The Effects of Culturally Responsive Computer-based Social Skills Instruction on the Social Skill Acquisition and Generalization of Urban 6th-Grade Students with Emotional and Behavioral Disorders

Dissertation

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ABSTRACT

This study examined the effects of culturally responsive, computer-based social skills instruction on the social skill acquisition and generalization of urban sixth graders with emotional and behavioral disorders (EBD). Six students received the social skills intervention three to four times a week for approximately 3 to 7 weeks.

A multiple-probe across participants design was used in this study. This design allowed the experimenter to note the effects of the social skills intervention on the participant’s ability to follow adult directions. The dependent variables included: following adult directions, participation, and entering conversations appropriately. Pre and post-test measures were given to determine the effects of the social skills intervention on each participant’s overall ability to learn information pertaining to the social skill of following adult directions.

Results revealed that culturally responsive, computer-based social skills instruction was effective at increasing the participant’s ability to follow adult directions, participate in classroom activities, and enter conversations appropriately. Generalization results were modest for four participants but two students demonstrated increasing trends across experimental conditions for the dependent measures. These results support the use of culturally responsive, computer-based social skills instruction for urban adolescents with emotional and behavioral disorders. This study extends current research as direct
observations were conducted to measure each participant’s behavior and traditional social skills instruction was integrated with culturally responsive and computer-based instruction to allow for more personalized instruction. Implications, limitations, and future research are discussed.
Dedication

I would like to dedicate this paper to my children, Kayden and Kaylyn.
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First, I would like to thank God for giving me the strength and passion to get through this program. I would also like to thank my family and friends for your love, support, prayers, and faith throughout this process. You all kept me motivated along this journey and words could never express my full gratitude for all of the MANY ways you have supported me. I know I can never fully repay each one of you for all that you have done but it is my hope that I can “pay it forward” through my work of educating and advocating for the needs of children. To mom and dad, we have finally made it! Thank you for ALL of your support through this process. I could not have done this without you. To Kayden and Kaylyn, thank you for being supportive and understanding and “Yes, mommy will have a job so I will not be in college anymore!” Also, to Jen thank you for being such a wonderful friend and for ALL of your help throughout this process. Last but not least I would like to thank DeMarco for all of your support and many words of encouragement.

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follow in your footsteps to touch the lives of others in the way that you have touched mine.

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Chapter 1: Introduction

At-risk urban learners arguably have the poorest school outcomes of any student group (Schott Foundation, 2008; Smith, 2005). To illustrate, black males have the lowest levels of academic achievement and the highest rates of discipline referrals (Skiba, Michael, Nardo, & Peterson, 2002). Statistically black and Hispanic students have the highest rates of dropping out of school, unemployment/underemployment, and are overrepresented in special education and the criminal justice system (Jackson & Moore, 2008). These disparities are even more prominent with urban learners with disabilities, especially those with emotional and behavioral disorders (Kauffman & Landrum, 2009). The obvious consequences of these conditions are school failure and post-school marginality.

Although there are a variety of factors contributing to the poor outcomes of at-risk urban learners including poor school and environmental conditions, one potentially promising intervention may be culturally responsive (CR) computer-based social skill instruction. Social skill instruction has been advocated by several authorities (e.g., Cartledge & Milburn, 1995; Glick & Goldstein, 1987; Sheridan, 1995; Scott, Nelson & Liapusi, 2001; Walker, Ramsey, & Gresham, 2004) as an effective means for equipping children and youth with more adaptive behaviors. The latest reauthorization of the Individuals with Disabilities Education Act (IDEA, 2004) advises that schools employ
school-wide positive behavior supports (SWPBS; Sugai & Horner, 2009), which includes social skills instruction to mitigate behavior problems and excessive disciplinary actions. Modest beneficial reductions in disciplinary actions in SWPBS schools are documented (Vincent, Swain-Bradway, Tobin, & May, 2011) however, it is contended that returns may be more pronounced if interventions are culturally tailored and computer-based for specific groups, especially those least likely to thrive within the current system.

**Urban Learners**

**Student Demographics**

One out of four children in America or 14 million children attend an urban school district (Haberman, 2005). During the 2005-2006 school year, there were more than 95,000 public schools, 12,000 schools in large cities, with a larger number of schools located in mid-sized cities (Frankenberg, 2009). Urban schools educate approximately 30% of public school students and urban schools consist of 5 million fewer students than suburban schools. There are fewer urban schools than rural schools. However, urban schools educate approximately 10% more students due to the low numbers of student enrollment in rural schools.

The racial composition of students receiving an education from urban schools varies. However, most urban schools consist of a majority of students who are from culturally and linguistically diverse backgrounds (Weiner, 1999). According to recent statistics, almost one of every three students in large urban schools is black and the largest percentage of students in larger urban schools is Latino (Frankenberg, 2009). Furthermore, the number of white students who attend urban schools is reduced in half when compared to the overall public school enrollment of white students. For example,
white students make up 22% of the student population in large city schools, but in contrast, they make up 57% of overall student enrollment in public schools (Frankenberg, 2009).

**School Achievement**

As noted, poor school performance is a major concern for at-risk urban learners. They are also disproportionately represented in special education programs (Mickelson & Green, 2006). Black males, for example, make up 20% of students placed in programs for students with mental retardation and 21% of students classified with emotional and behavioral disorders (EBD), even though they are only approximately 9% of the student population (Schott Foundation, 2008; U.S. Department of Education, 2000). These and other sources also point out the predominance of black males in lower academic tracks with lower high school and college graduation rates, and lower standardized test scores compared to students in other cultural groups (Mickelson & Greene, 2006).

Significant disparities are evident for basic academic skills. For example, 56% of poor students in comparison to 25% of middle and affluent youngsters performed below basic levels on an eighth-grade math achievement measure (Education Trust, 2003). More than 50 percent of urban learners are substantially deficient in reading; for urban African American and Hispanic learners, the rates approach 70 percent (Bursuck & Damer, 2006). Additionally, grade eight reading assessments show that nationally 78% of white, non-Hispanic male students were performing at or above basic level, compared to 46% for black, non-Hispanic 6th-grade males. Similar discrepancies are observed in math wherein 82% of white, non-Hispanic males in 2007 scored above basic levels in math compared to 46% of black, non-Hispanic males (NAEP, 2007).
In addition, these academic disparities among urban learners influence graduation rates. For example, the national high school graduation rate during 2008-09 school-year was 75.5% (NCES, 2011). However, high school graduation rates are lower than 50% for African-Americans and Hispanics, and as low as 28% in Cleveland City Schools for African-American males (Greene, 2002). These discrepancies are also noted across varying social classes, with students from low-income families having a 10% dropout rate compared to middle income students with a 5.2% dropout rate, and high-income students with a 1.6% dropout rate (NCES, 2002).

**Behavior Profile of Urban Learners**

The poor academic achievement among at-risk urban learners is associated with the overrepresentation of this population in the area of student discipline and in the criminal justice system. In particular, African American youngsters have the highest levels of disproportionate discipline African American youth, for example, account for 16.9% of the student population yet they constitute 33.4% of all suspensions (Education Trust, 2003). Also, on average black students are 2.5 times more likely than other students to be suspended or expelled. These statistics are consistent with discipline data in urban districts. For example, in Montgomery Public Schools African-American students make up 23% of the student population but account for 52% of student suspensions (Porter, 2012). Similar statistics are found in other urban school districts in places such as New Jersey, Virginia, and Washington D.C. (Porter, 2012; Witt, 2007).

These exclusionary disciplinary actions put urban learners at greater risk for dropping out of school and subsequent criminal activity. High school dropouts, for instance, account for 75% of America’s state prison inmates, and 59% of America’s
federal prison inmates (McKinney, Flenner, Frazier, & Abrams, 2006). Thus, due to disproportionate discipline rates and high school drop out rates urban learners are more susceptible to poor post-school outcomes.

**Definition of Emotional and Behavioral Disorder**

As previously noted, urban learners are at-risk for a multitude of behavioral issues; however, the risk is even greater for urban learners with disabilities, especially emotional and behavioral disorders. The Individuals with Disabilities Education Improvement Act (IDEIA, 2004) defines an emotional and behavioral disorder (EBD) as a condition consisting of one or more of the following characteristics over a long period of time that adversely affects a child’s educational performance: (a) An inability to learn that cannot be explained by intellectual, sensory, or health factors, (b) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers, (c) Inappropriate types of behavior or feelings under normal circumstances, (d) A general pervasive mood disorder, unhappiness or depression, (e) A tendency to develop physical symptoms or fear associated with personal or school problems (IDEIA, 2004). In addition to these characteristics, students with emotional and behavioral disorders exhibit behavior according to two main features: internalizing and externalizing behaviors. Students with internalizing behaviors often show extreme characteristics of social withdrawal. Furthermore, students with these behaviors can be depressed and suicidal. In contrast, students with externalizing behaviors act out and can demonstrate overt aggression, sexual problems, and attention and hyperactivity disorders. Students with emotional and behavioral disorders can also be identified with many other disorders such as anxiety disorders, eating disorders, schizophrenia, bi-polar and mood disorders, and post-
traumatic stress disorder. However, students cannot be labeled as EBD if they are only socially maladjusted and have not been identified with a clinical diagnosis (Kauffman & Landrum, 2009).

**Urban Learners with Emotional and Behavioral Disorders**

Overall, students with emotional and behavioral disorders have poor school outcomes due to behavioral and academic concerns (Nelson, Benner, Lane, & Smith, 2004). The problems associated with emotional and behaviors often become more pronounced during adolescence, which make students with this disability more at-risk for juvenile delinquency, substance abuse issues, and gang activity (Kauffman & Landrum, 2009). Contributing to this risk are factors such as poverty, living in an urban area, having low academic achievement, having a history of child abuse, and having a family history of criminality puts students at an even higher risk for delinquency and poor post-school outcomes (Kauffman & Landrum, 2009; Zhang, Hsu, Katsiyannis, Barrett, & Ju, 2011). Thus, urban learners with emotional and behavioral disorders are at severe social risk (Sinclair, Christenson, & Thurlow, 2005).

**Cultural Misconceptions**

As a result of the common cultural, racial, and language differences between school personnel and urban learners, urban learners are often misunderstood by school staff, often leading to disproportionate or questionable disciplinary actions. In particular, urban students, especially black males, are disproportionately suspended and expelled and are often given harsher punishments than their counterparts (Gregory & Cornell, 2009; Hardy, 2009; Monroe, 2005). Some authorities contend that punishment policies
such as Zero Tolerance have contributed to disproportionate discipline referrals of at-risk students (e.g., Monroe, 2005; Noguera, 2003).

Skiba et al. (2002) analyzed the sources of gender and racial disproportionality in school punishment based on middle-school discipline data in a large urban district and found that black and Hispanic males had the greatest number of discipline referrals, despite variances in social class. Other findings indicated that black and Hispanic males did not commit infractions more often than other students, but office referrals tended to be based on subjective rather than objective criteria. For example, students from other racial groups were referred to the office for smoking, vandalism, and obscene language. However, Black and Hispanic students were sent to the office for disrespecting adults, loitering, and making excessive noise. These results are consistent with other research questioning the degree to which Black and Hispanic males are more likely than their racial and ethnic peers to be discipline problems in the classroom (Lewis, Butler, Bonner, & Joubert, 2010; Skiba et al., 2002).

The disproportionate overrepresentation of black students with and without disabilities is often attributed to two main factors: (a) racial and cultural biases on the part of school personnel, and (b) differences between student and educator behavior, both of which can lead to subjective interpretations of student behavior (Cullinan & Kauffman, 2005).

Subjective interpretations of misbehavior can be misleading and have detrimental effects on students if school personnel are not familiar with the culture of the student, and fail to differentiate between culturally specific behaviors and behavioral concerns. Two students engaging in verbal sparring for sport, a behavior culturally specific to diverse
urban learners, for example, should not be immediately labeled fighting. On the other hand, if it is occurring during class when they should be attending to instruction, they need to be redirected and handled accordingly. Misperceptions can lead to vicious conflict and discipline cycles, undermining teacher-student relations, and contributing to poor pupil outcomes (Cartledge & Kourea, 2008; Cartledge & Milburn, 1995). Teachers need cultural knowledge about themselves as well as their students and they need to understand how their beliefs and biases affect their teaching practices (Cartledge & Kourea). Kincheloe (2004) contends that teachers need to develop a deep understanding of the “nature and needs of urban students” (p. 16). For education to progress in narrowing the achievement gap between urban and nonurban populations, teachers need to understand the urban culture and social conditions, and use this awareness to adapt pedagogical practices and methodologies so that they reflect students’ cultural references (Banks, 2001; Ladson-Billings, 1994).

In agreement with Kincheloe (2004), Monroe (2005), offers that schools are often inattentive to the cultural background of students and that many school practices conflict with the culture of culturally diverse students. Monroe (2005) recommends culturally relevant practices as a means to close the discipline gap between culturally diverse students, in particular Black males and their counterparts. Monroe advises that school personnel be cognizant of culturally specific behavioral norms and use culturally relevant behavior management strategies.

Moreover, reactive methods such as suspension and expulsion do not teach socially appropriate replacement behaviors, but tend to lead to more maladaptive responses and poor school outcomes (Mendez & Knoff, 2003). All students, but in
particular students with disabilities, need to be taught the social skills that will contribute to their school and post-school success.

**The Case for Social Skill Interventions**

One common form of teaching students important socially appropriate behaviors is by teaching social skills. Gresham, Van, and Cook (2006) assert that social skills are a set of competencies that “(1) facilitate initiating and maintaining positive social relationships, (2) contribute to peer acceptance and friendship development, (3) result in satisfactory school adjustment, and (4) allow students to cope with and adapt to the demands of the school environment” (p. 364). Social skills are best taught with explicit, systematic, and consistent instruction. Researchers have reported positive effects of social skills training on the behavior of students ranging from kindergarten to high school (Aram & Shlak, 2008; Meier, DiPerna, & Oster, 2006; Warger & Rutherford, 1996). Social skills training has been successfully applied in general education, special education, and school wide settings (Bardon, Dona, & Symons, 2008; Cotugno, 2009; Sugai & Horner, 2009).

Although specific programs vary, social skill instruction is typically based on a social modeling paradigm where the targeted skill is demonstrated, students are guided to emulate the modeled behavior and get multiple opportunities to practice the behavior, and receive feedback and reinforcement for their performance (e.g., Cartledge & Milburn, 1995; Cartledge & Kleefeld, 2010; Goldstein & McGinnis, 1997; Schoenfeld, Rutherford, Gable, & Rock, 2008). These authors also recommend making student feedback specific, immediate, frequent, and positive and effect behavior generalization through self-management skills (e.g., self-monitoring and self-evaluation). Skills are often taught in
small groups and the instruction incorporates cognitive elements, which focus on problem solving and other cognitive processes (Yung & Hammond, 1995).

**Culturally Responsive Instruction**

As previously stated, traditional social skill instruction is a viable instructional strategy for improving the behavior of all students, including those with disabilities. However, the integration of culturally responsive instruction could have the potential to make these returns more pronounced for urban learners with EBD (Brown, 2003; Cartledge & Kourea, 2008; Cartledge & Loe, 2001; Gay, 2002; Harris-Murri, King & Rostenburg, 2006). Culturally responsive instruction involves a variety of components but essentially it means that educators make an effort to understand, embrace, respect, and meet the needs of students who are from cultural backgrounds that are different from their own (Ford & Kea, 2009). In addition to these key factors, the basic template for teaching culturally responsive social skills includes (a) teaching skills most important to the target population, (b) using culturally relevant materials to provide a rationale for the skill, along with teaching it, (c) including culturally specific competent peer models, (d) incorporating the students’ personal experiences into the instruction, and (e) applying the skill within culturally specific parameters, these factors will be further discussed in the next chapter.

**Technology and Social Skills Instruction**

**Technology and Social Skills Instruction**

In addition to integrating culturally relevant instruction with social skills instruction, technology is another mode of instruction that can be incorporated into social skills training. Technology is defined as “a manner of accomplishing a task especially
using technical processes, methods, or new knowledge” (Merriam-Webster, 2011). It is one of the most pervasive tools in American society that is used in homes, schools, and businesses. Technology is used by people of all ages as a means for people to communicate, learn, and assess information. In school settings, technology forms such as computers, smart boards, multimedia, and mobile technology are being used as teaching tools for academic content areas and social skills methods (Baker, Staiano, Calvert, 2011; Barton-Arwood, Morrow, Lane, & Jolivette, 2005; Higgins Beauchamp, & Miller, 2003). Forms of technology are also being used to provide support for students in extracurricular activities, afterschool programs, and specialized courses (Carpenter, 2007).

Although technology usage is prevalent throughout society, it is probably most heavily utilized by adolescents. According to a 2008 Pew report, 97% of American teenagers, ages 12-17 use computers (Lenhart, Sousan, & Smith, 2008). Ninety-three percent of teenagers use the Internet, 61% go online daily, and 51% create content that others can view online (Lenhart, Madden, & Smith, 2007). Seventy-three percent of teenagers with some form of internet access (e.g. through mobile technology or home computers) use social networking sites such as Facebook (Lenhart, Ourcell, Smith, & Zickahr, 2010). The site myYearbook, a social networking site created specifically for 12- to 17-year-olds has 7 million members (Loten, 2008).

Prenzy (2001) observed that today’s students are “digital natives” due to the pervasive nature of technology in society. Therefore, he contended that today’s students “think and process information fundamentally different than their predecessors” (p. 1), which indicates that educators need to adapt their instructional materials to meet the styles of learners in this digital age.
**Video Modeling**

Other technology-based interventions such as video modeling have been successfully used in teaching social skills, addressing behavioral deficits, and increasing on-task behavior in students with and at-risk for disabilities (Baker, Lang, & O’Reilly, 2009; Embergets, 2002; McCoy & Hermansen, 2007). Results of video modeling studies have indicated that video modeling procedures promote skill acquisition, maintenance, and generalization of skills (Bellini & Akullian, 2007).

Video modeling requires an individual to watch a video recording of him/herself (or a culturally similar peer with high levels of social competence) and engage in the behavior targeted for improvement (Baker, Lang, O’Reilly, 2009). The use of video modeling has numerous benefits including demonstration of desired skills in relevant contexts and the use of multiple examples and response exemplars (Morgan & Salzburg, 1992). Video modeling is based on social learning theory, in which individuals are believed to learn from observation (Bandura, 1977).

**Potential for Integration**

Computer based interventions have been demonstrated as being advantageous to student performance across content areas such as reading and math (Boon, Fore, Blankenship, & Chalk, 2007; Journell, 2009). Due to the success of technology-based instructional programs in these content areas, it is assumed that technology can be equally beneficial as a delivery mode for social skills instruction (Cumming, 2010). This is because technology forms such as computers, multimedia, and video modeling have been effective with increasing pro-social behaviors during social skills instruction (Cumming et al., 2008).
Due to the pervasiveness of technology and the diverse needs of students, technology in the form of computers and digital equipment has become an integral part of schools and instructional programs. This indicates that it could be a viable option to teach social skills as well.

**Limitations of Technology Based Social Skill Interventions**

Currently, there are very few published studies regarding technology based social skill intervention for adolescents (Cumming, Higgins, Pierce, Miller, Boone, & Tandy, 2008; Fernstermacher, Olympia, & Sheridan, 2006; Rozalski & Moore, 2004). Although existing studies demonstrate promise for technology based social skill interventions, they are not without limitations. First, many published interventions are implemented over a very short period of time, questioning whether students were given adequate instruction to acquire the target social skills. Second, the interventions either include limited or no measures on maintenance and generalization of the social skills. Also, most studies do not include student observations in natural settings to analyze behavior transfer. Instead, the results are often based upon data taken during role play groups and/or teacher and student ratings, which may not be an accurate reflection of actual student behavior (Cumming, Higgins, Pierce, Miller, Boone, & Tandy, 2008; Fernstermacher, Olympia, & Sheridan, 2006; Rozalski & Moore, 2004).

**Purpose of Study**

Urban learners with emotional and behavioral disorders disproportionately have school failure due to pervasive behavioral and social skill problems. Consequently, these poor school outcomes contribute to continued hardships during adulthood. One possible method of mitigating these negative outcomes is through social skill instruction. The
integration of social skill interventions, culturally responsive instruction and technology may yield enhanced outcomes for urban learners with EBD (Robinson-Ervin, Cartledge, & Keyes, 2011). Computer-based social skills programs that combine these components as a package have been modestly explored as a method to increase the acquisition of social skills but the limited number of studies in the literature lack methods that empirically study the effects of CR computer-based interventions on the social skill acquisition of urban adolescents with emotional and behavioral disorders. Therefore, this study examined the effects of CR computer-based social skills instruction on the acquisition and generalization of social skills for urban 6th-grade students with emotional and behavioral disorders. Specifically, the following research questions were addressed.

**Research Questions**

1) What effect will CR social skill instruction delivered through computer software have on the social skill acquisition of 6th-grade participants with emotional and behavioral disorders?

2) What effect will CR social skill instruction delivered through computer software have on the generalization of social skills to new settings?

3) How will the participants respond to CR social skill instruction delivered through computer software (as measured by a social validity questionnaire)?

4) How will teachers rate the effectiveness of CR social skill instruction delivered through computer software on the social skill acquisition of 6th-grade participants?
Chapter 2: Literature Review

This chapter contains a review of the literature on social skills instruction with adolescents, culturally responsive instruction, and technology-based social skills instruction. The section on social skills instruction with adolescents provides a template for traditional social skills instruction and discusses the effectiveness of traditional social skills instruction with urban adolescents and adolescents with emotional and behavioral disorders (EBD). The subsequent section includes the definition and benefits of culturally responsive instruction and how it can be integrated into traditional social skills instruction. The last section is an integration of technology and social skills instruction, along with its benefits and implications for practice.

Social Skills Instruction

Social Skill Interventions

Social skill instruction is a method to teach and model for students important social skills that are needed to be successful in school and other socially based environments. It also has positive effects on student academic performance. Social skill instruction is important for all students, but it is particularly important for students who do not easily acquire social skills through their natural environment, such as students with EBD (Sugai & Horner, 2009).

In the previous chapter social skills were defined, as a set of competencies that “(1) facilitate initiating and maintaining positive social relationships, (2) contribute to
peer acceptance and friendship development, (3) result in satisfactory school adjustment, and (4) allow students to cope with and adapt to the demands of the school environment” (Gresham, Van, Cook, 2006, p. 364).

Social skills are often taught within a framework which includes the following components: (a) all students can learn social skills; (b) social skills instruction is most effective when individualized to the student's needs; and (c) social skills must be generalized once they are learned (Schoenfeld, Rutherford, Gable, & Rock, 2008).

Furthermore, to implement social skills instruction effectively, the following format is advised. First, teachers should target students who would benefit from the intervention. The selections would be based on observations where significant deficits were detected and specific skill needs are identified. It is important to distinguish between performance and knowledge deficits. That is, whether the student has the skill in his/her behavioral repertoire and simply fails to display it or if the student does not know how to perform the skill. Motivating contingencies would be emphasized in the former case while direct instruction as well as incentives would be needed for the latter (Schoenfeld et al., 2008).

To increase the effectiveness of social skills instruction, a sound social skills program should do the following: (1) Teach students to identify alternative pro-social behaviors and strategies. (2) Provide students with models that demonstrate pro-social behaviors and strategies. (3) Provide multiple opportunities for students to practice the behavior and (4) Directly reinforce socially appropriate behaviors and strategies. Students should be given feedback that is specific, immediate, frequent, and positive. The feedback should also be specific to the needs of each individual student. To help maintain
appropriate social skills, students should learn strategies of self-control such as self-monitoring, self-evaluation, and self-feedback (Schoenfeld et al., 2008).

Schoenfeld et al. (2008) recommend that trainers assess classroom and school settings to determine the most important social skills to teach. They also advise teaching social skills on three levels: (a) classroom interventions, (b) subgroup targeted interventions, and (c) pupil-specific interventions. Social skills instruction needs to be monitored and evaluated on an ongoing basis to gauge student progress. These measures will ensure accurate assessment of the skills, and facilitate appropriate changes, in case any changes need to be made.

**Social Skills Instruction and Secondary Students with Emotional and Behavioral Disorders**

Although social skills instruction has been shown to be effective with a variety of student populations such as primary students and students with disabilities (Aram & Shlak, 2008; Meier, DiPerna, & Oster, 2006; Warger & Rutherford, 1996), there are still doubts remaining about the efficacy and effectiveness of social skills instruction with secondary students with emotional and behavioral disorders due to the lack of research with this population (Kazdin, 1987; Maag, 2006). Despite the skepticism of the beneficial effects of social skill instruction with secondary students with EBD, most educators would argue that considering the poor post school outcomes of students with EBD, the cost of not intervening is far too great (Lane, Wehby, & Barton-Arwood, 2005). Accordingly, Cook, Gresham, Kern, Barreras, Thornton, & Crews (2008) state:

Given the sheer number of secondary students with EBD who lack or inadequately perform critical social skills, there is an urgent need for schools to
proactively identify the students in most need of additional social and behavioral supports. The students who are identified as having the most significant needs with respect to social development and functioning, whether in general or special education, would represent prime candidates for interventions aimed at remediating their social skill deficits and improving their overall adjustment and well-being. Failure to intervene with students with deficits in social competence forbodes serious consequences and will likely place students on a course toward negative outcomes in adulthood (p. 132).

To investigate the effectiveness of social skills training with adolescent students with EBD, Cook et al. (2008) conducted a meta-analysis of social skills training studies with secondary students with EBD. The researchers examined group experimental or quasi-experimental designs but excluded single subject designs or case studies. The included investigations consisted of behavioral, cognitive, and/or social interventions that were directed at training specific social skills and/or remediating social skills deficits. The researchers analyzed 367 studies from 1980-2006. Results indicated that the overall improvement rate for secondary-age students receiving social skills training was 66%, compared to a 34% improvement rate for controls. Based on these results, the authors concluded, “In other words, two thirds of EBD students receiving SST will improve, compared to only one third of EBD students not receiving SST” (Cook et al., 2008, p. 140). Although this analysis is not without limitations including a lack of standard procedures regarding the examination of meta-analyses and the lack of studies due to the exclusion of single-subject designs and case studies, this overall finding suggests that secondary students with EBD have a greater chance of improving social skills with the
help of formal social skill instruction. Also, these findings support social skill instruction as a viable instructional method for adolescents with EBD, despite limitations.

Similar modest but supporting data are found in a study reported by Volosin, McKnight, and Sikula (2011). This study was conducted with 1500 urban adolescents with and without disabilities. A formal social skills training program (Society for Prevention of Violence, SPV, 2009/2010) was embedded into the curriculum through an eight-step curricular program. The social skills lessons involved modeling, role-playing, and discussion of the use of social skills in real life situations. Components of the program included developing138 school action plans, social skills workbooks, pre and post student evaluations, parent engagement, a staff satisfaction survey, a social skills banner, weekly meetings with students, and reinforcement procedures.

Teachers were required to assist trainers with the implementation of the lessons and were provided with professional development and technical support throughout the school year. Teachers were also required to complete The Learning Climate Survey prior to the start of social skills lessons and at the end of the school year.

The Learning Climate Survey assessed program participation and individual outcomes related to three primary domains: disruptive behaviors, classroom habits, and social and emotional behavior. The instrument examined 35 individual areas that comprised the three domains. Results showed that 32 out of 35 areas noted a positive outcome, with the greatest area of improvement in disruptive behaviors. The researchers reported the program had a statistically significant impact on 75% of the target behaviors and there was a 24% decrease in serious student infractions, when compared to the previous school year.
Survey findings indicated that 90% of the 150 teachers felt that social skills training had a positive impact on the students in their schools, helped to eliminate disruptive problems, and reduced classroom management concerns. Also, at least 92% of the teachers stated that social skills training increased on-task instructional time.

Despite the limitations of this study including the lack of direct observations and the over-reliance on perceptive methods such as surveys, the results of the study do indicate that the educators who participated in the study believed that social skills instruction was effective with their secondary students. Most importantly, these educators believed that social skills training was beneficial to their at-risk adolescent students, regardless of student age or background. Also, it should be noted that the administrators and teachers who participated in the study were looking forward to continuing and building upon the research the following school year.

**Token Economy**

It is recommended that students are praised, acknowledged, and/or rewarded after they are taught a particular social skill (Gresham, Van, & Cook, 2008; Schoenfeld, Rutherford, Gable, & Rock, 2008). The use of these strategies helps to reinforce prosocial behavior and increases the likelihood that students will engage in similar behavior in the future (Cooper, Heward, & Heron, 2007). Providing reinforcing consequences are extremely important while teaching new social skills, especially for resistant students such as those with EBD (Kennedy & Jolivette, 2008; Tomlin & Reed, 2012). Reinforcement can take many forms but it is important that reinforcement methods do not single students out, particularly adolescents who traditionally do not find being singled-out as rewarding (O’Brien, Albert, Chein, & Steinburg, 2011).
Token economies function like a monetary system (Zirpoli, 2008), where students receive tokens or points as a reward for appropriate behaviors that are later traded in (spent) for tangible reinforcements, such as edibles, toys, or school supplies or activities or privileges (e.g., computer time or extra recess) (Alberto & Troutman, 2006).

A token economy is an empirically supported strategy for increasing higher levels of desired student behavior (Alter, Wyrick, Brown, & Lingo, 2008; Reitman, Murphy, Hupp & O’Callaghan, 2004). It provides teachers with an easy way to dispense a reinforcer that bridges the time gap between the behavior and the backup reinforcer and creates situations where the amount of reinforcement is obvious to the student (Maag, 2004). Token economy systems can be created in a variety of methods and can be tailored to be culturally responsive, as discussed in the next section.

**Culturally Responsive Social Skills Instruction**

As previously noted, secondary students with EBD can benefit from traditional methods of social skills instruction; however, integrating culturally relevant features into the instruction can potentially lead to more effective student outcomes for urban learners with EBD. The perception of appropriate and maladaptive behavior is a cultural construct, thus the acceptability of social behavior is relative to the surrounding culture (Kauffman & Landrum, 2009). Therefore, students from diverse backgrounds need to be taught adaptive behaviors for their immediate environment (e.g., school) in ways that is respectful of the student’s native culture and, when possible, incorporate the student’s culture into the teaching.

Culturally responsive instruction requires educators to be accepting of the cultural background of students who differ from their own (Ford & Kea, 2009). Culturally
responsive instruction is considered to be empowering, affirming, and beneficial in creating more positive classroom environments (Ladson-Billings, 1992). Teachers who incorporate culturally relevant instructional strategies tend to establish more positive and proactive relationships with students and parents (Monroe, 2005). Also, teachers who implement culturally relevant strategies tend to respond to students’ behavioral and educational needs in a more proactive and positive manner (Cartledge & Kourea, 2008; Monroe). Additionally, culturally relevant instructors are willing to understand their students’ culture and values, and have high expectations for culturally diverse students despite their social class and learning background (Howard, 2001). Howard asserts that there is empirical evidence that culturally relevant instruction positively affects student engagement and the ability of teachers to meet the academic and social needs of their students.

Culturally responsive teachers are willing to make changes to instructional strategies and programs to help students relate to the content. Therefore, in order to tailor traditional social skills instruction to students from culturally diverse backgrounds, additional components need to be included during social skills instruction. A basic template for teaching culturally responsive social skills includes (a) teaching skills most important to the target population, (b) using culturally relevant materials to provide a rationale for the skill and to teach it, (c) including culturally specific competent peer models, (d) incorporating the students’ personal experiences into the instruction, and (e) applying the skill within the culturally specific environment (Robinson-Ervin, Cartledge, & Keyes, 2011).
Template for Culturally Responsive Social Skills Instruction

Teach Skills Most Important To Target Population

School personnel need to observe students closely to determine which social skill replacement behaviors are most critical for success in the instructional setting (Schoenfeld et al., 2008) and for later in life. These assessments need to be systematic, objective, and extended (e.g., over a period of days or weeks). A starting point might be with office disciplinary referrals. Lo and Cartledge (2007), for example, reviewed the office disciplinary referrals for students in two urban elementary schools and found behavior referrals pertaining mainly to peer conflict, classroom disruption, and gross insubordination. Disaggregating these data revealed males were more likely to be referred for peer aggression and classroom disruption compared to gross insubordination for females. Although not part of the above study, more direct observations would assist in identifying key conditions associated with these behaviors to specify most clearly the skills to be taught. The office referral data from one school informed us that the African American males would benefit from instruction on alternatives to aggression, conflict management, and positive peer interactions. Yung and Hammond (1995), who have developed programs for African American males, argue that African American males at risk for violence are susceptible to social skills deficits in information processing and anger management, and unconstructive beliefs. Their programs, such as the PACT Program: Positive Adolescent Choices Training, place an important emphasis on violence-risk education and anger management, along with social skills training in giving and receiving negative feedback and negotiation. As noted previously in this paper, disciplinary referrals for African American males, compared to their opposite race
counterparts, more often centered on soft or subjective issues such as disrespectful or argumentative behavior. This suggests that many of these students would benefit from instruction on skills such as responding appropriately/constructively to corrective feedback and following directions.

Use Culturally Relevant Materials for Rationale and Instruction

When teaching social skills, attractive materials and a compelling rationale for performing the skill can be used to motivate the learner. Lessons can be introduced through simple discussions, films, video clips, music stories, poems, and so forth. To be most effective, these introductory materials should reflect the students’ interests and backgrounds. For urban learners, some major resources could be rap music, relevant literature, and visual media.

Rap. Rap music is controversial and highly popular among today’s youth. Although some consider rap music to be a negative influence on youth, Tanner, Asbridge, and Worley (2009) assert that rap music elicits different meanings for different listeners. The authors further assert that rap music confirms identity and informs the social consciousness of black youth. However, the authors state that this is not at the expense of skepticism because black youth tend to be more skeptical about rap music and its lyrics than students of other racial groups.

Tanner et al. (2009) discuss the diversity of rap music through its multiple subgenres. The authors state that previous researchers such as Lena (2006) have identified 13 subgenres of rap music. These subgenres are based on the background music and musical content of rap songs and range from “hiphop/soul” to the notorious
“gangsta rap” music. These subgenres are also proposed to range in their link to deviant behavior. For example, “hip/hop soul” is weakly correlated with deviant behavior.

Due to the complexity of rap music, certain subgenres consisting of positive and pro-social rap lyrics can be incorporated as an effective culturally relevant instructional tool for teaching and critiquing social skill competence. Numerous studies analyzing rap music have involved two common themes: (1) the use of rap music to bridge the cultural divide between schools and students’ homes, and (2) community culture (Au, 2005). However, Watts, Abdul-Adil, and Pratt (2002) used rap music from a variety of subgenres as a way of enhancing critical consciousness in young African American men residing in low-income urban areas. Rap lyrics and videos, both positive and negative, were critically analyzed by the participants as a platform for discussing social competencies and how they affect community change and development. In addition to incorporating existing rap lyrics into instruction, students can also create their own songs. These songs can serve as affirmations, help promote student engagement, and assist students in learning the steps to acquiring a particular social skill. Two rap productions specifically designed to address social skills for African American youth are And the winner is... by LL Cool J (2002) and Think again by D.E. Fresh (2002).

**Literature.** Literature is another effective method to integrate culturally relevant strategies into social skills instruction (Cartledge & Kiarie, 2001). Considering the importance of reading and social skills instruction, literature is an effective means of integrating the two areas. Furthermore, the content of adolescent literature can be used to teach and help students generalize and maintain their social skills. Wanzek, Vaughn, Kim, and Cavanaugh (2006) reviewed the professional literature to study the effects of
reading interventions on the social outcomes of students. The authors concluded reading to have a real, albeit modest, effect on social behavior, suggesting that reading interventions or literature may be instrumental in social development. Ladson-Billings (1992) and Collier (2000) make the argument that the content of reading instruction is equally as important as students having effective reading skills. Furthermore, Ladson-Billings advocates that culturally relevant literature should be used to help students understand that African-American culture should be valued similarly to European American culture.

Cartledge and Kiarie (2001) discuss the importance of using literature to facilitate instruction, in particular, social skills instruction. Cartledge and Kiarie assert that youth’s literature can provide valuable opportunities for students to learn appropriate social behavior. However, in order to integrate social skills and literature, it is imperative that teachers are clear about the behaviors that they want students to develop and that the books reflect the social skills being taught. Also, teachers should consider the complexity of the story and choose relatively brief stories so that critical lessons will not be lost in complicated story detail. Cartledge and Kiarie’s model for using literature in teaching social skills consists of the following steps: (1) present the story, (2) clarify the story concepts, (3) clarify the skill, (4) enact the skill, (5) practice the skill, and (6) maintain the skill. These steps help to facilitate the acquisition of the social skill and help guide the instruction so that students understand the most critical concepts from the story.

**Visual media.** Young people are heavily influenced by media, which along with music and literature can be a powerful tool to help adolescents learn, generalize, and maintain social skills. The impact of the visual media on the social development of youth
is highly controversial, but it has its defenders. Mares & Woodward (2005), for example, state, "...television is no more prone to fostering violence than it is to fostering pro-social behavior" (p. 316). Moreover, the authors report from their study that children who watched pro-social behaviors on television demonstrated more positive pro-social behaviors than students who watched neutral or aggressive content. However, the authors warned that violence is often mixed in the pro-social content and therefore, it is imperative that students are explicitly taught the moral or lesson of the program.

Although acts of violence are sometimes incorporated in programs that advocate pro-social behaviors, Mares & Woodward (2005) found that television has great potential to help children develop social skills. Furthermore, the authors stressed the importance of children watching television content that clearly models behavior and presents realistic situations where students could foster pro-social behaviors. According to the authors, the greater the connection between the situation illustrated on television and the student's personal life, the more likely the student is to emulate the modeled behaviors. Therefore, adults should not only be cognizant of the media models, but they should also ensure that the context of the modeled behavior is relevant and realistic to students.

Similarly, Brown and Pardun (2004) contend that adults should be aware of how adolescents interpret the media. They propose that adolescents may use television and or media sources to help them become more self-aware and find models that aid their self-identity in the larger culture. Using the media as a means for defining oneself is a highly desired and common practice among black male adolescents. Thus, adults need to know how adolescents are interpreting and applying media portrayals in their personal lives. Research suggests that not all adolescents will incorporate or interpret racial and gender
portrayals in the same manner. Therefore, it is imperative that adults develop and expound on the positive attributes of program content or characters to prevent adolescents from focusing on the unsavory content (Ward, 2003).

**Culturally Specific Competent Models**

In addition, to using culturally relevant materials, peers from the same cultural group can also be a means of teaching desired social behaviors. Social learning emphasizes social modeling and there is good evidence that individuals learn social skills through observing the behaviors of others (Bandura, 1977). The empirical literature also supports the importance of the learner being able to identify with the model (Glick & Goldstein 1987; Goldstein & Sorcher 1973). This is particularly the case for African American males. Thus, Yung & Hammond (1995) recommend using African American group leaders who can serve as models during social skills instruction. Cartledge and Kourea (2008) additionally recommend that the instructional group include socially competent peers along with students who have not mastered the skill being taught. Competent peers should be from the same racial and socioeconomic background as the less skilled peers, but the competent peers should be respected by the other students and, if necessary, trained in ways to prompt their peers in the target skills. Competent peers can serve as models initially in the instruction until the other students develop the desired competence. With training, peer models also can serve as effective social skill trainers (Blake, Wang, Cartledge, & Gardner, 2000; Cartledge, Gardner, & Ford, 2009).
Relevant Personal Experiences

Cultural relevancy also demands that the instruction reflect the everyday experiences of the students. Wyngard (2004) studied the component of relevance with African American students. The students defined relevancy as the ability for the teacher to make a link between the students’ previous knowledge, their life outside of school, and projections into the future. This linkage should be motivating to the students and would serve as an important factor in the students’ success and their teacher-student relationship.

Culturally Specific Environment

Our ultimate goal in social skills instruction is to get the behaviors to persist over time and to get the students to emit the behaviors in different environments. If we are teaching youth to use conflict management skills in the classroom and on the school grounds, we also want those behaviors to occur elsewhere such as in the home and the neighborhood. This means involving parents and significant others in the youth’s life. Social skill trainers would be wise to cultivate relationships with at least one home- or community-based authority person in the youth’s life. This person would be instructed in ways to prompt the desired behavior at home or in the community. Regular (e.g., weekly) reciprocal communication on the skill and monitoring of the learner’s progress is recommended. The adolescent learner also would be a part of this process, using a formal self-monitoring procedure to record, evaluate, and share his progress.
Barriers to Social Skills Instruction in Schools

Although many students need explicit forms of social skills instruction, teachers often struggle with ways to integrate social skills into the school day due to time and resource constraints. Due to these barriers many teachers are not able to deliver formal social skills instruction. Therefore, many teachers rely on incidental teaching and “train and hope” methods to teach social skills. Although teachers are well intended in their efforts, many students need more structured instruction, and therefore do not respond to these informal teaching methods (Battallo & Stephens, 2005).

Incidental teaching. Many teachers have the perception that it is not necessary to explicitly teach social skills in school because of the assumption that students will learn appropriate behaviors through the daily interactions in the context of schools and classroom (Battalo & Stephens, 2005). This is based on the belief that students will learn the desired behaviors by observing others and newly acquired behaviors will be maintained across settings. Learning social skills through non-explicit messages is a form of incidental teaching, which can support social skills development, but is often not sufficient for students with significant problem behaviors. These students often have trouble picking up on environmental cues that steer them toward appropriate behaviors and often have trouble selecting the most productive behavioral option even if the environment is read correctly. The student who accurately detects teacher annoyance for being off task, for example, may attempt to ingratiate himself with the teacher through irrelevant chatter with the teacher rather than simply getting back to work or asking for
help with the assignment. Direct instruction is warranted for imperceptive students with poor decision-making skills.

**Social skills instruction in schools.** Although many students need explicit forms of social skills instruction, teachers often struggle with ways to integrate social skills into the school day due to time and resource constraints. Battalo and Stephens (2005) investigated the social skill teaching behavior of 74 special education teachers. The teachers reported on a survey information about their prior training in social skills, their ability to implement social skills instruction, and their beliefs on social skills instruction.

Ninety-four percent of the teachers who returned his/her survey indicated that social skills training was important and particularly important for students with behavioral concerns. They also felt that social skills instruction was not only needed for success in the school setting, but also was important for students to be successful as adults, employees, and relationship builders. Only 49 teachers stated that they had time in their schedules to teach social skills. Twenty-two teachers said that they had 2 to 3 times a week to provide formal social skills instruction, six teachers reported that they focused on social skills 1 to 2 times per week, and nineteen teachers said that they implemented social skills instruction once or a few times per week. Most teachers stated that they used social skills instruction as a reactive method instead of a proactive method for addressing social skills deficits, indicating that they do not have specific times in their schedules to address social skills. Moreover, teachers felt that factors such as time and resources and lack of support from outside sources limited the effectiveness of social skills instruction. The most important factor hindering social skills instruction was time constraints. Teachers reported that they were overwhelmed by teaching academic subjects and
therefore it was difficult to find the time to implement social skills instruction during the school day.

Not surprising, most (71%) teachers reported generalization was the most difficult component of social skills instruction, using mainly the train and hope method to increase generalization. The most common way of promoting generalization was through contracts, which were used by 67% of the respondents. In addition to addressing generalization, these teachers had difficulty monitoring social skills development. Most teachers used daily or weekly information to monitor student behavior. Some teachers used daily progress notes, report card information, and teacher conferences to gather information about student behavior. Teachers also indicated that they would benefit from professional development pertaining to social skills acquisition and generalization of social skills.

Social skills instruction is important for all students, but it is particularly important for students who do not easily acquire social skills through their natural environment (Sugai & Horner, 2009). Furthermore, despite its potential, teachers are not often trained pre-service on social skills methods. Also, in-service teachers report many barriers to social skills instruction, including time constraints and lack of resources (Battalo & Stephens, 2005; Dobbins, Higgins, Pierce, Tandy, & Tincani, 2010). The following section will address how technology has been integrated with social skill instruction and how it can assist with alleviating some of these barriers.
Technology and Social Skills Instruction

Prevalence of Technology in Education

There has been a steady increase in the use of technology in the classroom in the past decade (National Center for Education Statistics, NCES, 2000; 2009). In the most recent report (NCES, 2009), 97% of teachers reported having one or more computers in their classroom every day. Internet access was available for 93% of the computers located in classrooms and the ratio of students to the number of computers in the classroom every day was 5 to 1. Forty percent of teachers reported that they used computers in the classroom during instructional time. Also, teachers reported having access to other technology devices such as projectors, interactive whiteboards, and digital cameras. Teachers reported using at least one form of technology during 50% of instructional time. At least 90% of teachers reported that their school or school district had email and a database system for collecting grades, attendance records, and results of the student assessment.

Adolescent and Teacher Perceptions of Technology

Many adolescents and secondary teachers perceive that technology helps them to learn and retain information. Kay & Knaack (2007) surveyed 221 students and 30 teachers from 12 middle and high schools to evaluate how adolescents and their teachers perceive the benefits of technology in the classroom. Seventy-five percent of students indicated that technology was a beneficial asset to classroom instruction, particularly when they had engaging, visual supports, and high levels of interactivity. Similar results
were reported among teachers who overall perceived technology as being beneficial to classroom instruction.

However, the teachers responded that the timing of the introduction of technology into classroom instruction was important, suggesting that the technology should be supportive and carefully integrated into the lessons. Another recommendation was that the technology should be user friendly with sufficient student training to ensure student comfort in using the technology.

Gorder (2008) surveyed the perceptions of 300 (K-12) teachers on technology integration in the classroom. Survey results indicated that secondary teachers were more comfortable with using technology and used technology more frequently than primary teachers, supporting the relationship between comfort and use. Consistent with the findings of Knezek & Christensen (2008) teachers and students who have a positive attitude toward using technology in the classroom and are competent with technology are more likely to use technology with beneficial effects.

**Potential for Integration**

Due to the prevalence of technology among adolescents and secondary teachers, computer-based technology could be integrated with traditional social skills training and components of Personalized Self Instruction (PSI) (Keller, 1968) to create a highly effective method for combining traditional skills instruction and technology. PSI methods require explicit instruction, mastery levels of performance, self-paced progress, immediate error correction and multiple opportunities for practice (Keller, 1968). The components of PSI are research-based and have been shown to be essential to effective instructional programs, including those based on computer technology (Pear & Crone-
Todd, 1999). Furthermore, they particularly lend themselves to the capabilities of computer-based interventions because computer technology allows interventions to be personalized to each student’s level of performance. It also allows instruction to be constructed to provide students with explicit feedback to correct errors immediately, and to enforce and monitor mastery performance through data collection taking systems. Moreover, due to the emphasis of PSI, computer-based programs that teach student academic skills have been extremely effective (Twyman, Layng, Skikeleather, & Hobbins, 2004).

The integration of technology and social skill instruction could facilitate the integration of social skills into schools because of its benefits to teachers. First, it would free up teacher time by presenting lesson components via the computer, giving teachers more opportunities to work with other students. Also, media and multi-media components could engage students in the lesson topics. Furthermore, programs using this method would automatically collect and compile student performance data related to the lessons. This would provide teachers with immediate feedback so that lessons can be based on the most pertinent student social skill needs. Also, social skills lessons integrated with the PSI format would immediately correct student errors and personalize instruction based upon student performance. Thereby, lessoning teacher concern to tailor instruction to specific student needs.

This technology-based framework could be advantageous for social skills instruction for secondary students because of the familiarity that adolescents have with technology, its ability to increase student performance in academic areas, and the overall
positive perceptions that students have about technology integration in the classroom (Juvonen, 2007).

Technology is engaging so it can be used as a means to motivate students to overcome negative competing behaviors and provide the student with immediate gratification, which could consequently enhance the effectiveness of social skills programs (Gresham, 2004). Technology also provides a means for teaching and reinforcing social skills through culturally relevant materials such as culturally relevant visual media, literature, and music. Therefore, interventions such as technology-based social skills instruction can provide a means of increasing social connectedness and engagement among adolescents (Juvonen, 2007).

In support of this contention to integrate technology and social skills instruction, there is some preliminary evidence that technology can be used effectively to help students with and without disabilities acquire desired social behaviors. For example, Rozalski & Moore (2004) implemented a computer-assisted program to improve student cooperative social skills. The study's participants consisted of seven male adolescent students who were incarcerated. All of the students in the study had a history of exhibiting externalizing problem behaviors. For example, the students often used derogatory terms, threatened others, and instigated conflicts. The students were also not engaged during classroom instruction and tended not to complete class work and assignments or interact positively with their peers. Due to the students’ severe problem behaviors, they were placed in a residential facility.

To provide the most effective means for delivering social skills instruction, the authors decided to implement computer-assisted instruction. The computer-assisted
instruction was chosen because of its positive effects on student academic achievement and student attitudes towards learning, especially the at risk students (Diem & Katims, 2002).

The social skills instruction consisted of 50 minute daily social skills lesson that were implemented for a week. The lessons focused on the topic of racism and prejudice. The program embedded a computer-based academic component, which taught students about the history of racism and prejudice. It also consisted of a computer-based component that required students to complete cooperative learning activities. The program required students to discuss in small groups the information that was learned during the computer based sessions. Students were also required to complete writing assignments pertaining to the relevant social skills.

In order to determine the effectiveness of the social skills program on student behavior, the researchers measured the target behaviors using daily records, school data collection sheets as well as student surveys and teacher interviews.

The results of the study indicated that students had made improvements in their ability to exhibit pro-social behaviors. For example, staff reported that students increased their instances of positive behavior from 0.3 to 0.9. After the intervention, students were also more willing to help staff. Based on Likert-scale ratings, teachers reported that students slightly reduced their instances of talking over peers and interrupting conversations. Based on this scale, there were also improvements in individual student behavior such as listening and following directions, working cooperatively with others, and accepting constructive criticism.
After the intervention, students reported that they enjoyed working on the computer and they had fewer racial prejudices. However, the students did not rate themselves as highly as the teachers, and they stated that they did not improve in the following areas: their respect for peers, listening skills, and the ability to work cooperatively with each other.

Although this study speaks to the potential for technology-based social skills programs for students with severe behavior in restricted settings, it had multiple limitations. First, the sample size was small and the study was conducted in a highly restrictive setting. Also, the program was implemented in a very short period of time, therefore students were probably not given adequate instruction to acquire the target social skills. Additional concerns were that the program did not allow for maintenance and generalization and did not include school observations to analyze how the information acquired during the lessons transferred to actual student behaviors. Instead, the results were based upon teacher and student perceptions with Likert-scale responses, which may not provide an accurate account of student behavior.

Similar to the previous study, Cumming et al. (2008) conducted a social skills study to determine the effects of a technology-based intervention for adolescents with emotional and behavioral disorders. The participants in their study consisted of middle school students with emotional and behavioral disorders who were taught in a self-contained classroom. The intervention consisted of a 12-week study, which compared student-generated social skills DVD’s in combination with traditional teacher led social skills instruction to teacher-led social skills instruction only. The program lessons were 50 minutes and took place five days a week.
The lessons were based on the Skillstreaming Adolescent Curriculum (Goldstein & McGinnis, 1997). The program is designed to teach social skills to adolescents. It consists of planned and systematic instruction to teach 50 social skills to adolescents. All of the students in the study were taught eight skills from the program: (a) listening, (b) following instructions, (c) dealing with someone else’s anger, (d) asking permission, (e) using self-control, (f) keeping out of fights, (g) dealing with group pressure, and (h) staying on task. These skills were selected because secondary general education teachers rated them as essential for student success in school (Lane, Pierson, & Givner, 2004).

Teachers and parents were asked to complete pre-, post-, and maintenance questionnaires for both interventions. The questionnaire format consisted of a Likert-scale, which required social skills to be rated on a 1 to 5 scale. The pre intervention questionnaires were completed prior to the study. The post intervention questionnaires were completed at the end of each intervention, and the maintenance questionnaires were completed two weeks after the conclusion of each intervention.

To determine if the traditional and combined interventions had an effect on student learning of social skills, students were tested on their knowledge of the social skills taught during each intervention phase prior to and immediately after the intervention was implemented. During these tests, teachers provided the students with a list of the skills and directed them to write the steps necessary to complete each skill.

The traditional social skills intervention was implemented over a four-week period. The lessons consisted of topics such as: following directions, listening, asking permission, and handling anger. Each lesson consisted of teacher directed instruction with the teacher presenting the skill and its steps. During this intervention, students also
participated in problem solving, role-playing, group discussions, and journaling activities. They were also required to complete homework assignments pertaining to the social skills topic.

Following traditional social skills lessons, students participated in training sessions for the technology component of the combined social skills instruction intervention. The training took place during the maintenance period between the two interventions. During the first training, the students learned how to use the camera. The second training involved teaching students how to transfer video from the camera to the computer. During the third training, students learned how to edit their videos and save them to DVDs. This training helped to minimize the amount of extra class time used during the combined intervention.

For the second four weeks of the study, students received traditional social skills instruction combined with a multimedia-authoring component. A different skill was learned each week (using self-control, keeping out of fights, dealing with group pressure, and concentrating on a task), using the same lesson format. On Monday, teachers defined the skill for the students and broke it down into steps. They also modeled the skill to show students what it should look like. The students’ need for the skill was established through a class discussion. Students then practiced the skill, and the teacher provided them with feedback and assigned homework. Other lessons included class discussions, journaling, and role-playing. The multimedia component consisted of the students creating their own role-plays in triads and recording them with a camera. They used the steps they learned in the training phase to transfer the movie from the camera to the computer. Students then edited their movies and transferred them to DVD. The teacher’s
role in the combined intervention lessons was that of a facilitator. At the end of the week, each triad showed its social skills DVD to the class, which gave feedback on each performance. After the DVD presentations, students took a quiz on the skill. The quiz consisted of listing the skill and its steps. A two-week maintenance period followed the combined intervention.

The findings indicated that the teachers perceived improvements in the students’ social skills and viewed the combined intervention with technology to be more effective than traditional social skills alone. Parents and students also reported social skill improvements but did not differentiate between approaches.

Students’ knowledge of the social skill steps increased from pre-test to post-test for both interventions, benefitting equally from both interventions, but students were reported to be more engaged and motivated during the combined intervention.

This study expanded the social skills literature by adding a technology-based intervention to a social skills intervention for adolescents with emotional and behavioral disorders, and had several important implications for practice. First, the students were very motivated and involved during the combined intervention. This is particularly important because it is often difficult to motivate students with emotional and behavioral disorders. Also, the teachers indicated that they enjoyed using the combined intervention more than the traditional intervention to teach social skills, which may indicate that social skills instruction using technology may lead to increased implementation of social skills interventions. Despite the positive findings, the small number of participants, short intervention, limited maintenance, and the assessment solely of perceptions points to the need for more rigorous investigations.
Fernstermacher, Olympia, & Sheridan (2006) also investigated the effectiveness of a computer facilitated interactive social skills program on the students’ social behavior. Three pre-adolescent and adolescent boys with attention deficit hyperactivity disorder were participants. The purpose of the study was to determine the effectiveness of the computer multimedia-based social skills training on student problem-solving skills, and the student’s ability to generalize the skills to computer facilitated situation and role-play situations.

Fifty-minute social skill lessons based on a curriculum by Sheridan (1995) were conducted twice per week over a six-week period. A videotaped peer actor delivered all of the computer interaction. The actor was the same gender and approximately the same age as the participants.

During intervention, students completed the computer based instruction activities for 20 minutes, then they watched an interactive video for 20 minutes, and lastly, they participated in a series of role-plays with competent peers for 10 minutes.

Follow-up data was collected at three and six weeks post intervention for each student. These data were collected during role-play scenarios to determine if students had maintained the skills that were taught during the treatment phase.

Direct observations of role-plays and ratings on social skill instruments (e.g., The Social Skills Ratings System, SSRS, 1990) were used pre and post to assess social skill progress. Students showed improvements on the posttest role-plays but only minimal increases were evident on the rating scales and parents did not indicate that the program was highly effective. More research is needed to account for problems with missing generalization and objective behavioral data in the natural environment.
Video Modeling

Video modeling has been demonstrated as effective teaching social skills, addressing behavioral deficits, and increasing on-task behavior in students with and at risk for disabilities (McCoy & Hermansen, 2007; Embergets, 2002; Baker, Lang, & O’Reilly, 2009). Video modeling is based on social learning theory, in which individuals are believed to learn from observation (Bandura, 1977) and it requires an individual to watch a video recording of him/herself (or a culturally similar peer with high levels of social competence) engage in the behavior targeted for improvement (Baker, Lang, O’Reilly, 2009).

Video modeling consists of the following components: (1) Identify the target skills, (2) produce videos demonstrating use of the skill across a variety of settings and with different peer models, and (3) show students the video (Ganz, Vollrath, & Cook, 2011). It is advised that students watch videos at a designated time during the day. It is also advised that students view videos immediately before they are placed in a situation where they have to exhibit the target skill. For example, if a student is watching a video targeting the skill playing cooperatively with others, then the student should view the video before physical education class. This will provide an opportunity for students to practice the target skills after watching the video.

Although there have been a number of video modeling studies, the number of video modeling studies with adolescent participants in social skills studies is quite limited. Due to the lack of research in this area, Parsons (2006) conducted a study to determine the effectiveness of video modeling and social skills instruction on adolescent students with Autism or Asperger's Syndrome. The intervention consisted of videotaped
role-plays, which allowed students to observe themselves, make helpful suggestions to their peers, and rehearse social skills. The students participated in social skills lessons for 4 days a week.

The role-plays consisted of events that naturally occurred in the students’ everyday lives. Therefore, conflicts arising during the school day such as arguments about seating on the bus, squabbles over physical education equipment, verbal altercations regarding board game rules, off-task behavior in the computer lab, or unkind remarks made during lessons were used in later role plays.

Data were collected using parent surveys, peer surveys, and student surveys. The learners took home the parent survey on the first day of class for a pre-intervention measure and again 2 weeks later, for a post intervention measure. Students completed a peer evaluation survey.

The results of the surveys indicated that students were more personable with staff and students. They also had fewer conflicts with each other throughout the school day and were more inclined to apologize for inappropriate behavior. These changes show how the intervention helped students make progress in demonstrating positive social skills.

Parents reported an increase in pro-social behaviors and a decrease in social conflicts. These results suggest that the students generalized the social skills to some extent within the home environment.

This study adds to the literature by providing insight on the efficacy of video modeling and social skills instruction with adolescents. The study also used authentic student situations to teach social skills. Despite its contributions, the study is not without
limitations. First, specific information regarding the methods that were used during video
modeling and social skills instruction are not provided. Also, the number of participants
is not indicated. Second, the study relies on perception data; therefore behavioral
observations in the natural environment are not included.

**Directions for Future Research**

Both the traditional and technology-based social skill studies discussed suggest
the potential for the integration of technology with social skills instruction, in particular,
with at-risk adolescents (Cumming, 2010). However, the research in this area is
extremely limited. Furthermore, many of the published studies heavily relied on data
based on perceptions instead of direct observations. Therefore, it has not been adequately
examined how social skills training reflects actual student behavior under real life
conditions.

Also, the viability of culturally responsive instruction is discussed in relation to
general classroom instruction and its potential to be integrated successfully into social
skill instruction; however, the integration of these components needs further examination.
Given the limited body of literature related to traditional social skills instruction,
culturally responsive instruction, and technology-based social skills instruction for
adolescents, there is a need for continued research in these areas of social skills
instruction integration. In particular, more research is warranted to determine the
effectiveness of the integration of these components and how they reflect the “real world”
behavior of urban adolescent students with EBD (Cook et al., 2009; Robinson-Ervin,
Cartledge, & Keyes, 2011).
Implications

Due to the success of social skill interventions, culturally responsive practices, and technology, the integration of these components can be explored as a way to increase the frequency of social skills instruction for urban learners with EBD by addressing barriers to implementation such as time constraints, teacher skills, and resources (Battalo & Stephens, 2005). Also, the integration of these components could provide a way to engage and motivate students during social skills lessons, which could facilitate social skills acquisition (Gresham, 2004). Last, the integration of technology and social skills instruction could provide students with opportunities to practice social skills instruction and get immediate and corrective feedback about their performance.

Conclusions

Students with emotional and behavioral disorders face enormous obstacles due to pervasive problems with social competence and problem behaviors. These obstacles are even greater for adolescent students from disadvantaged backgrounds. Due to the poor outcomes of this population, it is contended that students need social skills instruction to mitigate some of these concerns (Cartledge & Kourea, 2008; Kauffman & Landrum, 2009).

The aforementioned programs and components illustrate how social skill instruction, culturally responsive instruction, and technology-based social skill instruction can be successfully implemented in the classroom to assist with the education of at-risk students. In particular, research has demonstrated that traditional social skills training can be successfully implemented with secondary students with EBD from an urban setting.
(Cook et al., 2008; Volosin, McKnight, & Sikula, 2011). Also, there is some evidence that culturally responsive instruction can facilitate a positive classroom environment for culturally diverse learners (Howard, 2001). Components of culturally responsive instruction lend themselves to social skill instruction, along with technology, and can fairly easily be included in social skill lessons (Robinson-Ervin, Cartledge, & Keyes, 2011). Technology can be an integral component of instructional delivery by providing personalized instruction for students, corrective feedback, and assistance with data collection (Keller, 1968). This is especially true when technology is carefully integrated into lessons, when students are comfortable using the technology prior to instruction, and when the technology components are not used in place of teacher direct instruction. In addition, technology makes it easier for school staff to track student progress throughout the year. This gives teachers and administrators instant information that allows for ongoing and continuous refinement of instructional programming, and increased student achievement, which is extremely important for urban adolescents with emotional and behavioral disorders. Finally, favorable teacher and adolescent perceptions of technology in the classroom further increase the viability of these programs (Gorder, 2008; Kay & Knaack, 2007).
Chapter 3: Method

This section describes the process of conducting this study. Elements include the study’s setting, participants involved in the research, and each phase of the study from the initial recruitment of participants to post-intervention data collection. Each step in the process is detailed.

Participant Recruitment

Before beginning any phase of the study, the researcher met with potential participants and social skill peers to review the purpose of the study and the procedures involved. The students were given paperwork containing an explanation of the study and an assent form and a parent permission form. After both forms were signed, students turned the form in to a locked box that was on a desk in the back of the classroom. After a period of three weeks, the researcher collected assent and parent permission forms for the participants and peers in the study. Students were able to ask questions at this time and were free to leave the study at this time, or any time during the study, without consequence.

Participants

The participants in this study included sixth-grade students that attended a middle school in an urban midwestern area. Six students were selected for this intervention
according to the following criteria: (a) enrolled in the 6th grade, (b) scored below the 50th percentile on social skills measured on the Social Skills Improvement Scale-Teacher form (Gresham & Elliott, 2008), (c) assigned to a classroom for students with emotional and behavioral disorders, and (d) received teacher recommendations. See Table 3.1 for Participant Characteristics, Table 3.2 for Woodcock-Johnson III-Tests of Achievement (WJ-III) Reading Scores (WJ-III ACH; Woodcock, McGrew, & Mather, 2001), and Tables 3.2 and 3.3, respectively for The Social Skill Improvement System (SSIS)-Teacher and Student Rating Form Results.

Desiree. Desiree was a 13-year-old female in the sixth grade identified with a disability of emotional and behavior disorder (EBD). She had a clinical diagnosis of Schizophrenia with Psychosis and Post-Traumatic Stress Disorder (PTSD) due to sexual abuse by an older brother. Her IQ scored within the average range. Desiree’s grade-equivalent reading scores on the Woodcock Johnson III Tests of Achievement for Letter-Word Identification, Passage Comprehension, Word Attack, and Reading Fluency were 7.1, 5.1, 8.6, and 3.1, respectively. Desiree’s percentile scores on the Social Skills Improvement Rating System (SSIS)-Teacher Rating Form for Social Skills, Problem Behavior, and Academic competence were 34, 97, and 42, respectively. Desiree’s percentile scores on the Social Skills Improvement Rating System (SSIS)-Student Rating Form for Social Skills and Problem Behavior were 58 and 19, respectively.

Donte. Donte was a 12-year-old male in the sixth grade who had been identified with a disability of emotional and behavior disorder (EBD). He had a clinical diagnosis of attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), separation anxiety, and mood disorder with an IQ score within the average range. Donte’s
grade-equivalent reading scores on the *WJ-III* for Letter- Word Identification, Passage Comprehension, Word Attack, and Reading Fluency were each 3.1. Donte’s percentile scores on the *SSIS*- Teacher Rating Form for Social Skills, Problem Behavior, and Academic Competence were 42, 98, and 14, respectively. His percentile scores on the *SSIS*- Student Rating Form for Social Skills and Problem Behavior were 52 and 79, respectively.

**Johnny.** Johnny was a 12-year-old male in the sixth grade who had been identified with a disability of emotional and behavior disorder (EBD). Information could not be obtained regarding his clinical diagnoses however he had an IQ score within the average range. Johnny’s grade-equivalent reading scores on the *WJ-III* for Letter- Word Identification, Passage Comprehension, Word Attack, and Reading Fluency were 4.8, 4.0, 7.5, and 3.8, respectively. Johnny’s percentile scores on the *SSIS*- Teacher Rating Form for Social Skills, Problem Behavior, and Academic competence were 37, 92, and 40, respectively. His percentile scores on the *SSIS*- Student Rating Form for Social Skills and Problem Behavior were 28 and 77, respectively.

**Bobby.** Bobby was a 12-year-old male in the sixth grade who had been identified with a disability of emotional and behavior disorder (EBD). He had a clinical diagnosis of Attention Deficit Hyperactivity Disorder (ADHD), Bipolar Disorder and Hypomanic with Psychosis with an IQ score within the average range. Bobby’s grade-equivalent reading scores on the *WJ-III* for Letter- Word Identification, Passage Comprehension, Word Attack, and Reading Fluency were 9.1, 4.5, 12.9, and 4.4, respectively. Bobby’s percentile scores on the *SSIS*- Teacher Rating Form for Social Skills, Problem Behavior, and Academic competence were 37, 95, and 79, respectively. His percentile scores on the
SSIS- Student Rating Form for Social Skills and Problem Behavior were 10 and 49, respectively.

Keith. Keith was a 12-year-old male in the sixth grade identified with a disability of other health impairment (OHI). He had a clinical diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) with an IQ score within the average range. Keith’s grade-equivalent reading scores on the WJ-III for Letter-Word Identification, Passage Comprehension, Word Attack, and Reading Fluency were 4.4, 2.7, 3.6, and 9.2, respectively. Keith’s percentile scores on the SSIS- Teacher Rating Form for Social Skills, Problem Behavior, and Academic competence were 4, >99, and 51, respectively. Keith’s percentile scores on the SSIS- Student Rating Form for Social Skills and Problem Behavior were <1 and 82, respectively.

Kathy. Kathy was a 12-year-old female in the sixth grade identified with a disability of emotional and behavior disorder (EBD) and a cognitive delay (CD). She had a clinical diagnosis of Bipolar Affective Disorder mixed with psychotic features and Post-Traumatic Stress Disorder (PTSD) due to sexual abuse by a family member. She had an IQ score within the below average range. She also was deaf in her right ear. Kathy’s grade-equivalent reading scores on the WJ-III for Letter-Word Identification, Passage Comprehension, Word Attack, and Reading Fluency were 1.9, 1.7, 1.0, and 1.7, respectively. Kathy’s percentile scores on the SSIS- Teacher Rating Form for Social Skills, Problem Behavior, and Academic competence were 10, 79, and <1, respectively. Her percentile scores on the SSIS- Student Rating Form for Social Skills and Problem Behavior were 1 and 77, respectively.
<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Gender</th>
<th>Race</th>
<th>Grade</th>
<th>Age</th>
<th>Disability</th>
<th>SES¹²³⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desiree</td>
<td>Female</td>
<td>Black</td>
<td>6th</td>
<td>13</td>
<td>EBD¹</td>
<td>FRL⁵</td>
</tr>
<tr>
<td>Donte</td>
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<td>Black</td>
<td>6th</td>
<td>12</td>
<td>EBD</td>
<td>FRL</td>
</tr>
<tr>
<td>Johnny</td>
<td>Male</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>EBD</td>
<td>FRL</td>
</tr>
<tr>
<td>Bobby</td>
<td>Male</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>EBD</td>
<td>FRL</td>
</tr>
<tr>
<td>Keith</td>
<td>Male</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>OHI²</td>
<td>FRL</td>
</tr>
<tr>
<td>Kathy</td>
<td>Female</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>EBD/CD³</td>
<td>FRL</td>
</tr>
</tbody>
</table>

1 EBD = Emotional and Behavioral Disorder
2 OHI = Other Health Impairment
3 CD = Cognitive Delay
4 SES = Socio-Economic Status
5 FRL = Free-Reduced Lunch

Table 3.1 Intervention Participant Characteristics.

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Grade</th>
<th>Letter Word-ID</th>
<th>Passage Comp.</th>
<th>Word Attack</th>
<th>Reading Fluency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desiree</td>
<td>6th</td>
<td>7.1</td>
<td>5.1</td>
<td>8.6</td>
<td>3.1</td>
</tr>
<tr>
<td>Johnny</td>
<td>6th</td>
<td>4.8</td>
<td>4.0</td>
<td>7.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Donte</td>
<td>6th</td>
<td>3.1</td>
<td>3.1</td>
<td>3.1</td>
<td>3.1</td>
</tr>
<tr>
<td>Bobby</td>
<td>6th</td>
<td>9.1</td>
<td>4.5</td>
<td>12.9</td>
<td>4.4</td>
</tr>
<tr>
<td>Keith</td>
<td>6th</td>
<td>4.4</td>
<td>2.7</td>
<td>3.6</td>
<td>9.2</td>
</tr>
<tr>
<td>Kathy</td>
<td>6th</td>
<td>1.9</td>
<td>1.7</td>
<td>1.0</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Table 3.2 Woodcock-Johnson III Tests of Achievement Scores for Intervention Participants (Grade Equivalent).
<table>
<thead>
<tr>
<th>Name</th>
<th>Social Skills Scale</th>
<th>Problem Behaviors Scale</th>
<th>Academic Competence Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Score</td>
<td>Percentile</td>
<td>Raw Score</td>
</tr>
<tr>
<td>Desiree</td>
<td>90</td>
<td>34</td>
<td>40</td>
</tr>
<tr>
<td>Donte</td>
<td>85</td>
<td>42</td>
<td>55</td>
</tr>
<tr>
<td>Bobby</td>
<td>82</td>
<td>37</td>
<td>44</td>
</tr>
<tr>
<td>Johnny</td>
<td>82</td>
<td>37</td>
<td>39</td>
</tr>
<tr>
<td>Keith</td>
<td>48</td>
<td>4</td>
<td>66</td>
</tr>
<tr>
<td>Kathy</td>
<td>73</td>
<td>10</td>
<td>63</td>
</tr>
</tbody>
</table>

Table 3.3 *Social Skill Improvement System (SSIS)*- Teacher Rating Form Results for Intervention Participants.
<table>
<thead>
<tr>
<th></th>
<th>Social Skills Scale</th>
<th>Problem Behaviors Scale</th>
<th>Academic Competence Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Score</td>
<td>Percentile</td>
<td>Raw Score</td>
</tr>
<tr>
<td>Desiree</td>
<td>101</td>
<td>58</td>
<td>9</td>
</tr>
<tr>
<td>Donte</td>
<td>102</td>
<td>52</td>
<td>67</td>
</tr>
<tr>
<td>Bobby</td>
<td>71</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>Johnny</td>
<td>88</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Keith</td>
<td>36</td>
<td>&lt;1</td>
<td>33</td>
</tr>
<tr>
<td>Kathy</td>
<td>44</td>
<td>1</td>
<td>30</td>
</tr>
</tbody>
</table>

Table 3.4 *Social Skill Improvement System (SSIS)*- Student Rating Form Results for Intervention Participants.

**Social Skill Group Competent Peers**

Six socially competent sixth-grade students from the general education classroom were also included in the study. These students worked with the participants during practice group sessions, however, they did not receive computer-based intervention training. The competent peers included in this study were recommended by classroom teachers based on their ability to interact successfully with the study participants. Also, these peers were targeted because of their ability to relate to participants and because of their potential to have a positive influence on the study participants. Parental permission of all peers was required to participate in the study.
<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Gender</th>
<th>Race</th>
<th>Grade</th>
<th>Age</th>
<th>Disability</th>
<th>SES¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rochelle</td>
<td>Female</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>None</td>
<td>FRL²</td>
</tr>
<tr>
<td>Nicole</td>
<td>Female</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>None</td>
<td>FRL</td>
</tr>
<tr>
<td>Amy</td>
<td>Female</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>None</td>
<td>FRL</td>
</tr>
<tr>
<td>Jasmine</td>
<td>Female</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>None</td>
<td>FRL</td>
</tr>
<tr>
<td>Tamiea</td>
<td>Female</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>None</td>
<td>FRL</td>
</tr>
<tr>
<td>Cameron</td>
<td>Male</td>
<td>Black</td>
<td>6th</td>
<td>12</td>
<td>None</td>
<td>FRL</td>
</tr>
</tbody>
</table>

1 SES = Socio-Economic Status
2 FRL= Free-Reduced Lunch

Table 3.5 Competent Peer Characteristics.

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Grade</th>
<th>Letter Word-ID</th>
<th>Passage Comp.</th>
<th>Word Attack</th>
<th>Reading Fluency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rochelle</td>
<td>6ᵗʰ</td>
<td>6.7</td>
<td>3.7</td>
<td>6.1</td>
<td>4.5</td>
</tr>
<tr>
<td>Nicole</td>
<td>6ᵗʰ</td>
<td>3.7</td>
<td>4.0</td>
<td>5.1</td>
<td>4.2</td>
</tr>
<tr>
<td>Amy</td>
<td>6ᵗʰ</td>
<td>3.1</td>
<td>2.9</td>
<td>2.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Jasmine</td>
<td>6ᵗʰ</td>
<td>5.9</td>
<td>6.7</td>
<td>7.5</td>
<td>8.4</td>
</tr>
<tr>
<td>Tamiea</td>
<td>6ᵗʰ</td>
<td>2.3</td>
<td>2.3</td>
<td>2.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Cameron</td>
<td>6ᵗʰ</td>
<td>5.9</td>
<td>4.5</td>
<td>5.1</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Table 3.6 *Woodcock-Johnson III Tests of Achievement Scores* for Competent Peers

(Grade Equivalent).
<table>
<thead>
<tr>
<th>Name</th>
<th>Social Skills Scale</th>
<th>Problem Behaviors Scale</th>
<th>Academic Competence Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Score</td>
<td>Percentile</td>
<td>Raw Score Percentile</td>
</tr>
<tr>
<td>Rochelle</td>
<td>116</td>
<td>73</td>
<td>2</td>
</tr>
<tr>
<td>Nicole</td>
<td>88</td>
<td>31</td>
<td>14</td>
</tr>
<tr>
<td>Amy</td>
<td>69</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Jasmine</td>
<td>96</td>
<td>41</td>
<td>18</td>
</tr>
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<td>Tamiea</td>
<td>68</td>
<td>11</td>
<td>33</td>
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<tr>
<td>Cameron</td>
<td>108</td>
<td>72</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3.7 *Social Skill Improvement System (SSIS)*- Teacher Rating Form Results for Competent Peers.

<table>
<thead>
<tr>
<th>Name</th>
<th>Social Skills Scale</th>
<th>Problem Behaviors Scale</th>
<th>Academic Competence Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Score</td>
<td>Percentile</td>
<td>Raw Score Percentile</td>
</tr>
<tr>
<td>Rochelle</td>
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<td>4</td>
</tr>
<tr>
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<td>77</td>
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<td>33</td>
</tr>
<tr>
<td>Amy</td>
<td>98</td>
<td>37</td>
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</tr>
<tr>
<td>Jasmine</td>
<td>69</td>
<td>6</td>
<td>34</td>
</tr>
<tr>
<td>Tamiea</td>
<td>84</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Cameron</td>
<td>84</td>
<td>29</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 3.8 *Social Skill Improvement System (SSIS)*- Student Rating Form Results for Competent Peers.
**Researcher**

The researcher was a third-year special education doctoral candidate in The College of Education and Human Ecology at The Ohio State University. She held a Master’s degree in special education and a teaching license in mild/moderate disabilities in grades K-12. She was a classroom teacher for four years in a self-contained classroom for Kindergarten through third-grade students with emotional and behavior disorders.

**Secondary Observer**

The secondary observer was a third-year doctoral student in The College of Education and Human Ecology at The Ohio State University. She held a Master’s Degree in Special Education and a teaching license in mild/moderate disabilities in grades K-12. She was a classroom teacher for eight years in an urban school district.

**Third Observer**

The third observer was an instructional assistant for a middle school classroom for students with emotional and behavioral disorders. He was working toward a bachelor’s degree in education. He had worked with at-risk adolescents for 11 years prior to the start of the study.

**Setting**

The study took place in the participants’ urban middle school. The middle school had a total enrollment of 243 students with 100 percent of the students on free or reduced lunch. It has been referred to as the poorest performing middle school in the state of Ohio due to its exceptionally high levels of discipline referrals and extremely low Ohio Achievement Assessment scores (Richards, 2010).
Computer-based intervention sessions took place in the classroom for students with emotional and behavioral disorders, which was equipped with 5 desktop computers for student use, a smart board, 1 teacher desk with a desktop computer, and 12 student desks. Each student computer had individual headphones and a chair. All intervention participants received the majority of instruction (for reading, writing, math, science, and social studies class periods) in the classroom for five class periods a day with the exception of lunch and two periods for unified arts (i.e. art, gym, music, Spanish). During the computer-based intervention sessions the 6th grade participants were the only students in the classroom.

In contrast, the socially competent peers from the general education classrooms changed classrooms at the end of each period and therefore received instruction in 7 different classrooms daily (a different classroom for reading/writing, math, science, social studies, and unified arts). The general education classrooms were equipped with the same items as the EBD classroom except they had 18 desks instead of 12 desks.

Practice group intervention sessions with the intervention participants and the socially competent peers took place in a vacant classroom. The vacant classroom consisted of a teacher’s desk with a desktop computer, 15 student desks and chairs, 5 desktop computers, and a smart board. Although the classroom was not used, the set-up of the classroom was similar to the other sixth-grade classes, which gave students the opportunity to practice social skills lessons in a realistic setting to increase generalization of the skill.
Materials

In order to implement this study, the experimenter used assessment materials, preferred items as reinforcers, and intervention materials (i.e., computer, headphones, and computer generated social skills lessons, etc.). Standardized instruments were used to access the academic and social skills of students (i.e. WJ-III and SSIS-T).

Social skills improvement system-teacher (SSIS-T) and social skill improvement system-student (SSIS-S). The Social Skills Improvement System (SSIS; Gresham & Elliott, 2008) is a norm-referenced rating scale comprised of three separate rating forms for teachers, parents, and students. The teacher and student forms of the secondary version of the SSIS were used in the current study. The teacher form consisted of 57 questions and the student form consisted of 39 questions. Responses are completed on a 3-point Likert-type scale. Three main scales make up this instrument: social skills (teacher and student forms), problem behaviors (teacher form), and academic competence (teacher form). The social skills scale included a separate 3-point importance rating for the teacher form. All SSIS forms consisted of seven sub-scales: communication, cooperation, assertion, responsibility, engagement, and self-control, with empathy subscale unique to the student version. The purpose of the SSIS is to "assist professionals in screening and classifying children suspected of having significant social behavior problems and aid in the development of appropriate interventions for identified children" (Gresham & Elliott, 2008, p. 1).

The standardization sample included 4,170 children from Grades 3 to 10, who were rated by their teachers and parents. This sample is large and includes nearly equal
numbers of girls and boys. The manual presents raw scores, standard scores (M = 100, SD = 15), percentile ranks, confidence bands, and behavior levels.

The SSIS-T documents the perceived frequency and importance of behaviors influencing students’ social competencies and adaptive functioning at school. It has adequate internal consistency reliability for the Total Social Skills (α = 0.93), Total Problem Behaviors (α = 0.88), and Academic Competence (α = 0.95) scales. Four-week test-retest reliability coefficients for the three scales range from 0.84 to 0.93 with a median stability coefficient of 0.85. The SSIS manual reports a number of studies offering validity evidence for the SSIS-T based on test content, relationships with other measures, and the internal structure of items (Gresham & Elliott, 2008).

**Reading testing materials.** The Woodcock-Johnson Test of Achievement – Third Edition (WJ-III ACH; Woodcock et al., 2001) is a highly accurate and valid diagnostic system that has uses for educational, clinical, and research purposes, as well as for diagnosis and guiding educational programming and evaluation. The subtests of the standard battery of the WJ-III ACH that were administered include letter-word identification (LWID), word attack (WA), passage comprehension (PC), and reading fluency (ORF). The median reliability for these subtests is 0.94, 0.87, 0.88, and 0.90, respectively. These reliability scores all meet or exceed desired reliability standards. The raw scores and age- and grade-equivalent scores were used in order to determine the most accurate information about the reading level of the participants. This information was used to determine the level of reading materials and comprehension questions that were developed for the study.
**Computer-based social skills program.** This was a computer-based social skills program that took participants through a series of lessons to teach social skills. The lessons were created using *Adobe Captivate*. The program consisted of pre-recorded social skills lessons adapted by the experimenter from a formal curriculum (Cartledge & Kleefeld, 2010). Each computer-based lesson included experimenter developed questions about the skill and objectives of each target social skill. Furthermore, to measure the student’s comprehension of the skill subject, students answered experimenter developed pre-test questions at the beginning of each unit and post-test questions at the end of each unit. The skills taught were based on student need, according to the behaviors identified most frequently by the classroom teacher. The lessons were adapted to include culturally relevant examples and media to facilitate instruction. Practice sections of the units were recorded and embedded into *Adobe Captivate* for student use and practice.

**Computers.** Each participant used the computer generated social skills program that was uploaded onto the Dell desktop computers with Windows XP in the special education classroom. Each desktop had a pair of headphones that the participants used to listen to the instruction on the computer generated social skills program.

**Video recorder.** A Flip-Camera HD video-recorder was used to record group practice sessions during intervention, which were later embedded into the *Adobe Captivate* program for student viewing.

**Black card.** The Black Card is an elite American Express Credit Card that is only given to persons from highly affluent social classes. The Black Card is highly coveted by hip-hop artists and their fans. An adaptation of the card was implemented for this study to make the reinforcement component culturally relevant. Therefore, each participant was
given a “Black Card” during intervention that contained a space for teachers to rate student behavior for each period during each school day. The participants earned points on their “Black card” based on their behavior. The points on the card served as a visual reminder of desired behaviors and were based on a token-economy system. Preferred tangible reinforcers were given to the participants upon reaching a predetermined level of points on their Black Card (See Appendix A).

**Reinforcer preference form.** Participants were given a reinforcement preference form to determine the type of tangible reinforcers that were distributed during the study (See Appendix B).

**Mini-Mart.** Students were able to redeem points earned on their Black Card from the Mini-Mart. The Mini-Mart consisted of a decorated cardboard box with decorative index cards indicating the cost of each tangible reinforcer (See Appendix C).

**Gymboss Interval Timer.** A Gymboss Interval Timer was used during observation sessions to discretely and accurately track intervals during observation sessions.

**Data collection form.** An observation form was used to document behavior on an interval scale during observation sessions. The form included the definitions of each dependent variable behavior (See Appendix D).

**Dependent Variables**

The dependent variables were the number of pre- and post-test questions answered correctly and student observation data. The computer generated social skills program was used to assess the dependent variables on the acquisition of social skills.
Pre-test and post-test questions. The participants answered questions about each lesson component (See Appendix E). At the beginning of each social skills unit students were required to answer questions about the social skill that was taught. Students answered these questions on the computer and these questions served as a pre-test measure for each unit. At the end of each unit students were asked the same questions as those administered during the pre-test. The questions at the end of the unit served as a post-test measure. Pre-test and Post-test questions were compared for each unit in order to determine if students had acquired new information about the use of social skills pertaining to the unit. The pre-test and post-test questions and answer selections were pre-recorded and read aloud to students using computer software. These questions consisted of multiple-choice questions (each having four choices), true/false questions, and short answer questions. Questions pertained to the components and skills discussed for each unit. These data were collected at the beginning and end of each unit. Students completed the questions using an online program. The data were stored under each student’s individual password. However, the experimenter could access the question responses for data collection purposes.

Student observation data. The researcher recorded the occurrence or non-occurrence of appropriate behaviors using a partial interval method with 10-s time intervals for 20-minute observation sessions. The whole interval recording system required an observer to record whether a behavior was present or absent during the specified interval.

The whole interval recording method was used because it provided a more accurate measure of behavioral occurrences than a direct measure of rate due to the
varying lengths of behavior (e.g. an instance of inappropriate behavior may be shorter than 10 seconds or longer than 1 minute). The whole interval method should also be used for behaviors that are continuous and where there is a goal to produce a behavior increase (Cooper, Heron, & Heward, 2007). This method will produce a slight underestimation of the presence of the behavior and it requires the undivided attention of the observer. Therefore, in order to have consistent intervals during observation sessions a Gym-Boss timer was used. The Gym-Boss automatically reset after each 10-second interval and discretely notified the observers of the next interval during observation sessions.

The percentage of intervals of which the occurrence or non-occurrence of target behavior were observed was calculated using the following formula: intervals of appropriate behavior/total intervals X 100 or intervals of inappropriate behavior/total intervals X 100.

Student observation data were collected during baseline, intervention, and generalization. Students were observed for following adult directions based on the following measures: following adult commands, participation, and entering conversation appropriately. A “+” sign was recorded if the behavior was observed and a “-” sign was recorded if the behavior was not observed. “N/A” was recorded if the behavior was not applicable or if the student took a bathroom break during observation.

Following an adult command was marked (+) if the student complied within 5 seconds. A (-) was recorded for not following the direction or taking longer than 5 sec.

Participation during seatwork was recorded as a (+) if the student was completing the assigned task during independent seat work (i.e. attending to assignment without
talking out or talking to classmates) however a (-) was recorded for not working, or working while talking to classmates or talking out.

Participation during group work was recorded as a (+) if the student was participating during a group activity (i.e. answering questions, reading silently or aloud upon adult request) however, a (-) was recorded if the student was not sitting with the group, not participating by following along with reading, and/ or not reading aloud or silently when appropriate.

Participation during teacher instruction was recorded as a (+) if the student was attending during teacher instruction (i.e. eyes on teacher, taking notes, staying in seat, answering questions) but a (-) was recorded if the student was out of his/her seat, his/her eyes were not on teacher, he/she was not attending to lesson, talking out, and/or talking to classmates.

Last, entering conversation appropriately was recorded with a (+) if the student was raising his/her hand and/or asking politely to gain adult attention but a (-) was recorded if a student talked out to teachers or adults who entered the classroom and/or was screaming and yelling to get adult attention.

**Generalization.** Direct observations were used to determine how students generalize previously taught social skills. The observations measured the same behaviors that were measured during intervention as previously described.

**Independent Variables**

**Culturally relevant computer-based social skills instruction.** The computer-based social skill program consisted of experimenter pre-recorded social skills lessons and experimenter developed comprehension/skill acquisition questions. The lessons
contained culturally relevant examples from literature, media, and music to teach social skills. For example, the computer-based social skills lessons consisted of culturally diverse literature and positive rap songs that were relatable to the students. The practice sessions consisted of skits and vignettes that reflected actual student experiences and competent peers from the same cultural group. Also, a culturally relevant reinforcement system was implemented through the use of the Black Card and the Mini Mart. A basic template for teaching culturally responsive social skills that was incorporated throughout the intervention included (a) teaching skills most important to the target population, (b) using culturally relevant materials to provide a rationale for the skill and to teach it, (c) including culturally specific competent peer models, (d) incorporating the students’ personal experiences into the instruction, and (e) applying the skill within the culturally specific environment.

The social skills lessons were created through *Adobe Captivate* by creating slides and embedding pre-recorded lessons, media, and music into the software. The experimenter-developed questions were included throughout the lessons. Responses to the comprehension/skill questions were recorded in the *Adobe Captivate* program. The computer-based feature of the intervention included components of Personalized Self Instruction (PSI) (Keller, 1968) which created a highly effective method for combining traditional skills instruction and technology. For example, the computer was used to explicitly teach students about the importance, steps, and consequences regarding following adult directions. Also, due to the use of the computer, students were able to complete lessons at their own pace, errors were immediately corrected, and students were required to master concepts before they could continue the program. Moreover, the
computer automatically collected and compiled student performance data related to the lessons. This provided the experimenter with immediate feedback for future instruction.

During intervention the participants followed the sequence that included: Rationale, Lesson Introduction, Discussion of Content, Discussion of Skill, Poster Presentation, Understanding the Skill, and Extension Activities. Participants performed the practice component of each unit in small groups with socially competent peers. The practice sessions were recorded and embedded in the *Adobe Captivate* lessons. To review and re-teach the skills taught during the practice session students were required to watch and analyze the previously recorded sessions. Participants were required to take a pre-test before the start of each unit and a post-test at the end of each unit. See the Computer Generated Social Skills Instruction section under procedures for a detailed description of a unit.

**Student “Black card.”** The second independent variable was the student Black card. Students were able to earn points on their cards for appropriate behavior during computer-based and group social skill lessons. Students were also required to give the card to teachers at the end of each class period so that the teachers could give students points based on their behavior. Students with “excellent” behavior who had not been reprimanded by the teacher during a class period could earn 3 points on their card. Students who had been reprimanded by their teacher 1 to 2 times could earn 2 points on their card during the class period. Students who had been reprimanded 3 times could earn one point on their card. Students with 3 or more reprimands or students who were given an office disciplinary referral could not earn any points on their card during the class period. Points on the student Black cards could be exchanged for tangible reinforcers
during intervention. Students used the Black card during intervention. Student points earned in both phases were compared.

**Procedure**

**Experimental Design**

This study was an experimental study. The research design was the Multiple Probe Design (Cooper, Heron, & Heward, 2007) across students. This design allows intermittent measurements or probes to be taken in order to determine whether behavior change had occurred prior to intervention. The multiple probe design also is appropriate for evaluating the effects on skill sequences in which it is highly unlikely that the participant can improve his/her performance on later steps in the sequence without acquiring prior steps. Therefore, due to its sensitivity to sequential instruction it lends itself to determine the effectiveness of social skills instruction. The multiple probe design also does not require the collection of ample observational baseline data; therefore it allows treatment to be delivered more quickly.

The study consisted of an intervention group of six students. Three students were in the first tier and received the social skill intervention first, two students were in the second tier and received the social skill intervention second, and one student was in the third tier and received intervention last.

**Pre-test**

The classroom teachers completed the *Social Skills Improvement System-Teacher (SSIS- T)* as a pre-test measure of the students’ current level of social skill. The rating scale helped determine if a student was a candidate for participation in the study.
according to previously specified criteria. Students meeting the following rating scale criteria were selected as participants: (a) enrolled in the 6th grade, (b) score at or above the 90th percentile for problem behaviors and below the 30th percentile on social skills measured on the *Social Skills Improvement Scale- Teacher* form (Gresham & Elliott, 2008), (c) assigned to a classroom for students with emotional and behavioral disorders, and (d) received teacher recommendations. The teachers of the competent peers also completed the *SSIS-T*. Parental permission of all students was required to participate in the study.

The *Social Skills Improvement System- Student (SSIS-S)* was administered to all the students (participants and competent peers) as a pre-test measure of the student’s current self-perception of their own social skills. The *SSIS* was administered to all students in the special education classroom. Each student completed the assessment individually with the exception of Kathy. Due to her reading level the instructor read each statement aloud before she circled the appropriate answer on the rating form. It took students 30-45 minutes to complete the form. The rating scale provided information about the participants’ self-perception of their social skills. The information was not used for selection criteria.

Additionally, the experimenter administered the reading subtests of the *WJ-III ACH*. The results of the pre-test were used to determine the participant’s reading and comprehension levels. The subtests of the standard battery of the *WJ-III ACH* that were administered included letter-word identification (LWID), word attack (WA), passage comprehension (PC), and reading fluency (ORF). To determine the most accurate information about the reading level of the participants, the raw scores and age- and grade-
equivalent scores were used. Pre-testing took place approximately one week prior to the implementation of baseline. During pre-testing the experimenter tested each student individually in the same vacant classroom that was used during group practice sessions. The testing took students 30-40 minutes to complete.

**Baseline**

Observations were taken for baseline measures for the six participants. Baseline observation data were collected for 3-4 days a week over a three-week period. The Teacher Notation Form was used during baseline. The teacher covertly completed the form and the information was then given to the researcher. This information was later compared to the teacher notes on the “Black Card” that was used during intervention.

**Training**

The participants needed to be trained to use the computer-based social skills program (See Appendix F). The experimenter trained the participants in three separate groups based on their intervention tier. During the first day of training, the students were provided with a description of social skills instruction and why it is important. They were also provided with an overview of the program which included slides that explained each component of the pre-recorded lesson sequence that included Lesson Rationale, Lesson Introduction, Discussion of Content, Discussion of Skill, Poster Presentation, Understanding the Skill, and an introduction to the multiple question formats used throughout the program. During the second day of training students were required to actively engage in the program by completing a short sequence of the pre-rerecorded lessons that were provided. This sequence required students to answer questions, login with their password, and submit their virtual assignments. The participants were allowed
to ask questions at any time, and were considered trained if he/she could go through an entire lesson sequence without prompting from the experimenter during the third day of training. A procedural integrity training checklist was developed for the training (see Appendix G) and scored by the third observer.

**Culturally Relevant Computer-based Social Skills Intervention**

Each experimental session contained a section of the social skill lesson sequence as indicated by the activities stated below. The full lesson sequence for 1 social skill unit took participants 20-25 days to complete. Each lesson took participants 30-40 minutes to complete. Participants took one day to complete each lesson component, with the exception of the practice and video modeling components. Before the start of each unit students completed a pretest pertaining to the social skill unit. At the beginning of each lesson students reviewed the previous day’s lesson and answered review questions about previous material. All the computer sessions involved the intervention participants. Practice sessions took place in small groups of 4-6 students, which consisted of the intervention participants and three competent peers. The following section is a description of each lesson component. At the end of the unit students completed a post-test.
Table 3.9 Social Skill Unit Sequence for Following Adult Directions.

**Social Skills Unit.** The social skills unit, Following Adult Directions was presented during the intervention. It was the most important to the target population as indicated by teacher recommendation, student behavior plans, and informal researcher observation due to the number of discipline problems resulting from not following directions. The teacher and researcher concluded that targeting this social skill could
potentially keep students from getting into trouble and increase the student’s learning
time in the classroom.

**Pre-test.** Participants were required to take a pre-test before the start of the unit
(See Appendix E). Students answered questions pertaining to each unit. These questions
pertained to why the social skill is important, how one would demonstrate knowledge of
the social skill, and questions asking students to discriminate between examples and non-
examples of the target skill. Questions consisted of multiple choice, true/false format, and
short answer. The questions and answer selections were pre-recorded and read aloud to
students using computer software. Participants completed the questions using an online
program. The data were stored under each participant’s individual password. However,
the experimenter had access to the question responses for data collection purposes. The
computer automatically graded the answers.

**Rationale.** At the beginning of the unit participants were given a rationale for the
importance of the social skill taught in the unit (See Appendix H). For example, if the
social skill unit consisted of students learning how to follow adult directions, then the
experimenter would state in the pre-recorded lesson why the skill is important. For
example, the experimenter would state to the students, “If an adult is giving you a
direction it is important that you listen and follow through. Listening to adult directions
can make you a better student and help keep you from harm.

If you ignore the adult and make rude comments you will make things worse and
could get into trouble or be put in an unsafe situation.”

Students were also given four reasons why following adult directions are
important: (1) Following directions can keep you safe. (2) Following directions can keep
you from getting into trouble. (3) Following directions can help you to be a better student. (4) Following directions can keep you from making mistakes.

Following the social skill rationale the experimenter had students answer questions about their past experiences with following adult directions.

**Lesson introduction.** The introduction to this skill was designed to make a case for following adult directions, thereby increasing the likelihood of getting the students’ needs met (See Appendix I). For example, for the following adult directions unit the experimenter would read aloud or have participants to read aloud “Pandora’s Box” (Cartledge & Kleefeld, 2010) to help confirm the rationale for the skill. This Greek Myth consists of a young girl who was given a beautiful box by her father. Upon giving Pandora the box her father gave her strict instructions not to open the box. Instead, she was only allowed to admire its beauty from the outside. However, Pandora was a very curious little girl and opened the box despite her father’s wishes. Although Pandora tried to quickly close the box, it was too late; because of her insubordination, bad things were released into the world.

**Discussion of content.** After reading the passage, the experimenter asked participants questions about the events in the story and the message of the story (See Appendix J). The purpose of this section was to test the student’s understanding of the content. For the purpose of this lesson participants were required to answer the following questions in a multiple-choice format: (1) What directions did Pandora receive? (2) Why do you think Pandora wanted to open the box? (3) What happened when Pandora opened the lid of the jar? (4) What did Pandora plan on doing if the jar had bad things inside?
These questions were asked to ensure that students were comprehending and actively engaged while reading the story.

**Discussion of skill.** This part of the lesson required participants to analyze the story in relation to following adult directions (See Appendix K). The purpose of this section was to focus the participants on the part of the literature that pertains to the social skill. In order to assess students’ understanding of the skill, the experimenter asked students questions in fill-in-the-blank, multiple choice and short answer format: (1) Pandora’s father gave her a ________________. (2) He told her never to _______________ the box. (3) Pandora did not __________________ to her father and opened the box. (4) Why did Pandora peek inside the box? (5) If Pandora had followed directions, would all of the bad things have escaped into the world? (6) List 3-4 adjectives that describe how Pandora felt when she opened the box. (7) What bad things happened because Pandora did not follow directions?

**Poster skill steps.** Following the discussion of the skill, the experimenter introduced the skill steps of the social skill using a poster presentation (See Appendix L). The poster presentation broke the target skill into small and measurable steps for participants. This gave participants the opportunity to focus on each individual component of the target social skill. For example, in the following adult directions unit, the experimenter introduced the skill steps to the participants by presenting a poster to students that had the following information:

“Following Adult Directions”

(1) If possible look at the person.
(2) Listen.

(3) Repeat directions to yourself.

(4) If you don’t understand ask.

(5) Do what you were told.

During the poster presentation, the experimenter would highlight each step, and then discussed how the author used the skills or could have used the skills in the sequence. For example in multiple choice and short answer format the experimenter would ask: (1) What steps did Pandora use in the example? (2) What steps did Pandora not use in the story? (3) Would it have been appropriate for Pandora to use all of the steps? (4) When would it be appropriate for Pandora to use all of the steps?

**Understanding the skill.** This component of the lesson analyzed if participants understood the importance of the social skill (See Appendix M). For example, the experimenter would ask students what would have happened if Pandora had followed the last steps in the sequence instead of satisfying her curiosity. Also, to help students understand the consequences of one's actions, the experimenter would ask students to watch a time when a person did not follow the sequence and there were negative consequences. For example, the experimenter showed participants a culturally relevant media clip of "With the In Crowd" from the popular TV show *The Cosby Show* (Finestra, Kott, & Markus, 1989) to help them understand how it affects others when people do not follow adult directions.

**Peer training for practice sessions.** Prior to the practice sessions the socially competent peers were trained. The first day of training involved explaining the purpose of the practice sessions to competent peers. The second day of training, the peers were given
an index card with a scenario and role and they were required to practice the scenario in front of the experimenter. After, successfully practicing the scenario in front of the experimenter the peers were required to create and act out their own role-play for the social skill of following adult directions. After successfully completing this requirement the peers began social skill practice groups with the study participants from the special education classroom.

**Peer reinforcement for practice sessions.** Socially competent peers were awarded points during the practice group sessions. These points were traded in for prizes from the mini-mart weekly.

**Practice.** The purpose of the practice component of the social skill lesson was to give participants an opportunity to practice and analyze the use of the social skill (See Appendix N). The practice component of this intervention took place in small groups with a total of 6 students (three competent peers and three students with emotional and behavioral disorders). Participants practiced the social skills in person. The practice sessions were recorded and uploaded onto the computer program so that students could view and analyze their behavior during the subsequent sessions. The practice sessions were led by the experimenter and took place over 10 experimental sessions. To provide students with a model of appropriate behavior during role-play sessions, students from the special education classroom viewed live role-play practice skits demonstrated by the competent peers from the general education classroom prior to the practice sessions for each unit. These skits were based on experimenter recommendation and student input. The peer-modeled role-play sessions consisted of culturally competent peers.
During the practice sessions the experimenter would review the rationale and the steps for following the social skill at the beginning of each lesson. The review component was projected from a Smart Board. Students were also required to state aloud a reason to follow an adult direction. To have students practice good listening skills, they were required to not only state their response but also repeat previous responses given by their classmates. During practice sessions the researcher would present or ask participants to suggest situations that would cause them to have difficulty following adult directions. These might include, for example, following dress code, school and classroom rules and so forth. For each event, the researcher would ask volunteers how they would usually respond to these situations and how they could use the social skill to help them to be more compliant in similar situations. After sufficient practice, the experimenter would give students the opportunity to begin to use examples of times or situations where it was difficult to follow directions. During the practice, the experimenter would explain to participants that it is important to understand that on a daily basis people are given a multitude of directions that need to be followed. Then, the experimenter would illustrate with a few examples that describe situations that students have had trouble following directions to in the past. The experimenter would invite students to follow the skill steps and question her examples; next the students would discuss whether directions were followed and if the student described in the example followed all the steps in the sequence.

During the practice sessions, participants had opportunities to practice and demonstrate competence in the social skill topic by developing and practicing vignettes.
based on their personal experiences, especially problem situations occurring in the school. For example, students would create scenarios based on their experiences of following directions in the hallway, in certain classrooms, and at home. During these vignettes students from the special education classroom were paired with the socially competent peers. Some of these vignettes were recorded and later uploaded to Adobe Captivate for the student viewing during the video-modeling lessons.

During the practice sessions the experimenter encouraged participants to use their own nonaggressive words but make sure they know how to switch register when speaking to authority figures versus peers. Also, the experimenter helped participants to take ownership for the skill by permitting them to co-teach and evaluate the skill performance of themselves and other students during practice sessions.

To integrate culturally responsive components, the practice sessions included culturally specific competent peer models, required students to incorporate their personal experiences into the instruction, required students to apply the skill within the culturally specific environment, and encouraged students to use their own jargon during sessions. The practice sessions took place in a vacant classroom and throughout the school building in context specific locations.

At the end of each practice session students were required to complete an “exit slip.” This required that students verbally state the steps that are needed to follow adult directions aloud. Students were also required to give a reason why it is important to follow adult directions. Again to encourage good listening skills students were required to listen to their classmates responses for the second question and they could not repeat a
previous answer stated by their classmate. If they repeated an answer they were required
to go to the back of the line and re-answer the question.

Students were awarded points on their “Black Card” based on the rating scale
criteria.

**Video modeling lessons.** The recorded practice sessions were uploaded onto the
computer for use in later video modeling sessions (See Appendix O). During these
lessons participants were required to watch and analyze the videos and answer skill
questions on the computer about the student behaviors that were exhibited during the
practice session and if the participants demonstrated the skill appropriately by using the
skill steps as criteria. For example, students were asked to compare the behavior of
students who portrayed socially appropriate peers and peers that were insubordinate by
analyzing the steps that they used during the lessons. Furthermore, students were required
to discuss in writing how the number of social skill steps differed for peers who were
subordinate and insubordinate. Students also were required to discriminate the
differences in consequences between the two types of student behavior and discuss how
these consequences affect themselves and others.

**Comprehension/skill questions.** The participants answered experimenter
developed comprehension/skill questions throughout the lessons on the computer screen.
Questions consisted of multiple choice, multiple select, fill in the blank, short answer and
true/false format. The questions and answer selections were pre-recorded and read aloud
to students using computer software. These questions consisted of multiple-choice,
multiple select each having four choices, and fill in the blank questions, short answer and
true/false questions. Questions pertained to the comprehension of the lesson content, the
social skill components, the importance or rationale of the social skill, and guided practice questions about the social skill.

Students were required to answer at least 90 percent of the comprehension/skill questions correctly during each computer-based lesson. If students answered a question incorrectly, the program would state that the chosen answer choice is incorrect. Then, students were required to go back and answer the question, until the correct answer choice was selected. If students did not answer at least 90 percent of the comprehension/skill questions correctly during a lesson, they were required to review the previous day’s lesson and were not able to advance in the social skill unit until a 90% mastery level was achieved. In order to facilitate maintenance, the comprehension/skill questions for each unit contained questions pertaining to the current material and the material from the previous lessons.

These data were collected for each computer-based lesson. Participants completed the questions using Adobe Captivate. The experimenter had access to the question responses for data collection purposes. The computer automatically graded the answers.

Students earned points on their Black card for answering at least 90% of the comprehension/skill questions correctly and demonstrating appropriate behavior during intervention sessions. Students were able to exchange the points in for prizes (as indicated by the reinforcement assessment) at the mini-mart each week.

**Culturally relevant music.** At the end of each lesson students were provided with a music clip of a rap song for successfully completing each lesson. The clips were 30 seconds and included songs such as “I Can” by Nasir “Nas” Jones (2003, Track 7) and “I’m Beaming” by Lupe Fiasco (2010, Track 13). All songs were positive and included
uplifting lyrics that students could recite to keep them motivated and to reinforce positive behavior.

**Mini-mart.** At the end of each week students were able to redeem the points earned on their Black Card for prizes at the Mini-Mart. The prizes that students could choose from were taken from the prizes listed on the reinforcer preference form. Each week students were given the choice to redeem prizes or “bank” all or a portion of their points to redeem a larger prize. Small prizes such as edibles or school supplies could be redeemed for 20 points each. Prizes such as posters could be redeemed for 100 points and the largest prizes such as toys could be redeemed for 350 points. To make the market relevant to the students they gathered the materials, created and named the market. The market was created out of an empty cardboard box and was decorated with pictures, decorative pins, and index cards stating the price of the items available at the market. The market was given the name “Mini-Market” due to their experiences of going to the local corner stores in their neighborhood, which made this component of the program culturally relevant, as well.

**Post-test.** At the end of each unit participants were given a post-test to determine if they could demonstrate that they acquired new knowledge about the social skill topic (See Appendix P). The post-test took the same format and consisted of the same questions administered in the pre-test. The post-test was completed on the computer and all questions and answer selections were pre-recorded and read aloud by the researcher. Pre and Post-test scores were compared for data collection purposes.

**Generalization.** Direct observations in unrelated settings were used to measure generalization. The generalization data collection procedures were consistent with
baseline and intervention with the exception of data collection outside the academic classroom environment in the art classroom, Spanish classroom, and computer classroom.

**Inter-observer Agreement**

Inter-observer agreement was conducted for 30% percent of the observation sessions with a second observer. The data between the primary instructor and the second observer were calculated using the mean count per interval formula to determine the percentage of inter-observer agreement. The formula for this method is \([(\text{Interval 1 IOA} + \text{Interval 2 IOA} + \text{Interval N IOA}) / \text{number of intervals}] \times 100\) where each interval of IOA is conducted by: Smaller count of behavior occurrences / Larger count of behavior occurrences \(\times 100\) and \(N=\) each successive interval. Because there was a permanent product (recordings) of the probe sessions, there was 100% agreement between both observers. In instances when observers disagreed on the percentage of following adult commands, participation, or entering conversation appropriately, the observers watched the recording to determine whether or not to count the behavior in question.

**Procedural Integrity**

Procedural integrity data were collected on a minimum of 30% of the sessions during training and intervention. A second observer watched the training sessions and intervention practice sessions and completed a checklist to ensure that each component of the intervention was being implemented completely and accurately (See Appendix Q). The experimenter also collected procedural integrity data on the participants’ correct use of the social skills program (See Appendix R). Procedural integrity was established by calculating the percentage of treatment steps implemented correctly during the session, and averaged across the total number of sessions. The steps were implemented correctly
100% of the time on training and data collection sessions. The correct use of the program by the participants ranged from 75% to 100%, with an average of 94%.

Social Validity-Student

At the conclusion of the study students were asked the degree to which they enjoyed the social skill lessons and wanted to continue the social skills program. An independent party (i.e. the third observer) administered the measures at the conclusion of the study through a social validity form. Students were independently asked questions on the form. Their verbal responses were immediately recorded on the form by the administrator (See Appendix S).

Social Validity-Teacher

At the conclusion of the study the classroom teacher and instructional assistant completed a questionnaire that assessed the social skill intervention and its benefit to students. The questionnaire was independently completed by each party and returned to the experimenter in a sealed envelope (See Appendix T).
Chapter 4: Results

This chapter presents the results of the study for all of the dependent variables. The main dependent variables were based on student observation data pertaining to following adult directions. Following adult directions involved: following adult commands, participation, and entering conversation appropriately. The second set of dependent variables were pre- and post-test scores on the Following Adult Directions social skill unit. Social validity data for the teachers and participants are also reported.

Primary Dependent Variables

Following are the results obtained across all participants over the course of the Culturally Relevant Computer-Based Social Skill Intervention. Specifically, results were analyzed by the participants’ observation data on following adult commands, participation, and entering conversation appropriately during baseline, intervention and generalization probes. Using the multiple-probe design across participants design allowed for a comparison across each of the phases of the study.

Olympic Middle School

Table 4.1 represents the baseline results for Following Adult Directions, Participation, and Entering Conversations Appropriately. The mean percentage and percentage range for each student is listed under the column for each dependent variable measure. Table 4.2 represents the intervention results for Following Adult Directions,
Participation, and Entering Conversations Appropriately. The mean percentage and percentage range for each student is listed under the column for each dependent variable measure. Table 4.3 represents the baseline results regarding the generalization probes for Following Adult Directions, Participation, and Entering Conversations Appropriately. The mean percentage and percentage range for each student is listed under the column for each dependent variable measure. Table 4.4 represents the intervention results regarding the generalization probes for Following Adult Directions, Participation, and Entering Conversations Appropriately. The mean percentage and percentage range for each student is listed under the column for each dependent variable measure. Table 4.5 represents the group mean scores for all six participants regarding the dependent variable measures during baseline and intervention probes. Table 4.6 represents the group mean scores for all six participants regarding the dependent variable measures during baseline and intervention generalization probes. Table 4.7 represents the pre- and post-test data for each student according to the social skill assessment.

Figure 4.1 presents the multiple probe following directions data for all six students. This figure shows the percentage of time the participants followed adult commands, participated in classroom lessons, and entered conversations appropriately across baseline and intervention conditions in the classroom setting during observation periods. Figure 4.2 presents the multiple probe following directions generalization data for all six students. This figure shows the percentage of time the participants followed adult commands, participated in classroom lessons, and entered conversation appropriately across baseline and intervention conditions in the unified arts settings (i.e. Spanish, computer, music, or art) during observation periods.
Desiree

Desiree, the first participant, averaged 23% on following adult commands in baseline with a range of 0% - 65% compared to an average of 78% with a range of 52% - 98% during intervention. She averaged 23% on participation in baseline with a range of 0% - 65% versus an average of 71% with a range of 30% - 98% during intervention. She averaged 78% on entering conversations appropriately in baseline with a range of 10% - 100% in contrast to an average of 96% with a range of 60% - 100% during intervention.

Overall, Desiree’s baseline data reflect a downward trend for the measures following adult directions and participation and a high stable trend for entering conversation appropriately. During intervention the data reflected an upward trend for following adult commands and participation and a stable trend for entering conversations appropriately.

For the generalization probes measuring following adult commands Desiree had an average of 53% with a range 51% - 54% during baseline compared to an average of 74% with a range of 65% – 79% during intervention. For the generalization probes measuring participation Desiree had an average of 53% with a range 51% - 54% during baseline versus an average of 74% with a range of 65% – 79% during intervention. For the generalization probes measuring entering conversations appropriately Desiree had an average of 100% with a range of 100% -100% during baseline compared to an average of 95% during intervention with a range of 88% – 100% during intervention.

Overall, for the three generalization measures Desiree’s data reflect a relatively steady trend across both baseline and experimental conditions.
Donte

Donte, averaged 17% on following adult commands in baseline with a range of 0% - 48% compared to an average of 86% with a range of 50% - 100% during intervention. He averaged 17% on participation in baseline with a range of 0% - 48% compared an average of 86% with a range of 60% - 100% during intervention. He averaged 64% on entering conversations appropriately in baseline with a range of 0% - 100% versus an average of 81% with a range of 28% - 100% during intervention.

Overall, during baseline Donte’s data reflected a decreasing trend across all three measures of following adult commands, participation, and entering conversations appropriately. In contrast, the intervention data reflected an initial upward trend and later stabilized across all three measures.

During the generalization probes measuring following adult commands Donte had an average of 28% with a range 26% - 29% during baseline versus an average of 47% with a range of 32% – 67% during intervention. During the generalization probes measuring participation Donte had an average of 23% with a range of 17% - 29% during baseline compared to an average of 47% with a range of 32% – 67% during intervention. During the generalization probes measuring entering conversations appropriately Donte had an average of 64% with a range of 62- 66% during baseline versus an average of 54% with a range of 40% – 71% during intervention.

Overall, Donte’s data reflected an upward trend across all three generalization measures during baseline and intervention.
Johnny

Johnny, averaged 14% on following adult commands in baseline with a range of 0% - 30% compared to an average of 94% with a range of 75% - 100% during intervention. He averaged 14% on participation in baseline with a range of 0% - 30% versus an average of 94% with a range of 75% - 100% during intervention. He averaged 16% on entering conversations appropriately in baseline with a range of 1% - 31% compared to an average of 96% with a range of 40% - 100% during intervention.

Overall Johnny’s baseline data varied, initially representing an upward trend across all three measures of following adult commands, participation, and entering conversations appropriately but then showed a downward trend towards the end of baseline. In contrast, Johnny’s intervention data represented a stable increase across all the measures with the exception of two data points.

During the generalization probes measuring following adult commands Johnny had an average of 69% with a range of 62%- 76% during baseline and an average of 93% with a range of 79% – 100% during intervention. During the generalization probes measuring participation Johnny had an average of 69% with a range of 62% - 76% during baseline compared to an average of 93% with a range of 79% – 100% during intervention. During the generalization probes measuring entering conversations appropriately Johnny had an average of 89% with a range of 88% - 89% during baseline versus an average of 94% with a range of 75% – 100% during intervention.

Overall, Johnny’s data represented a slight upward trend across the three generalization measures during baseline and intervention probes.
Bobby

Bobby, the fourth participant, averaged 8% on following adult commands in baseline with a range of 0% - 25%, contrasting with an average of 87% with a range of 67% - 100% during intervention. He averaged 8% on participation in baseline with a range of 0% - 25% versus an average of 85% with a range of 65% -100% during intervention. He averaged 2% on entering conversations appropriately in baseline with a range of 0% - 21% compared to an average of 88% with a range of 61% - 100% during intervention.

Overall Bobby’s baseline data represent a stable trend across all three measures following adult commands, participation, and entering conversations appropriately, with a slight increase in following adult commands and participation during the middle of baseline. However, the last baseline points represent a decreasing trend across all three measures. In contrast, Bobby’s overall intervention data represented a stable increase of following directions across all three measures.

During the generalization probes measuring following adult commands Bobby had an average of 58% with a range 51% - 63% during baseline versus an average of 88% with a range of 72% – 100% during intervention. During the generalization probes measuring participation Bobby had an average of 58% with a range 51%- 63% during baseline contrasted with an average of 88% with a range of 72% – 100% during intervention. During the generalization probes measuring entering conversations appropriately Bobby had an average of 96% with a range of 75% - 83% during baseline versus an average of 94% with a range of 72% – 100% during intervention.
Overall, the Bobby’s generalization data represent a slight upward trend across all three measures during the baseline and intervention experimental probes.

**Keith**

Keith, the fifth participant, averaged 4% on following adult commands in baseline with a range of 0% - 37% versus an average of 49.3 % with a range of 18% - 85% during intervention. He averaged 4% on participation in baseline with a range of 0% - 37% compared to an average of 49.3% with a range of 18% - 85% during intervention. He averaged 4% on entering conversations appropriately in baseline with a range of 0% - 37% in contrast to an average of 33.2% with a range of 18% - 75% during intervention.

Overall, Keith’s baseline data for all three measures following adult commands, participation, and entering conversations appropriately represented a slight upward trend during the beginning of baseline followed by a stable baseline during the middle and end of baseline. During intervention the data represented an upward trend followed by a slight decreasing trend.

During the generalization probes measuring following adult commands Keith had an average of 56% with a range of 48% - 64% during baseline compared to an average of 68% with a range of 57% – 79% during intervention. During the generalization probes measuring participation, Keith had an average of 56% with a range of 48% - 64% during baseline versus an average of 68% with a range of 57% – 79% during intervention. During the generalization probes measuring entering conversation appropriately Keith had an average of 69% with a range of 63%- 73% during baseline compared to an average of 63% with a range of 52% – 71% during intervention.
Overall, the generalization probes for Keith for all three measures reflect a steady trend across both baseline and experimental conditions.

**Kathy**

Kathy, the sixth participant, averaged 0% on following adult commands in baseline with a range of 0% - 0% compared to an average of 43.4% with a range of 14% - 75% during the intervention. She averaged 0% on participation in baseline with a range of 0% - 0% versus an average of 43.4% with a range of 14% - 75% during the intervention. She averaged 0% on entering conversations appropriately in baseline with a range of 0% - 0% in contrast to an average of 42.8% with a range of 20% - 75% during the intervention.

Overall, Kathy’s data for each measure of following adult commands, participation, and entering conversation appropriately represented a stable baseline of zero. In contrast, after the delayed intervention Kathy’s data demonstrated an upward trend and then a slight decrease towards the end of treatment.

During the generalization probes measuring following adult commands Kathy had an average of 0% with a range of 0% - 0% during baseline versus an average of 18% with a range of 11% – 28% during intervention. During the generalization probes measuring participation Kathy had an average of 0% with a range of 0% - 0% during baseline compared to average of 18% with a range of 11% - 14% during intervention. During the generalization probes measuring entering conversations appropriately Kathy had an average of 0% with a range of 0% - 0% during baseline and an average of 18% with a range of 11% – 28% during intervention.
Overall, Kathy’s data across all three generalization measures for baseline represent a consistent percentage of 0. Overall, the generalization probes for intervention represent a very slight increase.

<table>
<thead>
<tr>
<th>Adult Directions</th>
<th>Participation</th>
<th>Entering Conversations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Range</td>
</tr>
<tr>
<td>Desiree</td>
<td>23%</td>
<td>0%-65%</td>
</tr>
<tr>
<td>Donte</td>
<td>17%</td>
<td>0%-48%</td>
</tr>
<tr>
<td>Bobby</td>
<td>8%</td>
<td>0%-25%</td>
</tr>
<tr>
<td>Johnny</td>
<td>14%</td>
<td>0%-30%</td>
</tr>
<tr>
<td>Keith</td>
<td>4%</td>
<td>0%-37%</td>
</tr>
<tr>
<td>Kathy</td>
<td>0%</td>
<td>0%-0%</td>
</tr>
</tbody>
</table>

Table 4.1 Baseline Results for Following Adult Directions, Participation, and Entering Conversations Appropriately.
<table>
<thead>
<tr>
<th></th>
<th>Adult Commands</th>
<th>Participation</th>
<th>Entering Conversations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Range</td>
<td>Mean</td>
</tr>
<tr>
<td>Desiree</td>
<td>78%</td>
<td>52%-98%</td>
<td>71%</td>
</tr>
<tr>
<td>Donte</td>
<td>86%</td>
<td>50%-100%</td>
<td>86%</td>
</tr>
<tr>
<td>Bobby</td>
<td>87%</td>
<td>67%-100%</td>
<td>85%</td>
</tr>
<tr>
<td>Johnny</td>
<td>94%</td>
<td>75%-100%</td>
<td>94%</td>
</tr>
<tr>
<td>Keith</td>
<td>49%</td>
<td>18%-85%</td>
<td>49%</td>
</tr>
<tr>
<td>Kathy</td>
<td>43%</td>
<td>14%-75%</td>
<td>43%</td>
</tr>
</tbody>
</table>

Table 4.2 Intervention Results for Following Adult Directions, Participation, and Entering Conversations Appropriately.
<table>
<thead>
<tr>
<th></th>
<th>Adult Commands</th>
<th>Participation</th>
<th>Entering Conversations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Range</td>
<td>Mean</td>
</tr>
<tr>
<td>Desiree</td>
<td>53%</td>
<td>51%-54%</td>
<td>53%</td>
</tr>
<tr>
<td>Donte</td>
<td>28%</td>
<td>25%-29%</td>
<td>28%</td>
</tr>
<tr>
<td>Bobby</td>
<td>58%</td>
<td>51%-63%</td>
<td>58%</td>
</tr>
<tr>
<td>Johnny</td>
<td>69%</td>
<td>62%-76%</td>
<td>69%</td>
</tr>
<tr>
<td>Keith</td>
<td>56%</td>
<td>48%-64%</td>
<td>56%</td>
</tr>
<tr>
<td>Kathy</td>
<td>0%</td>
<td>0%-0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 4.3 Generalization Baseline Results for Following Adult Directions, Participation, and Entering Conversations Appropriately.

<table>
<thead>
<tr>
<th></th>
<th>Adult Commands</th>
<th>Participation</th>
<th>Entering Conversations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Range</td>
<td>Mean</td>
</tr>
<tr>
<td>Desiree</td>
<td>74%</td>
<td>65%-79%</td>
<td>74%</td>
</tr>
<tr>
<td>Donte</td>
<td>47%</td>
<td>32%-67%</td>
<td>47%</td>
</tr>
<tr>
<td>Bobby</td>
<td>88%</td>
<td>57%-79%</td>
<td>88%</td>
</tr>
<tr>
<td>Johnny</td>
<td>93%</td>
<td>79%-100%</td>
<td>93%</td>
</tr>
<tr>
<td>Keith</td>
<td>68%</td>
<td>57%-79%</td>
<td>68%</td>
</tr>
<tr>
<td>Kathy</td>
<td>18%</td>
<td>11%-28%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Table 4.4 Generalization Intervention Results for Following Adult Directions, Participation, and Entering Conversations Appropriately.
<table>
<thead>
<tr>
<th></th>
<th>Adult Commands</th>
<th>Participation</th>
<th>Entering Conversation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline</strong></td>
<td>11%</td>
<td>11%</td>
<td>27%</td>
</tr>
<tr>
<td><strong>Intervention</strong></td>
<td>73%</td>
<td>71%</td>
<td>73%</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td>62%</td>
<td>60%</td>
<td>62%</td>
</tr>
</tbody>
</table>

Table 4.5 Group Mean Scores for Baseline and Intervention Probes.

<table>
<thead>
<tr>
<th></th>
<th>Adult Commands</th>
<th>Participation</th>
<th>Entering Conversations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline</strong></td>
<td>44%</td>
<td>44%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>Intervention</strong></td>
<td>65%</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td>21%</td>
<td>21%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 4.6 Group Mean Scores for Baseline and Intervention Generalization Probes.
Figure 4.1. Baseline and Intervention Data.
Figure 4.1. Continued.
Figure 4.2. Generalization Probes.
Figure 4.2. Continued.
Secondary Dependent Variables

The results of the pre-post tests on the Following Directions Social Skills Unit represent the secondary dependent variables in this study (See Appendix P). The experimenter assessed each participant before the beginning of the social skill unit and after the completion of the social skill unit.

Table 4.7 presents the social skill pre- and post-test data for all six participants.

Desiree

On the pre-test Desiree answered 10 questions correctly and 10 questions incorrectly with a score of 50% compared to 20 questions answered correctly and 0 questions answered incorrectly with a score of 100% on the post-test.

Donte

On the pre-test Donte answered 8 questions correctly and 12 questions incorrectly with a score 40% of compared to 18 questions answered correctly and 2 questions answered incorrectly with a score of 90% on the post-test.

Johnny

On the pre-test Johnny answered 10 questions correctly and 10 questions incorrectly with a score of 50% compared to 20 questions answered correctly and 0 questions answered incorrectly with a score of 100% on the post-test.

Bobby

On the pre-test Bobby answered 12 questions correctly and 8 questions incorrectly with a score 60% of compared to 20 questions answered correctly and 0 questions answered incorrectly with a score of 100% on the post-test.

Keith
On the pre-test Keith answered 2 questions correctly and 18 questions incorrectly with a score 10%. Due to student absences Keith did not complete the post-test.

**Kathy**

On the pre-test Kathy answered 4 questions correctly and 16 questions incorrectly with a score 20%. Due to a delayed intervention Kathy did not complete the post-test.

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Pre-test Score</th>
<th>Post-test Score</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desiree</td>
<td>10/20 50%</td>
<td>20/20 100%</td>
<td>+10 50%</td>
</tr>
<tr>
<td>Donte</td>
<td>8/20 40%</td>
<td>18/20 90%</td>
<td>+10 50%</td>
</tr>
<tr>
<td>Johnny</td>
<td>10/20 50%</td>
<td>20/20 100%</td>
<td>+10 50%</td>
</tr>
<tr>
<td>Bobby</td>
<td>12/20 60%</td>
<td>20/20 100%</td>
<td>+8 40%</td>
</tr>
<tr>
<td>Keith</td>
<td>2/20 10%</td>
<td>N/A N/A</td>
<td>N/A N/A</td>
</tr>
<tr>
<td>Kathy</td>
<td>4/20 20%</td>
<td>N/A N/A</td>
<td>N/A N/A</td>
</tr>
</tbody>
</table>

Table 4.7 Social Skill Pre- and Post-test Scores.

**Results: Social Validity**

Four of the six participants and the classroom teacher completed social validity questionnaires. The participant and teacher questionnaires can be found in Appendices S and T, respectively.

**Classroom Teacher and Instructional Assistant**

Both the classroom teacher and the instructional assistant felt that all of the students’ overall ability to follow adult directions improved over the course of the intervention. Also, both adults responded that the students became much better at
exhibiting the appropriate social skills after the intervention. Their responses indicated that they would allow their students to participate in a similar program in the future. Last, the adults stated that they thought the students enjoyed the social skills intervention and that social skill intervention programs are very important for students who struggle with social skills. In addition to the previous responses, both adults stated that the program was an important contributor to the progress of the students. They also stated that the intervention was effective in teaching the students to think before reacting.

**Participants**

The students answered questions about their enjoyment of the program and their social skills. There were eight questions, all of which were “yes” or “no” answers and included an open-ended “Why?” response. All four of the participants who completed the questionnaire responded “yes” to each question. This means that each of these students liked learning about social skills on the computer and in the practice groups. They also indicated that they improved their social skills and would like to continue the program in the future. Each student said that they liked working for prizes with the Black Card and retrieving prizes at the Mini-Mart, but somewhat surprisingly, each student also stated that they would participate in the program even if they had not received any prizes.

The responses to the open-ended question “Why?” were very informative as well. First, the students stated that they liked learning new social skills on the computer “Because it was some good learning skills. I also learn some things I didn’t know” (Johnny), “Yes, I liked the songs. I liked how it helped me learn. It was fun.” (Bobby) and “Because it helped teach me how to follow directions and helped me calm down” (Donte). Second, the students stated that they liked learning social skills in the practice
group because “I could do skits and act out stuff” (Donte), “Because it showed me how bad it is not to follow directions” (Johnny) and both Desiree and Bobby stated, “It was fun.” Third, students stated that they improved their social skills and interactions with others because “It made me think what would happen if I follow these instructions” (Johnny), “I started being good and improved my skills” (Bobby) and Desiree and Donte stated they were learning. Fourth, the students stated that they liked working for prizes at the Mini-Mart because “We got to tell you the prizes we wanted” (Bobby) and the remaining students stated that it gave them a goal and helped them to work harder. Fifth, the students stated that they liked earning points on the Black Card for the following reasons: they could get prizes, it helped them work towards a goal, it let them know they were doing well, and it made them try hard at exhibiting the correct social skills. Sixth, the students responded that they would have done the program even if they could not earn prizes because “Either way I am doing it for a good cause” (Johnny), “So the teacher doesn’t have to buy stuff” (Bobby), “So I will still be able to work to learn new skills” (Desiree), and “It was fun” (Donte). Seventh, the students stated that they would like to learn new skills on the computer because they thought the program was fun and enjoyed the video clips. Eighth, all of the students stated that they would like to continue the social skill practice groups because they were fun.
Chapter 5: Discussion

This study examined the effectiveness of CR social skill instruction delivered through computer software on the social skill acquisition and generalization of sixth graders with emotional and behavioral disorders. Six students participated in this study over the course of five months. The students received the CR social skill intervention three to four times a week for up to 7 weeks. All six students were trained to receive the CR social skill instruction, and five of the six students were able to advance through the sequence of instructional activities with little to no assistance.

A multiple-probe across participants was used in this study. This design allowed the experimenter to note the effects of CR social skills instruction on the students’ ability to follow adult directions as assessed by the following three measures: following adult commands, participation, and entering conversations appropriately. Three students were in the first tier, two students were in the second tier, and one student was in the third tier. After the first tier demonstrated a stable baseline, they were trained and then entered intervention. Next, the second tier entered intervention following a stable baseline and training. Last, the student in tier three entered intervention following baseline and delayed training.

Throughout the study, data were taken on various dependent variables. The experimenter collected data on the following measures: following adult commands,
participation, and entering conversations appropriately for each participant for baseline, treatment, and generalization probes.

Pre- and post-test measures were given individually to each participant approximately one week before the study began and during the last week of the study. These consisted of a computer-based assessment created by the experimenter to assess how much information participants had acquired pertaining to following adult directions during the course of the study.

This chapter will discuss study results according to each research question. Along with an analysis of each research question, limitations of the study, practical implications, and future research will be discussed.

Research Question One

*What effect will CR social skill instruction delivered through computer software have on the social skill acquisition of 6th grade participants with emotional and behavioral disorders?*

Overall, the data revealed that every participant’s percentage of the measures for following adult directions increased from baseline to intervention, suggesting that CR social skill instruction was effective in increasing their following adult directions. For example, the mean data for all six participants for following adult commands increased from 11 percent during baseline to 73 percent during intervention. Similar results were found for participation with a group mean increased from 11 percent during baseline to 71 percent during intervention, and entering conversations appropriately with a group mean increase from 27 percent during baseline to 73 percent during intervention.
The findings of this study are consistent with other similar studies that involved adolescents with emotional and behavioral disorders and included a computer-based social skill intervention (Cumming et al., 2008; Fernstermacher, Olympia, & Sheridan, 2006; Rolalski & Moore, 2004). Additionally, a culturally responsive component was included in the Fernstermacher et al. study through the integration of socially competent peers from the same cultural group. The researchers in these studies reported positive effects from the intervention for all of their participants; however, the current investigation advances the existing research in this area in several ways. First, the findings of the above noted studies were based on pre-post questionnaires and observations during social skill practice sessions rather than observations of student behavior under regular school conditions, as was the case in this study.

With the exception of the Cumming et al. (2008) study, participants in the current study received more intervention time than most participants in the research literature. Participants in the Cumming et al. study received intervention 5 days a week for 50 minutes over a twelve-week period, which is slightly more than participants in the current study who received intervention three to four days a week for 30-40 minutes from a 3-7 week period. Data collection and intervention time for students in the current study ended early due to the early retirement of the classroom teacher. However, students in the current study were observed for at least four weeks prior to the intervention, enabling, the experimenter to collect valuable observation data on the participants prior to intervention. Pre-intervention data were not provided in the Cumming et al. (2008) study.

Participants in the Rozalski & Moore (2004) study only received intervention during a one-week period and students in the Fernstermacher et al. (2006) study received
instruction 2 times a week during a six-week period.

In addition to the amount of instruction, the type or quality of instruction, may also be a very important factor in the success of these programs with adolescents. The following section will describe how culturally responsive instruction and the use of technology could have positively affected the outcomes of the study.

**Culturally Responsive Social Skill Instruction**

The use of the Black Card appeared to be particularly important for the students in this class because it gave them an opportunity to be rewarded and acknowledged for appropriate behavior, which was a shift from the typical classroom management plan in the classroom that constantly provided students attention for inappropriate behavior. Excitement was evident in students like Johnny who constantly carried the card in his wallet and was adamant about his teacher awarding him points at the end of each period. Johnny had some of the highest percentages of appropriate behavior during intervention.

The opportunity to buy prizes at the “Mini Mart” appeared to be effective incentives for several of the students. Donte and Johnny for example expressed the desire to purchase rather large prizes costing many points. The data for these students show nice increases in positive behavior through intervention. The accumulation of the points needed for prizes could have given students an incentive to work more diligently to improve their behavior and this could have positively affected the data.

Furthermore, the inclusion of the socially competent peers during the practice sessions could have contributed to the overall positive student outcomes. Under these conditions study participants had an opportunity to interact with peers from the same
cultural background in a positive manner. The competent peers also provided positive models from the same cultural group and community.

The interaction with competent peers gave the participants one of the few opportunities to interact with their general education peers. The students with EBD were in a self-contained classroom for five periods daily. Informal observations indicated that the competent peers have a positive influence on the targeted peers with EBD.

Furthermore, during the previous pilot of this study the researcher failed to implement the culturally relevant components and found a difference in the level of student performance and engagement. For example, during the pilot study, culturally competent peers were not included in the practice groups and the experimenter found the students with EBD had considerable difficulty with appropriate behavior displays. Also, the Black Card and Mini-Mart were not used during the pilot study, which resulted in considerable differences in the level of engagement and overall behavior of the students when compared to improved behavior and social skills of students in the current study.

**Computer-Based Social Skill Instruction**

The use of the computer was undoubtedly another attractive feature of this intervention. As noted in the professional literature, technology-based interventions have been demonstrated as a means to motivate adolescent students, helping them to overcome negative competing behaviors and providing immediate gratification (Gresham, 2004). The students in this study enjoyed using the computer facilitated by the fact that they were already computer literate and they easily learned how to use the instructional program. Also, the computer permitted the students to record their honest responses privately without encountering the judgment of the experimenter or the other students.
The responses recorded on the computer were often used during practice group sessions, therefore, the use of the computer allowed for the recording of responses that could be later used during practice sessions with more relevant and authentic exercises.

Second, the technology used during the intervention provided a means for teaching and reinforcing social skills through culturally responsive materials such as culturally responsive visual media, literature, and music. The integration of these components made the intervention highly relevant and engaging to the students. In particular the students could relate to the characters during the video clips and they enjoyed listening to the rap music at the end of each lesson. They found the music familiar but positive and would often recite lyrics to the songs to keep them motivated.

Third, the computer was used to teach explicitly the importance, steps, and consequences of following adult directions. Also, due to the use of the computer students were able to complete lessons at their own pace, errors were immediately corrected, and students were required to master concepts before they could continue the program. Therefore, the computer facilitated an individual learning process for each student, which required mastery. This may have positively contributed to the results of the intervention because it ensured that students mastered the book concepts before they were applied to practice and real life situations.

Fourth, the use of the computer facilitated the use of video modeling during the intervention. This is because students were able to view their performance and the performance of their classmates during the computer-based lessons that included uploaded video clips from previous group lessons. Also, the computer gave students the opportunity to answer questions immediately and independently regarding the video clip.
after the video clip was viewed. These factors could have slightly affected the data due to the positive results of video modeling as indicated by the literature (Baker, Lang, & O’Reilly, 2009; Embergets, 2002; McCoy & Hermansen, 2007).

**Student Results**

Despite the overall results, some students responded to the intervention more positively than others. This section will discuss some possible reasons why the data were varied for the participants.

**Donte, Johnny, and Bobby.** Donte, Johnny, and Bobby had the most pronounced results during intervention. These students were the most interested in the study and enjoyed the CR social skill instruction along with the reinforcement component. These three students answered each question thoughtfully and carefully throughout the computer lessons, in particular the short answer responses. The experimenter would also observe them repeating the information to themselves while completing the computer lessons. For example, during the computer lessons Bobby would constantly read and repeat the steps for following adult directions to himself and then quiz himself by closing his eyes to determine if he remembered all of the steps for following adult directions. These students were also observed redirecting their classmates when they were beginning to get off task and reminding students about the steps for following adult directions. For example, if a student were off task Donte would often state, “Do you remember the steps? What are the steps? Look, listen, repeat the direction to your yourself, ask a question, and DO WHAT YOU WERE TOLD!”

In addition, all of these students enjoyed participating in the practice groups and were able to demonstrate how much information they learned during the social skill
computer lessons by their ability to answer all of the questions correctly by selecting the correct answers and providing very descriptive responses during computer-based intervention sessions. During practice groups these students were highly engaged and critiqued the behavior of others using the information they previously learned from the computer-based sessions. These students were also the most interested in earning points on their Black Card and earning prizes from the Mini-Mart because they asked their teacher to write the number of points they earned at the end of each class period on their Black Card.

Anecdotal comments from some of the parents provided further support. The parents of Donte and Johnny expressed considerable pleasure about their children’s participation in the study and the improvement of their children’s ability to follow directions at school. They also commented that they noticed that their children were more capable of following directions at home and wanted to know if their youngsters could continue participating in the program the following year.

Desiree. Desiree responded well, although not as strongly as Bobby, Donte, and Johnny. Her responses were impressive, however, considering her severe mental illness and diagnosis of psychosis. For example, during the intervention Desiree would often tell the experimenter that the devil was talking to her and was trying to make her do “bad things.” Therefore, during the lessons she had to put forth extra effort to complete the lessons and to ignore the voices that she was hearing. Many times throughout the intervention, Desiree talked to herself and the experimenter would have to remind her to focus on the lesson. Desiree often was distracted during the social skill practice groups but most of the time the experimenter was able to help her to regroup so she could
participate with her classmates.

Keith. Keith responded modestly to the intervention. Initially Keith showed little interest in the intervention and during the first computer-based lesson, he responded to the questions by writing, “Poop” or “Fart” instead of indicating the appropriate responses. In response to his behavior his mother visited the school the following day and encouraged him to complete the lessons. She told the experimenter that her son needed a program to teach him how to listen to adults. She was very pleased with the program and felt that her son could benefit from social skills instruction.

Keith had a diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) and the limited classroom structure may have presented social problems for him. For example, most of the regular classroom activities consisted of independent seatwork and the completion of word searches and crossword puzzles, which students could complete at their discretion. However, the social skill instruction was very structured and required assignments to be completed within a certain amount of time. Therefore, this format was unfamiliar to Keith and could have contributed to his initial resistance.

Despite Keith’s initial resistance, with each lesson Keith became more comfortable with the program and with earning points on the Black card. Keith was very attentive during the social skill groups and enjoyed assisting the experimenter during these groups. However, during the middle of intervention Keith tragically lost a very close family member due to gunfire. After the death of his family member, Keith was absent for a week and a half from school (data points 43-59). Upon his return he was very distant and became very disinterested in school and the intervention. Keith was also caught writing a note to a student telling him that he would shoot him in the head, which
was the same way his family member was killed. In subsequent weeks following the death of Keith’s family member his behavior became more stable but he continued to struggle for the rest of the year. Keith’s mother removed him from school almost three weeks before the end of school and he was not able to complete the post-test or social validity questionnaire.

**Kathy.** Similar to Keith, Kathy’s data also demonstrated modest improvements. Kathy’s baseline data across all three measures were consistently zero. This is because Kathy was either asleep, as a result of her sleep disorder, or she was blatantly insubordinate by putting her head down during classroom work time, cursing the teacher and her classmates, or walking out of the classroom without permission. Moreover, Kathy’s intervention data represent a delayed intervention because Kathy was admitted into a mental hospital after physically threatening her mother and Kathy was absent from school for almost three weeks (data points 28-48).

During intervention the experimenter had to tailor the program to meet Kathy’s educational needs due to her low academic skills. Therefore, Kathy received one-on-one instruction during intervention. Instead of her completing lessons independently, the experimenter would read each question aloud, explain components of the question that Kathy did not understand, and type in Kathy’s dictated responses.

One factor that may have contributed to Kathy’s modest data was the classroom setting. Kathy was being evaluated for placement in a classroom for students with multiple disabilities because the classroom teacher and principal felt that Kathy’s placement in a classroom for students with EBD was not the correct placement. Kathy was imitating negative behaviors of the older students in the classroom. Kathy also could
not complete simple classroom assignments due to her very low academic skills, which made her more inclined to participate in activities that would get her into trouble instead of completing classroom assignments.

Domestic problems also interfered with Kathy’s performance in the study. Her family was investigated by Children’s Services and fear of Kathy meeting with the caseworker at school led her mother to remove Kathy from school two weeks before the close of the school year. Kathy was not able to complete the post-test or social validity questionnaire due to her absence.

Research Question Two

What effect will CR social skill instruction delivered through computer software have on the generalization of social skills to new settings?

This study included generalization probes for all three dependent variable measures during the baseline and intervention phases of the study. In particular, the generalization probes investigated how students transferred the skills learned during the CR computer-based social skill intervention to the unified arts settings such as art, music, computer, and Spanish classes. The results of the generalization probes demonstrate modest results because the mean average for all the participants for following adult commands and participation increased from 44 percent in baseline to 65% in intervention. However, overall there were no increases for entering conversation appropriately due to the same group mean of 70 percent during baseline and intervention.

There are a few reasons why the increases from baseline to intervention for the generalization probes may not have been as robust. First, the students had relatively high
baseline data for the generalization probes across all three dependent measures. The students were viewed by their classroom teacher as being better behaved during unified arts than in her class. This perception is consistent with the data and may have been due to the fact that the unified arts consisted of structured lessons with teacher-led instruction, small group instruction, and student activities. Overall the students found the topics and activities in the unified arts classrooms much more substantive than the worksheets typical of their classroom. Moreover, the number of structured lessons and overall improved student behavior in the generalization settings when compared to student behavior and classroom instruction in the general education classroom demonstrates the importance of structure and effective academic instruction when managing the behaviors of students with EBD.

The recently published studies focusing on adolescents and computer-based social skill instruction do not include generalization measures therefore it is not possible to compare these generalization outcomes with the literature. However, this study did include components often cited in the research literature as important for programming generalization for students with emotional and behavioral disorders (Maag 2006; McIntosh & Mackay, 2008; Stokes & Baer, 1977).

First, selecting socially valid behaviors is important to enhance the generalization of social skills because students are able to understand the relevance of the targeted skills in everyday situations. In this study following adult directions was chosen because it is a socially valid behavior that is needed in a multitude of situations in order for students to be successful in school and in society. Also, the skill is difficult for students with EBD to acquire and if not learned it can result in harsh consequences damaging student outcomes.
Second, programming for generalization requires teaching students with EBD replacement behaviors. The social skill instruction delivered during intervention taught students the steps for following adult directions and as importantly it gave students an opportunity practice these skills numerous times with their peers.

Third, including a competent peer group will also enhance the skills learned through social skill instruction. This is because peers reinforce target students for performing socially appropriate behaviors and interactions become mutually reinforcing for both groups. This was observed during the study because when the social skills groups first began, the experimenter observed resistance from the socially competent peers. For example, these students would sit together and be very reluctant to interact with the students from the special education classroom because of their reputation for inappropriate behavior. However, as the intervention continued the peers became more comfortable with interacting with the target students and these interactions made the target group want to continue acting appropriately. These interactions were very important because the target students and peers had to interact daily in their unified arts classes.

Fourth, incorporating reinforcement and self-management strategies into social skill instruction could promote the generalization of trained skills. For example, the integration of the reinforcement component could have been a major contributor to the generalization data increases for Donte and Bobby. These two students were the most excited about earning points during unified arts and they were adamant that their unified arts teachers award them points at the end of each class period.
Research Question Three

*How will the participants respond to CR social skill instruction delivered through computer software (as measured by a social validity questionnaire)?*

The students answered questions about their motivation, enjoyment of the computer program, and their reading abilities. All four of the participants who completed the social validity questionnaire responded “yes” to each question, meaning that they liked completing lessons on the computer and in their social skills group and felt they became better at demonstrating appropriate social skills. This is not surprising because the participants were sad that the intervention was over and that they could not work on the computer and in social skill groups anymore. The participants also responded that they would complete the intervention without prizes, which illustrates their excitement towards the instruction. Also, the students felt that the Black Card and Mini-Mart helped them to monitor their behavior and gave them a goal to achieve.

Additionally, during intervention, the participants were sad when it was not their day for the social skill instruction and would ask the experimenter when they could do the lessons on the computer and in social skill group. The fact that the participants received individualized instruction on a novel computer program, interacted with students from the general education classes during social skills groups, and interacted with a person other than their teachers could have played a role in their excitement to participate in the intervention.
Research Question Four

*How will teachers rate the effectiveness of CR social skill instruction delivered through computer software on the social skill acquisition of 6th grade participants?*

The classroom teacher and instructional assistant rated the effectiveness of the program by answering a questionnaire with six questions pertaining to the intervention. Questions one and two asked their opinion on their students’ ability to exhibit positive behaviors by the end of the intervention. Questions three and five assessed the teachers’ opinion on the importance of social skill instruction for students with emotional and behavioral disorders, question four assessed their students’ enjoyment of the program, and question six asked the teachers if they found the intervention to be an inconvenience. Also, there was space at the bottom of the questionnaire for comments.

The classroom teacher, the participants’ special education teacher, thought the program was helpful and that the students enjoyed participating in the program. She did believe, however, that some students put forth more effort than others, and that it showed by their interest in earning points on the Black Card to earn prizes at the Mini-Mart. She commented that she had observed a noticeable difference in four students Desiree, Donte, Bobby, and Johnny. She felt that Keith and Kathy benefitted from the program but they needed more intensive instruction. She believed that had the students had more time to continue with the program, they would have become even better at demonstrating appropriate social skills. The instructional assistant noted that the experimenter did a great job with the participants and commented that the students’ overall behavior was extremely improved. Both teachers agreed that intervention programs are very important
for struggling students and they would allow their students to participate in similar intervention programs in the future.

The social validity information collected from the students and teachers are in line with research from Volosin, McKnight, and Sikula (2011). The teachers in their study pointed out that the students who received social skills instruction were better behaved. Also, the teachers reported that social skill instruction was needed for all students, despite the severity of their disability, and they would continue implementing social skill instruction in the future. Additionally, the students valued social skill instruction and felt that it helped them to be better students. This research supports the use of scientifically validated research techniques that promote the acquisition of social skills, especially for students with disabilities such as EBD.

Discussion of Secondary Dependent Variables

The social skill pre- and post-tests were used as secondary measures to determine the effects of the intervention on the participants’ overall social skill acquisition of following adult directions.

Results for the pre-test revealed that all of the participants were not familiar with many reasons and the consequences associated with following adult directions. Also, none of the participants were able to state the five steps for following adult directions. Only four out of the six participants were able to take the post-test; however, these four students were able to increase their scores. Desiree and Johnny were able to double their scores from 10/20 to 20/20. Donte and Bobby both increased their scores by eight points from 8/20 and 12/20 to 18/20 and 20/20 respectively.
Even though most participants made gains from pre- to post-test on the social skills assessment, these results must be interpreted with caution. First, the assessment was created by the experimenter and was not a standardized measure. Also, the assessment only focused on one social skill therefore, the results cannot be related to other social skills. Furthermore, students may have increased their scores on the assessment but this does not mean that actual student behavior reflects the information acquired throughout the intervention.

Limitations

Despite the fact that the participants in the current investigation improved their social skills for following adult directions by the following measures: following adult commands, participation, and entering conversations appropriately, there were some limitations to the study. Therefore, caution is warranted when interpreting these findings.

Intervention Time

Although students in the first tier received 7 weeks of intervention, students in the second and third tier did not receive as much intervention time, which was critical to the participants with more intensive needs such as Keith and Kathy. Keith and Kathy actually received the least amount of intervention time and Kathy was not able to receive instruction in the practice group setting due to her delayed intervention time. The lack of intervention for these students could have affected their data and ability to exhibit more appropriate social behaviors.

Observation Time

This study attempted to address a concern with social skill interventions in the literature by including direct student observations. However, these observations only
provided a very small segment of student behavior because they were only 20 minutes three times per week. Also, due to scheduling conflicts the observations took place in the morning, when the students tended to be better behaved. Therefore, the number, length, and times of the observation data could have inflated student data.

**Limited Skills Taught**

This intervention focused on following adult directions and although it was a needed skill for the students to acquire, the effectiveness of this intervention should not be based on one social skill topic. It is unknown how this instruction transfers to other skills, especially those that may be infrequent and not easily observable.

**Pre- and Post-Test Measure**

This study attempted to measure how much information students acquired during the intervention through a pre- and post-test measure. Although the participants improved their scores by the end of the study, these results should be interpreted with caution due to lack of standardized measurement of the assessment.

**Lack of Control Group**

All of the participants in the study improved their ability to follow adult directions and the research design provided for replication and verification. However, as with other single-subject studies, there need to be several additional studies with similar findings before an evidence-based intervention is determined.

**Packaged Intervention**

The intervention that students received during the study was a package of culturally responsive instruction, computer-based instruction, video modeling, and a token economy. The package of these components were effective in increasing the
positive behaviors of students in the study; however, it is unknown which components were most effective when teaching social skills to this population.

**Lack of Maintenance Measures**

Due to time constraints maintenance was not addressed during this study and as a result it is not known if students were able to exhibit the appropriate social skills indefinitely following intervention.

**Lack of Generalization Measures**

Although this study programmed for generalization it did not include many measures for investigating how students generalized skills across different environments (i.e. structured environments like the classroom versus non-structured environments such as the lunch room) and how they generalized the previously taught skills to untaught behaviors.

**Implications**

Results from this study provide more support for the effectiveness of CR computer-based social skill instruction for adolescents with EBD. Limited research has been conducted with computer-based social skill instruction, along with culturally responsive instruction in particular (Cumming et al., 2008; Fernstermacher et al., 2006; Rozalski & Moore, 2004). This current investigation extended the literature and supports previous research with this population. Due to the success of this intervention, social skill interventions that include culturally responsive practices and technology can be explored as a way to increase the frequency of social skills instruction for urban learners with EBD by addressing barriers to implementation such as time constraints, teacher skills, and resources (Battalo & Stephens, 2005). Also, the integration of these components could
provide a way to engage and motivate students during social skills lessons, which could facilitate social skills acquisition (Gresham, 2004). Last, the integration of technology and social skills instruction could provide students with opportunities to practice social skills instruction and get immediate and corrective feedback about their performance.

Despite the promise for social skills instruction, culturally responsive instruction, and technology, the integration of these areas does have its challenges. First, the type of technology available in classrooms could pose a challenge. Although most classrooms have a computer, classrooms may not have additional technical equipment to integrate multi-media or video-modeling components into instruction. This causes additional hardship on teachers by requiring them to solicit additional resources from administrators or pay for the equipment themselves (Cumming, 2010).

Second, this integration will require that teachers are well trained in both the basics of social skill instruction and the technology of the instruction because the level of teacher skill would be a factor in determining the efficacy of technology-based social skills programs. Also, if teachers are trained to use technology-based social skills interventions, they will more than likely enjoy using it, perceive that it is effective, and be more inclined to include social skills interventions into their daily instruction (Cumming et al., 2008; Keengew, Ochvari, & Wachrira, 2008). Therefore, teachers with a stronger understanding of technology may be more inclined to implement this type of intervention in their classroom than teachers with less technological experience.

In addition to teacher training, the students participating in these programs would need to be well trained in order to know how to properly use the programs to increase procedural integrity. Also, if the social skills lessons require students to create mult-
media projects, then students would need to be properly trained on how to use the equipment (Cumming, 2010).

Third, the change from teacher-directed learning to student directed learning through the implementation of multimedia projects may also present challenges in the area of classroom management, especially if group work is not already an integral part of the classroom routine. To minimize any problems that may occur, a clear set of rules and routines for group work must be established ahead of time. Therefore, it is advised that teachers are proactive, set up clear expectations and consequences, and communicate these expectations to students (Cumming, 2010).

Fourth, the addition of culturally responsive components would require teachers to be respectful of diverse student backgrounds and receptive to learning about cultural differences. Teachers would also need to feel comfortable addressing these differences and incorporating them into social skill instruction (Ford & Kea, 2009).

**Future Research**

The current investigation of CR computer-based social skill instruction presents promising results in teaching adolescents with emotional and behavioral disorders appropriate social behaviors. Even though the effects of the CR computer-based program yielded positive results, there is still a need to further investigate this area of research. To date, there are limited studies regarding the effectiveness CR computer-based social skill instruction (Ferstermacher et al., 2006), in particular among adolescents (Cumming et al., 2008; Rozalski & Moore, 2004). Although the CR computer-based social skill instruction included research-based techniques a component analysis needs to be conducted to
analyze which components yield greater student results. Moreover, when including competent peers it would be helpful to include socio-metric data to assess how participants socially view competent peers.

Also, more research is warranted to determine how social skill instruction affects the behavior of students with EBD with different academic levels (Maag, 2006). As demonstrated in this study, social skills instruction may be more effective for students with mild achievement deficits than those with more academic or cognitive difficulties. Therefore, this variable should be addressed in future research.

Third, future studies need to include longer intervention time and more observation sessions across different times of the school day in order to fully investigate how CR social skill instruction affects student behavior throughout the school day (Maag, 2006). Additionally, future studies should include lessons to teach more social skills to determine the skills that are most easily taught by this method of instruction.

The use of a standardized measure for pre- and post-test and the implementation of a control group would give future studies more experimental control, which would allow for better analysis of the results.

Last, more attention needs to be given to generalization and maintenance to determine the effects of CR social skill over time and in a variety of settings and across different behaviors (Maag, 2006; McIntosh & Mackay, 2008).

**Summary**

This study examined the effectiveness of CR computer-based social skill instruction on the social skills of adolescents with EBD. In particular throughout the
instruction students were taught to follow adult directions, which was measured by following adult commands, participation, and entering conversations appropriately. Six students from an urban middle school participated in the study. They were included based on teacher recommendations of needing intervention for social skill deficits and the SSIS scores confirmed that all six students had social skill deficits.

The experimenter used a multiple probe across participants design to determine the effects of the CR computer-based social skill instruction on social skill acquisition and generalization. Also, a social skill pre- and post-test was administered to students to determine how much information they had acquired during the intervention. Overall, the results were promising. All students made gains from baseline to intervention and four out of six students who took both the pre- and post-test were able to increase their scores. All students made gains, some more than others and the greatest increases were seen in the students’ classroom versus unified arts classes.

This study demonstrated the effectiveness of CR computer-based social skill instruction as an intervention for adolescents with EBD. These findings are encouraging because this brief intervention provided a boost in positive behaviors that helped to start to narrow the social skills gap between these students and their peers. Moreover, this intervention was delivered through the computer, which offers teachers greater flexibility in providing individualized social skill instruction to more students at the same time. In this time of technological advancement and the focus on diversity in America, CR computer-based social skill instruction could be beneficial to implement with any learners with social skill deficits. Therefore, CR computer-based social skill instruction might be a part of the solution for mitigating the poor-outcomes disproportionately found
among students with disabilities, minorities, and students in poverty.
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APPENDICES
Appendix A

Student “Black Card”
Student I.D. was on the Signature Strip

Black Card Point Guidelines
*0 teacher reprimands = 3 points
*1 to 2 teacher reprimands = 2 points
*3 teacher reprimands= 1 point
*3 or more reprimands or office disciplinary referral = 0 points

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Appendix B

Reinforcer Preference Form
Reinforcer Preference Form

Name: _____________________________

Date: ______________________________

Please check any of the following items that you would like to earn during this program:

1. Snacks __________
2. Candy __________
3. Computer Time __________

Please list additional items that you would like to be considered as prizes during the program:

1. _________________________________________
2. _________________________________________
3. _________________________________________
4. _________________________________________
5. _________________________________________
Appendix C

Mini-Mart
Appendix D

Data Collection Form
# Interval Recording Sheet

**Student ID:**

**Observer:**

**Session Number:**

**Target Behavior:**

**Date:**

**Time Start:**

**Time Stop:**

**Condition:**

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### Definition of Target Behaviors:

- **A.C.** = (+) Following Adult Command within 5 sec.

- **(-)** Not following direction or taking longer than 5 sec.

- **P. (Seatwork)** = (+) Completing assigned task during independent seat work (i.e. attending to assignment without talking out or talking to classmates), (-) not working, working while talking to classmates or talking out.

- **P. (Group work)** = (+) Participating during group activity (i.e. answering questions, reading silently or aloud upon adult request), (-) not sitting with group, not participating by following along with reading, and/or not reading aloud or silently.

- **P. (Teacher instruction)** = (+) Attending during teacher instruction (i.e. eyes on teacher, taking notes), (-) out of seat, eyes not on teacher, not attending to lesson, talking out, talking to classmates.
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</table>

C. = (+) Entering conversation appropriately (i.e. raising hand and/or asking politely to gain adult attention), (-) talking out to teachers or adults who enter the classroom, screaming and yelling to get adult attention.

Key:

(+) The target behavior occurred

(-) The target behavior did not occur

(N/A): No opportunity for behavior to occur
Appendix E

Pre-test
Why is it important to follow directions? Give 4 reasons. Write your answer in the space below.

1.
2.
3.
4.

List the five steps for following adult directions?

Main Idea: 1 Point

How Pandora’s Box relates to following adult directions (2 points)

What is the main idea of Pandora’s Box and how does it relate to following adult directions?

List four bad consequences of not following adult directions?

List four good consequences of not following directions?
CONGRATULATIONS…
You finished today’s assessment!
Appendix F

Social Skills Training Lessons
Before you begin...

- Before you begin each lesson you will need to:
  - Get your Adobe Captivate ID card
  - Turn on your computer
  - Go to the following website: http://sites.google.com/site/osuchampion/my-forms
  - Click on the day’s lesson

Rationale

- This program will teach you new social skills and ways to improve your behavior through the computer and group practice sessions.
- You will have to read stories, answer questions, and watch video clips on the computer
- Each unit will have a set of directions that you will need to follow

Listen to the recordings

- The program will read all of the information on the slides to you.
- You can click on the button if you want to hear the information more than once or if you want to review.

Go to the next slide

- To go to the next slide click the button on the left hand corner of each slide.

Directions Slide

- Click the arrow on the bottom right to advance to the next slide.
- Read and think about each slide.
- Read and answer the questions on each slide.
- Have fun learning!
Answering Questions
- You will have to answer different kinds of questions during the lessons. Questions will be multiple choice, short answer, and fill in the blank.

Correct Answer
- If you get an answer right you will get to go to the next slide.

Wrong Answer
- If you choose the wrong answer, you will have to re-answer the question.

Finishing a Lesson
- At the end of each lesson there will be a slide telling you that the day's lesson has ended.
- When you arrive at the last slide you are to click on report quiz and submit your work by logging in with your Adobe ID number and password.

Submit Your Work!
- At the end of each lesson it is important that you submit your work.
- Submit your work by clicking report quiz scores and entering your Adobe ID number.
- If needed, ask an adult for help!

Congratulations you are done with today's training!
YOU'RE BEAMING!
Let's Practice Answering Questions
- The following slide will have a question and four answer choices
- Choose the answer you think is correct

Why do you think it is important to learn good social skills?

- a. So that I can share my feelings without getting into trouble
- b. So that I can find another way to give someone a piece of my mind
- c. So I will not look like a buster
- d. So I can make people feel bad

Short Answer Questions
- In the program there may be times that you will have to answer short answer questions
- Think carefully about what the question is asking you
- Type your answer in the box

Let's Practice
- What social skills are you good at showing to others? Type your answer in the box.

Try Your Best
- Try your best when you have to answer a question
- If you get an answer wrong the computer will tell you to answer the question again
Stories

- When you have to read a story the computer will read the story to you. Press the button when you see one in the story to hear the story being read.
- Listen very carefully because the computer will ask you questions about the story.

Story Example

The way I see it things happen on 145 St. that don’t happen anywhere else in the world. I’m not saying that 145th is weird or anything like that, it’s just intense. So when I heard about Big Joe’s Funeral it didn’t take me by surprise. It was something that I remember that’s why I’m telling it. This is the way it went down.

Video Clips

- The program will require you to watch video clips from the internet and from group practice sessions for each unit.
- To watch the video clip click the button on each video clip.
- Watch the video clips carefully, you will be asked questions about the clips.

Video Clip Practice

Let’s Practice!

- Get your Adobe Captivate ID card
- Turn on your computer
- Put your thumb drive in the computer
- Click on the day’s lesson
- Complete the day’s lesson
- After your lesson is completed have Ms. Robinson approve your work before it is submitted.

Submit Your Work!

- It is important that you submit your work.
- Submit your work by clicking report quiz scores on the last side.
- Then enter your Adobe ID number and password.
- If needed, ask an adult for help!
Congratulations you are done with today’s training!

YOU’RE BEAMING!
Appendix G

Procedural Integrity – Training Checklist
## Procedural Integrity – Training Checklist

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<td>Instructed clicking on media clips</td>
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<td>Instructed how to answer questions within the program</td>
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<td>Addressed student questions</td>
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Participant ID #: ______________________      Date: _____________________
Appendix H

Rationale
This unit is about following adult directions. During this unit you will:

1. Learn the importance of following adult directions.
2. Learn the steps for following adult directions.
3. Learn the consequences that can happen if you choose not to follow adult directions.
4. Practice the steps for following adult directions during social skills group.
5. Evaluate the ways that you and your classmates follow adult directions.

Following adult directions is important because:

1. Following directions can keep you safe.
2. Following directions can keep you from getting into trouble.
3. Following directions can help you to be a better student.
4. Following directions can keep you from making mistakes.

Is there another reason why it is important to follow adult directions? Type your answer in the box below.

RATIONALE
If an adult is giving you a direction it is important that you listen and follow through. Listening to adult directions can make you a better student and help keep you from harm.

If you ignore the adult and make rude comments you will make things bad and could get into trouble or be put in an unsafe situation.
Think of a time when you were to follow an adult direction. What did you do? Write about the situation in the space below.

In the past what did you do when you were to follow an adult direction?

a. Ignore the adult
b. Follow the direction when I got around to it
c. Tell the adult they are not my parent
d. Quickly follow the direction

Before science class your teacher says, “Take your notebooks out of your desk.” Do you think this is an example of an adult giving a direction?

In the past how would you usually respond to this situation?

a. Ignore the adult, because I don’t like science
b. Follow the direction when I get around to it
c. Tell the adult they are not my parent
d. Quickly follow the direction

A substitute teacher sees you running down the hallway and he says, “Please stop running in the hall. You can hurt yourself.” Do you think this is an example of an adult direction?

How would you usually respond to this situation?

a. Ignore the adult, they aren’t my real teacher
b. Follow the direction when I get around to it
c. Tell the adult they are not my parent
d. Quickly follow the direction
How often do you get into trouble for not following an adult’s directions?

- Everyday
- Once a week
- Once a month
- Never

In the past what kinds of things have happened to you because you did not follow an adult’s directions?

- I got into trouble a lot
- I got into trouble sometimes
- I got into trouble one or two times
- I never get into trouble.

Do you think you know how to follow adult directions?

- Yes
- No

Do you think you need to learn how to follow adult directions?

- Yes
- No

Why do you think it is important to learn how to follow adult directions?

- So that I can be safe
- So that I can be respectful
- So that I can be a good student
- Following adult directions is important

What directions can you do a better job of following? List them in the space below.
CONGRATULATIONS…
You finished today’s lesson!
Appendix I

Lesson Introduction
FOLLOWING ADULT DIRECTIONS

DAY 2: LESSON INTRODUCTION

Name: __________________________
Date: ___________________________

DIRECTIONS FOR USING THIS PROGRAM:
Click the arrow on the bottom right to advance to the next slide.

Read and think about each slide.

Read and answer the questions on each slide.

Have fun learning!

TODAY YOU WILL:

1. Review the reasons why it is important to follow adult directions.

2. Learn the importance of following adult directions by reading Pandora’s Box.

Why is it important to follow directions? Give 3 reasons. Write your answer in the space below.

Remember following adult directions is important because:

1. Following directions can keep you safe.
2. Following directions can keep you from getting into trouble.
3. Following directions can help you to be a better student.
4. Following directions can keep you from making mistakes.

PANDORA’S BOX INTRODUCTION

Today you will be reading a story called Pandora’s Box.
Pandora’s Box is a Greek Myth from the country of Greece.
READING ASSIGNMENT: PANDORA’S BOX

Once upon a time, a long time ago, Zeus ordered Hephaestus (Aphrodite’s husband) to make him a daughter. It was the first woman made out of clay. Hephaestus made a beautiful woman and named her Pandora.

Pandora was sent to live on Earth, but before she went Zeus called her to his throne and gave her the gift of a beautiful sealed jar. He cautioned her never to open the jar, but to simply admire its beauty on the outside.

Pandora lived a fine life on Earth, for she was kind and shy and good and curious. But because Pandora was curious, she was not always perfectly happy.

Carefully, slowly, Pandora pried open the tiniest edge of the lid. She had promised herself that if whatever was in the jar was dangerous, she would snap that lid back so fast and hard it would be forever sealed.

Sometimes she puzzled over things she did not know or understand. One thing that puzzled her greatly was inside the jar that Zeus had given her. Although she almost always did what she supposed to do, it was hard for her to keep her curiosity at bay regarding the jar.

Finally, her notions got the better of her, and she decided that a small peek inside the jar could not hurt.

Carefully, slowly, Pandora prised open the tiniest edge of the lid. She had promised herself that if whatever was in the jar was dangerous, she would snap that lid back so fast and hard it would be forever sealed.

"Hello, Pandora," said the bug, hovering just out of reach. "My name is Hope." With a nod of thanks for being set free, Hope flew out into the world, a world that now held Envy, Crime, Hate, and Disease— and Hope.

Although the other dreadful creatures pestered people all over the world, because Hope was set free, the world was saved as well.

"But the moment the tiniest bit of light got through the lid, hordes of horrible creatures swarmed. Out flew every kind of disease and violence, hate and envy, and all the bad things that people had never experienced before. Pandora slammed the lid closed, but it was too late. All the bad things were already out of the box. They flew away, out into the world.

Epimetheus woke up at the sound of her sobbing. "I opened the box and all these ugly things flew out," she cried. "I tried to catch them, but they all got out." Pandora opened the box to show him how empty it was. But the box was not quite empty. One tiny bug flew quickly out before Pandora could slam the lid shut again."
Appendix J

Discussion of Content
FOLLOWING ADULT DIRECTIONS

What directions did Pandora receive?

- a. To open the box when she wants
- b. Not to open the box at all
- c. To open the box when she turns 18
- d. To have a friend open the box for her

Why do you think Pandora wanted to open the jar?

- a. She wanted to disobey her father
- b. She wanted to satisfy her curiosity
- c. She was extremely bored
- d. She was very mad at her father

What happened when Pandora opened the lid of the jar?

- a. Bad things got out into the world.
- b. The world was destroyed
- c. Good things began to happen in the world
- d. Nothing

What did Pandora plan on doing if the jar had bad things inside?

- a. Closing it very quickly
- b. Leaving the box open
- c. Nothing, it did not matter if the box was open or closed
- d. Run to tell her father

What remained in the jar?

- a. Greed
- b. Peace
- c. Joy
- d. Hope
CONGRATULATIONS…
You finished today’s lesson!
Appendix K

Discussion of Skill
Name: __________________________
Date: ___________________________

TODAY YOU WILL:
1. Review the importance of following adult directions.
2. Learn the consequences that can happen if you choose not to follow adult directions.

REVIEW
Remember following adult directions is important because:
1. Following directions can keep you safe.
2. Following directions can keep you from getting into trouble.
3. Following directions can help you to be a better student.
4. Following directions can keep you from making mistakes.

Write about a time that you followed directions. What direction did you follow? How did you feel after you followed the direction? Write your answer in the space below.

PANDORA’S BOX REVIEW

PANDORA WAS A VERY CURIOUS LITTLE _______________.

On the next few slides you will complete the sentences discussing the events in Pandora’s Box.

Read each sentence carefully and write your response in the box.
PANDORA'S FATHER GAVE HER A ____________________.

HE TOLD HER NEVER TO ___________________ THE BOX.

PANDORA DID NOT __________________ TO HER FATHER AND OPENED THE BOX.

AFTER PANDORA OPENED THE BOX BAD THINGS ESCAPED INTO THE ________________.

THE ONE GOOD THING THAT ESCAPED FROM THE WORLD WAS ____________________.

Why did Pandora peek inside the box?

- She was very bored.
- She wanted to be mean to her father.
- She was very curious.
- She wanted to scare people.
If Pandora had followed directions, would all of the bad things have escaped into the world?

1. Yes, all of the problems of the world are Pandora’s fault.
2. No, because Pandora just made a mistake.
3. Yes, bad things escaped because Pandora was mean.
4. Maybe, if Pandora had listened to her father bad things wouldn’t have gotten out to the world.

The myth of Pandora teaches many lessons. One is that directions need to be followed.

Remember that following directions helps us in many ways. List 3 ways that following directions can help us. Use the space below.

What bad things happened because Pandora did not follow directions?

List 3-4 adjectives that describe how Pandora felt when she opened the box.

What are some bad things that can happen to us if we do not follow directions?
What are some good things that can happen to us if we follow directions?

CONGRATULATIONS… You finished today's lesson!
Appendix L

Poster Skill Steps
FOLLOWING ADULT DIRECTIONS

DAY 4: POSTER PRESENTATION

Name: __________________________  
Date: ___________________________

TODAY YOU WILL:
1. Review the importance of following adult directions.  
2. Learn the steps for following adult directions.

REMEMBER FOLLOWING ADULT DIRECTIONS IS IMPORTANT BECAUSE:
1. Following directions can keep you ______.
2. Following directions can keep you from getting into ____________.
3. Following directions can help you to be a better  ____________.
4. Following directions can keep you from making _____________.

Yesterday you read a story called Pandora’s Box. Write a summary of 4-5 sentences about the story in the box below.

PANDORA’S BOX DISCUSSION

Pandora’s Box was about the importance of following directions. Because Pandora did not listen to her father bad things happened in the world.

Because Pandora did not listen to her father she was scared about what happened to the world.

How do you think adults feel when we do not listen to their directions?

IN ORDER FOR US TO FOLLOW DIRECTIONS AND NOT MAKE BIG MISTAKES LIKE PANDORA WE NEED TO FOLLOW VERY IMPORTANT STEPS. USING THESE STEPS WILL HELP US TO LISTEN AND FOLLOW DIRECTIONS.
Following Adult Directions...

(1) If possible look at the person.
(2) Listen.
(3) Repeat directions to yourself.
(4) If you don't understand, ask.
(5) Do what you were told.

What steps did Pandora complete? You may choose more than one answer.

- She listened
- She did what she was told to do
- She asked her father a question
- Pandora did not follow any of the steps

Would it have been appropriate for Pandora to use all of the steps?

- Yes, she could have used all of the steps.
- No, she was afraid of her father, so she did not have to follow all of the steps.

When would it be appropriate for Pandora to use all of the steps? You may choose more than one answer.

- When she is writing a letter
- When she and her father are face to face
- When someone gives her a direction that she doesn't understand
- When she feels the urge to ignore the adult who gives her the direction.

Think of a situation where you had to follow a direction. What steps did you follow? What steps should you have followed? Write your answer in the box below.

When we follow directions...

There are certain steps we have to follow.

Sometimes we may not be able to follow the first step, which is to look at the person giving you the direction.

Give two examples of times that you may not be able to look at the person who is giving you a direction.

1. ____________________
2. ____________________
EVEN IF WE CANNOT LOOK AT THE PERSON REMEMBER THAT IT IS IMPORTANT TO ALWAYS LISTEN TO THE ADULT GIVING YOU THE DIRECTION AND IT IS IMPORTANT TO DO WHAT YOU ARE TOLD! 🎉

CONGRATULATIONS—You finished today's lesson!
Appendix M

Understanding the Skill
FOLLOWING ADULT DIRECTIONS

Name: __________________________
Date: ___________________________

REMEMBER FOLLOWING ADULT DIRECTIONS IS IMPORTANT BECAUSE:
1. __________________ can keep you ______.
2. __________________ can keep you from getting into ______.
3. ______________________ can help you to be a better ______.
4. _____________________ can keep you from making ______.

(5) If necessary, get help from someone else.

Following Adult Directions...
(1) If possible look at the person.
(2) Listen.
(3) Repeat directions to yourself.
(4) If you don't understand, ask.
(5) Do what you were told.

EVEN IF WE CANNOT LOOK AT THE PERSON REMEMBER THAT IT IS IMPORTANT TO ALWAYS ______ TO THE ADULT GIVING YOU THE DIRECTION AND IT IS ______ TO DO WHAT YOU ARE TOLD!

PANDORA’S BOX

Because Pandora did not listen to her father bad things got out into the world.
In order for Pandora to follow her father’s directions she should have followed the steps.
How do you think Zeus, Pandora’s father probably felt about the box?

- Excited
- Neutral
- Like he didn’t care about the box
- Protective

How did Pandora feel about the box?

- She did not care about the box
- She was very curious about the box
- She thought the box was ugly
- She thought the box was the most beautiful thing in the world

What could the Gods or humans have done to keep the bad things in the box from escaping under Pandora’s care?

- Get rid of the box
- Nothing
- Made sure Pandora understood and followed the directions she was given
- Kept the box for themselves

How do you think Pandora felt when all the bad things came out of the box?

- Happy
- Excited
- Frightened
- She did not care

Why do you think Zeus cautioned Pandora not to open the box?

- He was controlling
- He was mean
- He wanted to keep Pandora from having fun
- He wanted to keep the world safe

Why do you think your teachers and family members give you directions? Write your answer in the box below.
What sometimes happens when you don't follow your teacher's directions? Write your answer in the box below.

What sometimes happens when you don't follow your parent's directions? Write your answer in the box below.

How do you feel when you get into trouble for not following directions? Write your answer in the box below.

How do you feel when you follow directions and do what you are told? Write your answer in the box below.

Why is the skill of following directions and using the steps for following directions important? Write your answer in the box below.

**WHEN WE FOLLOW TEACHER'S DIRECTIONS, WE...**

1. Learn more
2. Get better grades
3. Show we are responsible
4. Feel good about ourselves
CONGRATULATIONS…
You finished today's lesson!
DAY 6:

UNDERSTANDING THE SKILL - PART 2

Name: __________________________
Date: ___________________________

TODAY YOU WILL:
1. Review the importance of following adult directions.
2. Review the steps for following adult directions.
3. Learn the consequences that can happen if you choose not to follow adult directions.

REMEMBER FOLLOWING ADULT DIRECTIONS IS IMPORTANT BECAUSE:
1. __________________ can keep you ______.
2. __________________ can keep you from getting into _________.
3. __________________ can help you to be a better _________.
4. __________________ can keep you from making _________.

Following Adult Directions...
Now it is your turn to fill in the blanks.
(1) If possible _______ at the person.
(2) _______.
(3) Repeat _______ to yourself.
(4) If you don’t understand; _______.
(5) Do what you were _______.

THE COSBY SHOW

Digital Clip

DIRECTIONS
Take a look at the following clip from The Cosby Show.
Think about how Vanessa could have done a better job of following directions and the consequences for her behavior.
I'M IN WITH THE IN CROWD PART 1

What did Vanessa do at her friend’s house that was against her parent’s directions?

- Play softball
- Play a game and get drunk
- Study
- Get into a fight

I'M IN WITH THE IN CROWD PART 2

How did Vanessa feel about not following her parent’s directions and drinking at the party?

- She did not care
- She chose not to drink
- She wanted to be mean to her parents
- She knew that drinking was against her parent’s directions but she did it anyway

What happened as a result of Vanessa not following directions? You may choose more than one answer.

- She got very sick
- Nothing
- She got in big trouble with her parents
- She got rewarded

What is the purpose of watching The Cosby Show clip?

- To show an example of a dysfunctional family
- To show the harsh consequences for not following directions
- So that I can laugh
- To show mean parents

What is the purpose of watching The Cosby Show clip?
How are Vanessa and Pandora alike? Type your answer in the box below.

THE COSBY SHOW REVIEW

Pandora and Vanessa were both given very important directions. Both made a bad decision not to follow their parent’s directions. Although they both were good kids, they made very big mistakes. Remember that we need to follow directions all of the time and remember the steps for following directions to keep us safe and out of trouble.

CONGRATULATIONS… You finished today’s lesson!
Appendix N

Practice
FOLLOWING ADULT DIRECTIONS

PRACTICE: SOCIAL SKILLS GROUP

- Review the importance of following directions
- Review the steps for following directions
- Model the social skill - Have students to evaluate why the social skill is important
- Model the incorrect way for exhibiting the social skill - Have students to evaluate why the social skill is important
- Choose 2 students to model the appropriate and inappropriate behavior in groups
- Have the class evaluate how well the skill was exhibited according to the steps
- Award "Black Card" points throughout lesson based on correct participation
- Have students to complete a verbal "Exit slip" stating what they learned

SOCIAL SKILLS GROUP INTRODUCTION

SOCIAL SKILLS GROUP INTRODUCTION

REVIEW- REASONS FOR FOLLOWING DIRECTIONS

REVIEW- SOCIAL SKILL STEPS

SOCIAL SKILLS SNIT
Appendix O

Video Modeling Lesson
EVEN IF WE CANNOT LOOK AT THE PERSON REMEMBER THAT IT IS IMPORTANT TO ALWAYS _________ TO THE ADULT GIVING YOU THE DIRECTION AND IT IS __________ TO DO WHAT YOU ARE TOLD!

Review: Write a brief summary of Pandora’s Box. Why was it important for Pandora to follow directions? Write your answer in the box below.

Review: What happened during the Cosby show skit? Why was it important for Vanessa to follow her parent’s directions? Write your answer in the box below.

VIDEO CLIP
SOCIAL SKILLS SKIT

Describe what happened in the skit. Write your answer in the box below.

What steps did Demetrius follow? Was he good at following adult directions? Write your answer in the box below.
What steps did Julius follow? Was he good at following adult directions? Write your answer in the box below.

What were the consequences for Demetrius and Julius? Why do you think their consequences were different? Write your answer in the box below.

WHEN WE FOLLOW TEACHER’S DIRECTIONS, WE:
1. Learn more
2. Get better grades
3. Show we are responsible
4. Feel good about ourselves

CONGRATULATIONS—
You finished today’s lesson!
Appendix P

Post-Test
Why is it important to follow directions? Give 4 reasons. Write your answer in the space below.

1. 
2. 
3. 
4. 

List the five steps for Following Adult Directions? 

1. 
2. 
3. 
4. 

What is the main idea of Pandora’s Box and how does it relate to following adult directions?

Main idea (1 point)

How Pandora’s Box relates to following adult directions (2 points)

List Four Bad Consequences of not Following Adult Directions?

1. 
2. 
3. 
4. 

List 4 good consequences of not following directions?

1. 
2. 
3. 
4.
CONGRATULATIONS…
You finished today’s assessment!
Appendix Q

Procedural Integrity Checklist – Data Collection
Procedural Integrity Checklist – Data Collection

Participant ID #: ____________________ Date: _______________

Lesson: ____________________________________________

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presented lesson</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructed participant to access Adobe Captivate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructed participant to access Pre-Test or Post-Test when appropriate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructed participant to carefully complete the lesson and answer questions</td>
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<td></td>
</tr>
<tr>
<td>Started/stopped intervention on time</td>
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</table>
Appendix R

Procedural Integrity- Participant Use of Program
Procedural Integrity- Participant Use of Program

Participant ID #: ____________________ Date: _______________

Lesson: __________________________________________________________

<table>
<thead>
<tr>
<th>Item</th>
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<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrieved Flash Drive and uploaded lesson onto computer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clicked on correct lesson</td>
<td></td>
<td></td>
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<tr>
<td>Attended during lesson (i.e., oriented at screen, tracking)</td>
<td></td>
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<tr>
<td>Advanced to next slide when appropriate</td>
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<td></td>
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</tr>
<tr>
<td>Clicked on Microphone Icon if he/she could not read aloud</td>
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<tr>
<td>Watched full video clip when appropriate</td>
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<tr>
<td>Read/listened to the questions and all answer choices before clicking on an answer</td>
<td></td>
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<tr>
<td>Asked for help, if needed</td>
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<tr>
<td>Started/stopped intervention on time</td>
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<tr>
<td>Submitted lesson</td>
<td></td>
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</tbody>
</table>
Appendix S

Social Validity Questionnaire- Student
Social Validity Questionnaire – Student

1. Did you like learning new social skills on the computer?
   a) Yes
   b) No

   Why?

2. Did you like learning new social skills in social skills group with your classmates?
   c) Yes
   d) No

   Why?

3. Do you think you improved your social skills and interactions with others?
   a) Yes
   b) No

   Why?

4. Did you like working for prizes at the Mini-Mart?
5. Did you like earning points on the Black Card?
   a) Yes  
   b) No
   Why?

6. Would you have done the social skills lessons on the computer and social skill groups even if you did not get prizes?
   a) Yes  
   b) No
   Why?

7. Would you like to continue to learn new social skills on the computer?
   a) Yes  
   b) No
   Why?

8. Would you like to continue to learn new social skills in social skills group with your classmates and peers?
   a) Yes
b) No

Why?
Appendix T

Social Validity Questionnaire – Teacher
Social Validity Questionnaire – Teacher

1. Do you think that the students’ overall demonstration of appropriate social skills has improved since completing the intervention _________
   a) A lot
   b) Somewhat
   c) A little

2. To what degree would you say that the students became better at exhibiting appropriate social skills after the intervention _____
   a) Very
   b) Somewhat
   c) Not very

3. Would you allow any of your students to participate in similar programs in the future?
   a) Yes
   b) No

4. Do you think the students enjoyed this social skills intervention ______
   a) A lot
   b) Somewhat
   c) A little

5. How important do you think social skill intervention programs are for students who struggle with demonstrating appropriate social skills?
   a) Very
   b) Somewhat
   c) Not very

6. Did this program inconvenience you in any way?
   a) Yes
   b) Somewhat
   c) No

7. If you answered yes or somewhat, please explain
8. What suggestions do you have to improve this social skill instructional program?

Comments: