessons for the first time and that DAR could help in that process. She said "Bloom's Taxonomy is so much information to remember, but DAR is just three things, so I think it would be very helpful for first year teachers." The visual art teacher remarked on having received training on how to teach lessons but felt that there was a missing component related to reflection and "ending" the lesson. She stated that "No one ever talks about 'So, how do we wrap this up?'" She noted that DAR was an appropriate method for making the learning meaningful to the individual learner. Thus, each teacher indicated the need to increase the instruction of DAR-style questioning with novice teachers to enhance their overall effectiveness.

Student Reactions

All of the teachers interviewed reported a similar pattern of student response: initial hesitation shifting to increased comfort and deeper processing of information. One teacher joked: "The first time I brought it up with them and said 'What did we just do?' they were like, 'Uh…?' They thought it was a trick question!" One teacher remarked that the "reflective piece is generally more challenging for them—to think outside of their immediate classroom environment." Another added "It takes longer when you ask the harder questions, but eventually the hands go up." Two teachers noted that with greater

exposure to DAR, the length of time for students to respond to higher-order questions decreased. Further, the three teachers noted the increasing depth of processing they witnessed in students. The art teacher experienced difficulty with feeling as though she were "drawing more out of them than I was getting" in the early stages, but that as the year progressed students became more creative in their answers. She remarked that she "felt like we were having middle school-level conversations" about the topic. She also likened the difference between DAR-based questioning and typical questioning to the difference between "essay questions and multiple choice."

It should be noted that assessment and analysis of teachers' perceptions related to the social context of DBI in general and DAR in particular were largely absent from the current study. As revealed in interviews in the current study, teachers' thoughts regarding the difficulties they encountered with implementation indirectly reveal a potential need for further study. Inclusion of teachers' observations of their own questioning and their students' reactions to these strategies in a constructivist context would enrich this work and should be considered in future studies in this field. Additional information on teachers' perceptions of the underlying functions and principles of DBI would provide further context for the mechanisms at work in building higher-order thinking skills in students. Without this information, the current study lacks a degree of depth related to teachers' ideas of the changes DBI and DAR enact in their students. It would be helpful to include teacher feedback about the social and

constructivist contexts of their own classrooms to better understand the outcomes of the current study.

Behavior Assessment System for Children, Teacher Rating Scales-Child (BASC-2 TRS-C)

Teachers completed a pre- and post-intervention administration of the BASC-2 to assess for their perceptions of the participating students' social skills. The two fourth grade teachers were able to complete both administrations of this measure, though their fifth grade colleague was not able to do so. The results of this measure are displayed in Figure 6. The scores are reported as *T*-scores, with a mean of 50 and standard deviation of 10. Scores of 40 to 31 are considered At Risk, while scores of 30 or below are considered Clinically Significant. Lexi's teacher's responses indicate a sharp drop in her overall social skill throughout the course of the school year. Her teacher noted in interviews that Lexi's overall behavior suffered a significant decline due to outside events in her life. The remaining fourth grade students all demonstrated an increase in their reported social skills. Diego and Yllissa both experienced increases of five points each, or half a standard deviation. Notably, Yllissa's scores both remain in the At Risk range, suggesting that her teacher observed her overall level of social skill to be significantly lower than that of the majority of her peers. Roderick experienced a substantial increase in his social skill as observed by his teacher. His score leapt 19 points, or nearly two standard deviations. Unfortunately, the two fifth grade students' post-intervention scores

are unknown, though their teacher rated their initial scores to be in the average range of functioning.

BASC-2 TRS-C	Pre-Intervention		Post-Intervention	
	T-Score	Percentile Rank	T-Score	Percentile Rank
Lexi	61	86%	45	31%
Roderick	45	35%	64	90%
Diego	53	62%	58	78%
Yllissa	32	4%	37	11%
Aaliyah	54	63%	--	--
Mila	47	37%	--	--

Table 1: BASC-2 TRS-C Social Skills Subscale Results

SUMMARY

The DAR intervention used in the present study was implemented with some challenges. It is believed that the participating students may not have had a faithful presentation of the dependent variable. Overall, the two fourth grade teachers and the art teacher indicated that they found this drama-based questioning strategy to be socially valid and expressed positive views in regards to its use. Their reflections on the benefits of DAR related to fostering higher-order thinking suggest a connection to socio-cognitive outcomes which were not reflected in the quantitative data, but should be considered nonetheless. Further, the fourth grade teachers indicated overall improvements in their students' general social skills as measured by the BASC-2. A more thorough discussion

of this issue will follow in Chapter 5 of this document. The results will now be summarized across participants as they pertain to each respective hypothesis.

Hypothesis 1

Hypothesis 1 postulated an increase in participants' *social problem-solving ability* following their exposure to the DAR questioning strategy biweekly for a period of two months. In the current study, only Lexi demonstrated such an increase. Even so, this increase was slight and should be interpreted with caution. The remaining participants demonstrated no significant changes in their social problem-solving skills from the baseline to intervention and follow-up phases.

Hypothesis 2

As was hypothesized, Lexi, Yllissa, and Aaliyah demonstrated slight improvements in their social perspective-taking ability, though these results should be interpreted with caution. Further, Roderick demonstrated a slight decrease in social perspective-taking from baseline to intervention and was the only student whose follow-up score was below the level of the baseline data. The remaining two students demonstrated no significant change in their social perspective-taking from baseline to intervention. Though Mila did not demonstrate a significant improvement in social perspective-taking during the intervention, the follow-up score was only a slight improvement from the baseline data.

Overview

In summary, it appears that the results of the current study are largely inconclusive. The mild gains observed in students' social perspective-taking suggest a positive trend which will be discussed further in the following sections. Also pertinent are the findings that the participating teachers, when interviewed, indicated support for the DAR strategy, despite their initial difficulty with its implementation. Additionally, teachers' responses on the BASC-2 suggest a mild degree of social validity for increases in general social skill in the participating students.

CHAPTER 5

Discussion

The purpose of the present study was to explore the impacts of a drama-based questioning strategy on six 4th and 5th grade students' social problem-solving and perspective-taking abilities. Also considered were participating teachers' perceptions of the effectiveness and utility of the DAR questioning strategy in their classrooms. Further, teachers' perceptions of the DAR strategy and their own proficiencies with it are examined in comparison with the measured student outcome variables.

Given that the field of drama-based instruction is relatively young, limited empirical research has been done to examine its benefits in a variety of areas. Previous studies suggest that drama-based instruction is a valuable professional development model for teachers (Dawson, et. al, 2011; Cawthon & Dawson, 2009). It has also been found to be beneficial in activating student classroom engagement (Cawthon, Dawson, & Ihorn, 2011). The Describe, Analyze, Relate questioning strategy exists in the framework of DBI and is used to guide students through higher-order thinking using tenets of Bloom's Taxonomy (DBI handbook, 2008). As such, the purpose of the current study was to begin the process of examining the potential benefits of DAR on the development of students' social perspective-taking and problem-solving abilities.

This study used a multiple-baseline, single-case design. All repeated measures data were graphed across intervention phases, including baseline, intervention, and follow-up, and were visually analyzed to assess intervention effects (Kennedy, 2005).

This chapter first summarizes the findings as they relate to each hypothesis, with a supporting discussion of these findings related to existing research literature. Emergent clinical and research themes within the present study are then reviewed. Subsequently, the limitations of the study are addressed. Finally, the chapter concludes with a discussion of the implication for future research and practice.

HYPOTHESIS 1

The first research question concerned the impact of the Describe, Analyze, Relate questioning strategy on the social problem-solving skills of upper elementary school students. It was hypothesized that students who were exposed to this intervention would experience an increase in their social problem-solving skill, which would be maintained or further increase at follow-up. Overall, this hypothesis was not supported. Although one participant demonstrated a small change in the therapeutic direction that was maintained at follow-up, there was no meaningful shift in the remaining five participants' social problem-solving scores.

One potential reason for the lack of change in participants' problem-solving skill may be due to an insufficient exposure to the intervention. As the classroom observations, teacher check-ins, and qualitative interviews reflect, the fourth grade teachers and the art teacher implemented DAR questioning approximately twice per month during the intervention period. The fifth grade teacher was only able to implement a formal lesson involving DAR once during that time. As classroom observations suggested, teacher proficiency and comfort with the strategy was still developing,

meaning that students were not exposed to sufficiently "pure" administrations of the strategy. As was noted previously, teachers tended to implement the questioning in a rushed manner, sometimes skipping the Relate step altogether. In effect, the "dosage" of the intervention appeared to be below what was expected for this particular study. As such, participants did not have adequate exposure to DAR to benefit in the hypothesized manner. As it stands, the participating students are believed to have been exposed largely to the Describe and Analyze steps of the DAR process, steps which are hypothesized to tie most closely with social perspective-taking ability as measured by the INS. That is, in the first two steps of the DAR process, students were asked to examine their own perspectives and had the opportunity to compare them with those of their peers. This greater exposure to differing perspectives may partially explain the weak gains in perspective-taking ability observed in the current study. Given that students did not receive as consistent an exposure to the Relate phase of questioning, it is reasonable to assume that the hypothesized higher-order thinking processes were not sufficiently established to increase students' problem-solving ability.

Another potential reason for the lack of improvement in students' social problem-solving scores relates to the issue of response fatigue and familiarity with the INS measure. Due to the repeated measures nature of the study, students were observed to learn the sequence of questions in the structured interview. After approximately the third administration, students were observed to answer the questions before the lead researcher asked them. Several students also made comments when answering the "Selected

Strategy" question indicating their choice of a particular option based on their ability to answer further questions more easily. While early administrations of the INS reflect a more "pure" assessment of participants' problem-solving skills, later administrations include their ability to anticipate the remaining questions. In these cases, the lead researcher observed that some students would give lower quality answers to the question asking for the "best way to solve the problem" (Question 4 in Appendix C) in order to provide a more evident response to questions related to "what could go wrong" with that solution (Question 6 in Appendix C). Consequently, participants' scores on later administrations may not reflect their "true" problem-solving ability.

On the other hand, repeated administrations of the INS may have provided a sort of "mentoring" for how to engage in the problem-solving steps. After repeated exposures to the questions, students may have begun to internalize the steps related to identifying the problem, generating solutions, considering outcomes, selecting a strategy, and evaluating its success (Crick & Dodge, 1994; Dodge & Pettit, 2003; Ronen, 2007). Thus, it is possible that students' scores may have increased due to repeated exposures to the INS. Given the relatively stable response pattern for the majority of the participants, this outcome seems less likely. There is no other known single-case design research conducted with the INS interview. Thus, no further information on a repeated measures administration of the interview is available. Should similar studies using the INS be conducted in the future, it may be beneficial to time the administrations of the interview farther apart in order to reduce the recency of the measure in students' minds.

HYPOTHESIS 2

The second research question concerned the impact of the Describe, Analyze, Relate questioning strategy on upper elementary students' social perspective-taking ability. It was hypothesized that students who were exposed to this intervention would experience an increase in their social perspective-taking skill that would be maintained or further increase at follow-up. Overall, this hypothesis was also unsupported by the data. Though three students demonstrated mild improvement in their perspective-taking ability, one of these students experienced a return to baseline level functioning in the follow-up phase. Two of the remaining students experienced no significant change to their functioning and the final student demonstrated a slight decrease.

One potential reason for this outcome relates to the INS measure itself. As discussed previously in this document, Gehlbach (2004) emphasizes the importance of measuring not only subjects' perspective-taking *ability*, but also their perspective-taking *propensity*. He argues that researchers should address not only the skill with which a subject takes another's perspective, but also his or her motivation to do so. The Interpersonal Negotiating Strategies interview measured only subjects' social perspective-taking ability, which may have limited this study's ability to capture the full impact of the DAR intervention. Although the intervention did not appear to have significant effect on participants' perspective-taking ability, it is possible they were increasingly motivated to make attempts at viewing situations from others' points-of-

view. Since that this aspect was not measured at this time, whether or not this effect was taking place is unknown.

As previously discussed with social problem-solving, inadequate exposure to the intervention may have contributed to a lack of significant change in participants' social perspective-taking scores. Due to a lack of fluency with the strategy, teachers struggled to provide a faithful administration of the intervention. This difficulty, in spite of teachers' prior and ongoing training, speaks to the challenges teachers face in asking questions that access higher-order thinking (Anderson et al, 1994); for a summary, see Walsh & Sattes, 2005). A more thorough discussion of this issue will follow in the Emergent Themes section of this document.

A final consideration in evaluating the outcomes related to both hypotheses is the issue of baseline level of social problem-solving and perspective-taking ability. The students who participated in the current study demonstrated typical initial levels of both skills. While the current study posits that DAR functions as a Tier I intervention for these social skills, it is possible that it is more effective at the Tier II level. Given that the participating students all began the study at expected levels, they may not have had much room to improve their abilities. In contrast, if this study were to be replicated with students who have identified deficits in this area, the observed difference may be greater.

EMERGENT THEMES

It is important to discuss the qualitative results of this study in addition to the quantitative ones. In the post-study interviews conducted with participating teachers,

they appeared to have a high degree of "buy-in" for the DAR strategy. That is, teachers noted the benefits of the DAR questioning strategy and indicated their support of it as a necessary pedagogical tool. Their consideration of the strategy tended to focus more on its academic benefits versus the socio-cognitive ones. As is discussed in the previous chapter, teachers emphasized that DAR is helpful in providing a structure for the process of guiding students through the levels of Bloom's Taxonomy. Though they experienced initial challenges in their implementation of the strategy, each noted the benefits of an organized scaffold for helping students reach greater depths in their processing of the curriculum. Though teachers did not tend to emphasize the social skill outcomes identified in the current study, they noted the importance of the cognitive outcomes that have been linked to social problem-solving and perspective-taking (Ronen, 2007; Kendall, 2006). So while the current study did not demonstrate the direct effectiveness of DAR on these skills, teachers observed the acquisition of "precursor skills" in their students. This information continues to suggest that longer-term exposure to DAR may have a more noticeable impact on social perspective-taking and problem -solving. Further supporting this idea are the results of the BASC-2, which indicate a mild increase in students' overall social skills. Thus, teachers may have been noting improvements in their students' social interactions not detected by the INS interview.

Also evident from this study is that a period of "apprenticeship" with the DAR strategy may be beneficial to teachers as they become accustomed to the process. Though teachers seemed to have a clear understanding of the fundamentals of the DAR

questioning process, they tended to demonstrate difficulty with their implementation of it in a real-time classroom setting. Even for experienced teachers, the stages of questioning appeared to be fairly challenging to enact faithfully. Thus, teachers in their first year of DAR questioning could benefit from feedback on their use of the strategy and ways to increase the educational value of the process. An ongoing mentoring of their use of questioning may allow teachers to become more proficient at asking questions that access higher-order thinking in students.

This study posits that helping teachers more effectively facilitate the Relate stage of questioning will lead to stronger higher-order thinking in students. In general, the types of questioning produced in this stage tap in to students' ability to apply the information to solve novel problems, synthesize the component parts of the information to assess for patterns, evaluate the quality of information, and connect this information with their own lived experiences. These skills tie directly to the steps of problem-solving both in a social capacity as well as an academic one (Crick & Dodge, 1994; Dodge & Pettit, 2003; Ronen, 2007). The qualitative results of this study suggest that teachers were beginning to witness the early stages of this skill acquisition. The belief is that students given greater time to practice these skills have increased opportunities to expand from an academically-based application to more socially-based ones (Ronen, 2007).

Examination of the overall school context is another relevant consideration. All three of the interviewed teachers in the current study mentioned standardized testing as a pressure for them. In many schools across the country, standardized testing is used as a

significant measure of success (Clarke & Gregory, 2003; Goertz & Duffy, 2003). Test results often determine funding for the school and pay increases for teachers (Clarke & Gregory, 2003; Goertz & Duffy, 2003). For example, the participating school in this study was facing the possibility of being closed for the following school year due to poor test scores. This type of pressure on schools, administrators, and teachers often leads to a hyper-managed school context in which teachers feel they have little flexibility to allow students to engage in dialogic, constructivist approaches to learning (McNeil, 2000). These variables should be taken into account when considering results from studies of drama-based instruction. While teachers may choose to engage in constructivist approaches, they may experience resistance from their school administration, in turn impacting the effectiveness of this type of pedagogy.

LIMITATIONS

Procedural

One obvious procedural limitation of this study is that many of the baselines demonstrate a trend or lack stability. In single case designs, it is preferable that baselines have low variability and demonstrate a lack of upward trend, or else run the risk of "render[ing] an experiment uninterpretable or severely constrain[ing] the interpretation of findings" (Kennedy, 2005, p. 35). In several cases in the current study, additional baseline data points would have been beneficial to establish stability in the data. Due to the time limitations inherent in the setting, however, it was not possible to extend the

baseline further. Another consideration in the decision not to collect further data points was the issue of response fatigue. As Bloom et al. (2006) mention, it is necessary to consider the acquisition of a stable baseline versus potential response fatigue in selecting the appropriate number of baseline data points. Given the potential for fatigue related to the INS, a minimum number of baseline administrations were conducted in the time available. In regards to the timing of the interviews related to the monthly interventions, there was little opportunity to tailor the data collection schedule to the intervention schedule. Due to teachers' needs for flexibility and the limited interview times available with students, the variable of sampling students immediately following exposure to the intervention was not considered. It is possible that doing so may have demonstrated more robust improvements to students' social perspective-taking and problem-solving due to the recency of the exposure to the underlying skills. A follow-up data collection would help to assess for a lasting effect of these improvements.

Another procedural challenge to this work involves the time period for data collection. Given the constraints of time and resources, the current study was conducted over a necessarily short period. As was discussed previously, it is believed that the participating students did not receive optimum exposure to the dependent variable, thus did not have time to experience its full impacts. Given that the higher-order thinking accessed by the DAR questioning strategy requires ongoing exposure and practice, observation of those effects over a longer period of time would be helpful. With greater exposure to and practice with the higher-order thinking skills bolstered by DAR

questioning, students have greater opportunities to incorporate those skills into areas of their cognitive processing beyond the academic realm. Ideally, this study would have been conducted over the span of a full school year. Baseline data would have been collected in the first few weeks of the year and the intervention would have lasted for a period of six to seven months, rather than two. It is believed that this increased intervention time would allow students greater time to digest the more complex cognitive processes that foster social perspective-taking and problem-solving capability.

Measurement

Another notable limitation of the current study is the relatively low level of interrater reliability on the Interpersonal Negotiating Strategies measure. Though the two raters trained to a 95% agreement level on practice administrations, the observed level of agreement on the selected interviews was 63%. It should be mentioned that in calculating interrater reliability, the lead researcher noted that the two observers' ratings of portions of the interviews were close in their scoring, though not exact. A common procedure in other forms of social and emotional assessment is to "average" scores when two responses are similarly "in between" two scoring categories. That is, a child may give two answers that are slightly more developed than a typical "1" score, but slightly less developed than a typical "2" score. When this occurs, the assessor is trained to "average" the responses by scoring one a "1" and the other a "2". This is germane to the current topic in that the lead researcher noted that both observers appeared to be using this "averaging" technique, but scoring the two questions opposite of one another. That

is to say that that Observer 1 would enter the scores "1" then "2", while Observer 2 would enter the scores "2" then "1". In calculating interrater reliability, this discrepancy appeared to be more negative than an examination of the scoring would suggest. Overall, however, the relatively low interrater reliability suggests that the Interpersonal Negotiating Strategies interview remains a somewhat subjective measure of social problem-solving and perspective-taking.

Further limitations related to measurement in the current study include the INS's lack of sensitivity to small changes in social problem-solving and social perspective-taking skill. Given the scoring and categorization system of the INS, students were given scores of 0, 1, 2, or 3 on each item in the structured interview (Schultz, Yeates, & Selman, 1989). This system is effective in giving a somewhat broad picture of each child's skill in this area, but may be more limited in detecting smaller changes in these abilities. While it is a helpful measure generally, a measure offering a more detailed analysis of the skills of social perspective-taking and problem-solving may yield more sensitive results. As of the time this study was conducted, no known measure existed that met this requirement and was suitable for a repeated measures design.

IMPLICATIONS FOR FUTURE RESEARCH AND PRACTICE

The inconclusive results of the current study may be explained partially by the fact that each of the participating teachers was in their first year of practice with the DAR strategy. As the teachers reported in their qualitative interviews, they experienced initial hesitation and a lack of fluency with the DAR process. But as they gained experience

with the strategy, teachers reported greater comfort and proficiency. This suggests that students whose teachers become increasingly comfortable with the technique and can incorporate it into their instruction more fluidly may have greater and more saturated opportunities to practice higher-order thinking skills. With higher and stronger "dosages" of the full DAR strategy, students may be able to develop proficiency with problem-solving and perspective-taking skills, enabling them to generalize these skills from academic realms to social ones. Although this study did not confirm quantitatively DAR's role in enhancing student social skills, the qualitative results from the BASC-2 and the teacher interviews suggest that further research regarding this issue is warranted. Future research in this field should include the effects of the strategy as administered by a DAR-proficient facilitator.

Due to the challenges presented by the INS measure, it may be helpful to consider other methods for measuring social perspective-taking and problem-solving in future studies. Given the drama-based context of the present study, a more interactive, dialogic form of assessment may be beneficial, particularly one which allows the student to engage in a more authentic manner with the problematic situation. This type of assessment might be accomplished by way of a "role play" style interaction with the examiner or an enactment of a "real world" problem with a peer. Another possible solution to the challenges presented by the INS may be to study and track observable behaviors in the target students. It would be beneficial to create operational definitions of the social perspective-taking and social problem-solving constructs and observe their

occurrence in vivo. Observations of the studied skills could be conducted in a number of environments in the school setting including the classroom, the playground, and the lunchroom.

Given the exploratory nature of this study, a goal was to evaluate not only the efficacy of the DAR intervention, but also the effectiveness. Teachers' responses suggest some positive implications of the DAR strategy despite the inconclusive efficacy demonstrated in the current study. Teachers' informal observations of students' social skills as measured by the BASC-2 indicate that they observed mild improvements in participating students' functioning. Additionally, teachers' qualitative responses suggest that they find the strategy to be beneficial in deepening students' understanding of material and in structuring their own use of questioning. They noted particular benefits to teaching the strategy to teachers-in-training as a way to facilitate more effective questioning. Teachers also indicated that the use of DAR helped them to develop greater proficiency with asking the higher-order questions that facilitate deeper processing of information on the part of students. These are the skills which access the types of learning described in Bloom's Taxonomy, argued in this study to enhance social perspective-taking and problem-solving ability. Future studies might address the issue in an empirical manner to determine if the anecdotal evidence is supported and if studying student outcomes that are more directly related to academic higher-order thinking skills is fruitful. An examination of the benefits to student proficiency with critical thinking skills in the areas of application, synthesis, and evaluation of information may prove to be a

solid foundation for further study in the field. As mentioned previously in this document, higher-order questioning is a valuable skill to teach to children and any method by which to foster it should be explored fully.

Though the predicted impacts on social skill were not observed in the current study, the possibility for other positive impacts on students' comprehension and learning have not yet been addressed. As this is the first known study examining DAR's specific effects on student outcomes, there remains a broad range of potential benefits of the DAR strategy. Given participating teachers' enthusiasm for the procedure and previous research noting the importance of deeper processing on a number of desirable student outcomes (Morgan & Saxon, 1991; Fusco, 2012; Holzer, 2009), further research on DAR questioning appears to be warranted. For students and educators alike, DAR-style questioning may provide an engaging method by which to broaden and enhance higher-order thinking skills. Empowering students to practice critical thinking can facilitate numerous positive outcomes in their academic and social lives, creating a healthier, more effective community at large.

Appendix A: Photograph of Rosa Parks

Appendix B: Drama-based sample lesson plan

A Missing Image (Adapted from a lesson plan by Kathryn Dawson and Lara Dossett) (close analysis)

Introduction: Begin discussion by prompting about information from previous lessons about Jim Crow laws, segregation, early Civil Rights leaders, etc. Introduce the name of Rosa Parks and ask students to describe what they have heard about her and who she was. "When you look up information about Rosa Parks in books or online a famous picture is often found. Take a look at this famous picture. What information do we get from this picture?

Read the Image: Observe a picture of Rosa Parks on the bus

D: What do you see in this picture?

A: What is this person doing? Why might this be important?

R: Let's relate this image to a quote by Rosa Parks: "I would like to be known as a person who is concerned about freedom and equality and justice and prosperity for all people." What do you see in this picture which connects with our quote? Why?

I invite you to look at this picture now as I read you a selection from Rosa Park's autobiography as she describes what happened the day she decided to not give up her seat on the bus. Let's listen to see if this picture is an accurate representation based on her account.

“The final straw came December 1st, 1955 as I rode the bus home from my job at the Montgomery Fair Department Store. I boarded the bus, paid my fare, and sat down in the first row behind the seats reserved for the whites. This was in the eleventh row and almost in the middle of the bus. The bus made its way along its route and the seats reserved for whites only began to fill up. When all of the seats were full, and there were still three whites standing the bus driver moved toward the back of the bus and demanded that four black people relinquish their seats to the white people. I just wanted to protect myself and my rights. The three black men near me moved, but I just scooted over towards the window seat. The bus driver then asked me why I did not get up and move and I told him that I did not feel that I should have to. People always say that I didn't give up my seat because I was tired, but that isn't true. I was not tired physically, or no more tired than I usually was at the end of a working day. I was not old, although some people have an image of me as being old then. I was forty-two. No, the only tired I was, was tired of giving in. I knew someone had to take the first step and I made up my mind not to move. Our mistreatment was just not right, and I was tired of it.”

Reflection: How is this description different than what we see in the photo?

Transition: Reflection on the photo. How is this description different than what we see in the photo? Let’s imagine that someone was there taking the picture. We’re going to re-create this image for ourselves keeping in mind what actually happened that day.

Create image through embodiment:

"Create our own version of this photo. Create what really happened that day on the bus. Build one character at a time. Rosa, Bus Driver, people on the bus. Encourage folks to stage the most dynamic moment, when the driver is asking Rosa to move. As each character adds, define the character's point of view. Look for multiple perspectives and where people's perspectives might come from.

As characters add to image, offer questions:

Describe: What do you see?

Analyze: What's happening, what emotions, etc. are you seeing? What about their body, face, posture, is telling you that?

Focusing on an image: "Let's pretend this person has a thought bubble over their head, what might this person be thinking in this moment? Why?"

Relate: How do these characters represent some of the views that shaped the Civil Rights movement?

Writing in Role:

Select one character from this scene and write a journal entry from his or her perspective. Consider what that person might have thought and felt about what was happening. Let the reader know what the character did (or didn't) do and their reasoning for that action. How did this event change him or her (or not!)?

Appendix C: Sample Vignettes from the Interpersonal Negotiating Strategies Interview

Dilemma 1

Randy (Mary) and Tom (Sue) are friends. They have been assigned to work together on a science project in school and only have two days to finish the project. They meet after school and Randy (Mary) says he (she) wants to start working on the project right away, but Tom (Sue) wants to play softball first.

Dilemma 2

Mark (Donna) and **David (Jane)** are friends who are talking together at school. Mark (Donna) asks David (Jane) to play after school, and David (Jane) wants to go. But David (Jane) knows that his (her) mother wants him (her) to clean up his (her) room by dinnertime because guests are coming, and if he (she) does, his (her) mother will increase his (her) allowance that week.

Dilemma 3

Bob (Debbie) and Steve (Anne) are classmates. They don't know each other very well, but their teacher has assigned them to work together on a social studies project about Africa, and they are trying to decide on a topic. Bob (Debbie) wants to do the report on wild animals, but Steve (Anne) wants the report to be about different tribes, like pygmies.

Dilemma 4

Ray (Jennifer) and John (Lynn) are both in the same grade, but they don't know each other very well. On the playground one day, they are both picked to be on the same kickball team. They both are good pitchers, both like to play that position best, and they both would like to pitch that day.

Interview Questions & Follow-up Probes

1. What is the problem here?
   Why is that a problem?

2. How do you think (the protagonist) feels?
   Why does he (she) feel that way?
   How do you think (the other person) feels?
   Why does he (she) feel like that?

3. What are all the things you can think of that (the protagonist) can do to solve his (her) problem with (the other person)?

How would that solve the problem?
What else could he (she) do?
Why would he (she) do that?

4. What would be the **best** way for (the protagonist) to solve his (her) problem with (the other person)?
   Why is that the best way to solve the problem?

5. How would (the protagonist and the other person) feel if (the protagonist) did that?
   Why would they feel like that?

6. What could go wrong with (the protagonist's) solution of ____?
   Why might that mess it up?

7. What would (the protagonist) do next if that happened?
   Why would he (she) do that?

8. How would (the protagonist) know if he (she) had really solved the problem?

Appendix D: Qualitative Questions for Teacher Interview (DAR teacher)

1. What is it like for you to conduct drama-based instruction with your classes? What works well about it for you? What is challenging about it for you?

2. What is it like for you to conduct DAR with your classes? What works well about it for you? What is challenging about it for you?

3. Would you recommend the DAR strategy to other teachers? Why or why not?

4. How do your students, as a whole, respond to the DAR framework?

5. How does [student], in particular, respond to the DAR framework?

Appendix E: Classroom Observation Form

Your Name: _____ **Date**_____

Starting Time: _____ **Ending Time:** _____

Teacher(s): _____ Teaching Artist(s)_____

Classroom Grade(s) (please circle all that apply): 4 5

Number of Students: _____

Class Subject(s):_____ Lesson topic:_____

Goals of the Lesson: (attach lesson plan if available)

Academic:_____

Social:_____

Arts:_____

WHAT'S HAPPENING?

The purpose of these items is to help you describe what you see while you are observing the class. At each time interval (every ten minutes or so), check off the items that have occurred *since the time of your last recording.* The first set of items relates to instruction; note whether Teacher A, Teacher B, and/or Teaching Artist (TA) was observed in the behavior. The second set of items relates to student participation. First, for the first row (* item) estimate the percent of students that are involved in the lesson in some way (i.e. not detached or actively disruptive). Then, for the items below, just check off which behaviors you observe in the students.

	10	**20**	**30**	**40**	**50**	**60**
Activity or Focus						
Teachers						
Questioning students to deepen their understanding						
Responding to student inquiry or questions						
Reflecting with students about the activity						
Encouraging students to be respectful of each other						
Questioning to clarify students' description of an object/image						

Redirecting students who make premature conclusions/inferences about an object/image						
Questioning to enhance student analysis of an object/image						
Questioning to encourage student reflection on the implications/relevance of an object/image						
Students						
Asking questions to the teacher or each other						
Making connections to personal experience						
Making connections to other content or projects						
Collaborative problem solving/ group work, cooperation						
Describing an object/image						
Analyzing an object/image for possible meanings						
Reflecting on the implications/relevance of an object/image						
Conversation between students about differing perceptions of object/image						

PROCESSING THE OBSERVATION:

After each item, please provide examples or indicators that support your response. You might note places where the teacher(s) were successful at the task or where there were some problem areas.

1. **How did the teacher engage students in the DAR process? Note examples of how the teacher facilitated this activity.**

2. Did the teacher redirect students who jumped prematurely to later stages of the DAR process? Note examples of ways she/he did so:

3. How would you describe the interactions between students during this lesson? Describe how students communicated with each other, roles taken, support given, etc.

The last set of questions are combination of a) a simple rating scale of your perceptions of this lesson and b) comments and examples of where you saw this in your observation. Please consider these items on a scale of 1 to 5, 1 = not at all to 5 = extensively.

Did the teacher(s) construct questions to guide the lesson?

1	2	3	4	5
Not at all		Somewhat		Extensively

Did the teacher(s) reflect or discuss the lesson's process and outcomes with the students?

1	2	3	4	5
Not at all		Somewhat		Extensively

Appendix F: Bi-weekly Teacher Check-in Questionnaire

1. How many times have you used the DAR strategy in the past two weeks?

2. Please describe how you have used DAR in the past two weeks?

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