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## Social skills of students with emotional disabilities: A technology -based intervention

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SOCIAL SKILLS OF STUDENTS WITH EMOTIONAL DISABILITIES:  
A TECHNOLOGY-BASED INTERVENTION

by

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A dissertation in partial fulfillment  
Of the requirements for the

**Doctor of Philosophy Degree in Special Education**  
**Department of Special Education**  
**College of Education**

**Graduate College**  
**University of Nevada Las Vegas**  
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## ABSTRACT

### **Social Skills of Students with Emotional Disabilities: A Technology-Based Intervention**

by

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Professor of Special Education  
University of Nevada Las Vegas

Students with emotional and behavioral disabilities can be some of the most difficult students to keep in the regular school setting, let alone include in general education classes (Desbians & Royer, 2005). Often, higher percentages of students with emotional disabilities are placed in the most restrictive settings (e.g., homebound, hospitals, and residential settings) than students with any other disability (Nelson, Jordan, & Rodrigues-Walling, 2002). One of the keys to success for these students is consistent and systematic instruction in the areas of behavior and social skills (Williams & Reisberg, 2003).

The use of multimedia, student-generated social skills lessons coupled with teacher facilitation to improve the social skills of middle school students with emotional disabilities was explored in this study. The effects of teacher-led social skills instruction and the combination of teacher-led and multimedia student-generated social skills instruction on the perceived social behaviors of the students were compared. The maintenance of perceived student social skills over time was examined. Also evaluated in

this study were the effects of the traditional and combined interventions on student knowledge of social skills.

The results of this study indicate that both interventions were effective in improving the students' social skills and their knowledge of social skills. Teachers, parents, and students all perceived that student social skills improved over the course of the study. Students appear to have maintained the improvements over the maintenance periods. The participating teachers perceived that the combined intervention was more effective than the traditional intervention in improving the maintenance of social skills. Parents and students however, did not perceive any differences in the effectiveness of the two interventions or of the two interventions over time on the improvement of the students' social skills performance.

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## CHAPTER 1

### INTRODUCTION

It often is difficult for educators to motivate and teach students with emotional disabilities (Ogden, 2001; Visser, Cole, & Daniels, 2002). Research indicates that these students do not like school or school-related tasks due to academic and social skills deficiencies (Fitzgerald, 2005). These deficits tend to increase as the child gets older (Goldstein, 1999a). Many adolescent students with emotional disabilities are masters of misbehavior and task avoidance (Fink, 1990). The consequence is challenging and the inappropriate behavior that occurs often results in removal from the classroom and a special education classification (Nelson, 2000). Without intervention, students with emotional disabilities are likely to experience negative outcomes within and beyond the school setting (Lane, Gresham, & O'Shaughnessy, 2002). These outcomes include, but are not limited to, lower graduation rates, high rates of unemployment, and high arrest rates (Davis & Vander Stoep, 1997).

The movement toward inclusive programming for all students with disabilities requires that students with emotional disabilities meet the behavioral expectations of both general education and special education teachers (Fitzgerald, 2005). The general education setting also provides a challenge in terms of peer social demands (Lane, Pierson, & Givner, 2004). In order for students with emotional disabilities to be

successful in the general education setting, they must possess the social skills necessary to meet the demands of both teachers and peers.

Youth with emotional disabilities facing the period of transition from school to adult life and employment often have poor social skills, lower academic achievement, and higher incidences of conduct problems than youth without emotional disabilities (Armstrong, Dedrick, & Greenbaum, 2003). These characteristics can be linked to lower graduation rates, limited post-secondary participation, higher unemployment, financial difficulties, high arrest rates, low rates of independent living, and unsatisfactory interpersonal relationships (Davis et al., 1997). The social skill problems that are defining features of emotional disturbance are the same skills that employers expect their employees to possess (e.g., following directions, listening, concentrating on a task). When provided with appropriate training, young adults with emotional disabilities have the potential to make substantial contributions in the workforce (Carter & Lunsford, 2005). Youth who receive interventions that build social skills and improve adaptive behavior demonstrate better overall transition outcomes than those who don't receive intervention (Armstrong et al., 2003; Carter & Lunsford, 2005).

Social skill instruction is an accepted intervention to combat aggression and other behavior problems of youth in special education and general education environments. Research indicates that this instruction is successful in remediating the social deficits of students with emotional disabilities (Colvin, Kameenui, & Sugai, 1993; Ison, 2001; Lewis, Sugai, & Colvin, 1998; Ogden, 2001; Poulou, 2005). Ison (2001) contends that social skills training lowers aggressive responses, increases assertive responses, increases compliance, and encourages prosocial conduct.

Fitzgerald (2005) suggests that new technologies be used to meet the unique curriculum needs of students with emotional disabilities. Computer-assisted instruction may help students with emotional disabilities decrease disruptive behavior, increase motivation, and increase time on task (Carman & Kosberg, 1982). Studies indicate that the use of technology with students with emotional disabilities can be advantageous in raising self-esteem, increasing on task behavior, and lowering levels of disruptive behavior (Fitzgerald, Fick, & Milich, 1986; Plienis & Romanczyk, 1985; Wetzel, 2001). Using instructional technology in the classroom also provides an opportunity for students to collaborate on academic work, thereby learning social skills in authentic settings (Wetzel, 2001).

While little research exists that pairs social skills instruction and technology, the existing literature concurs that more research in this area is needed (Cheney, 1990; Dawson, Venn, & Gunter, 2000; Fitzgerald, 2005; Muscott & Gifford, 1994). Fitzgerald (2005) discusses the importance of a programmatic research agenda to define and document the potential for new technologies to assist youth with emotional and behavioral disorders. She maintains that technology should be used to enhance a therapeutic curriculum.

### Social Skills Instruction

Until society begins to focus on the prevention of misbehavior, social skills instruction is one of the most effective interventions to help children who exhibit challenging behaviors (Nelson, 2000). Currently, students must possess appropriate social skills to be successful academically. These skills are necessary to participate in activities

such as problem solving, cooperative learning, and peer tutoring (Warger & Rutherford, 1996). Beyond school, social skills also are necessary to function as a contributing member of the community (Cosden, Iannaccone, & Wienke, 1990). The social skills that are essential for success in the workplace (e.g., negotiating demands, adapting to social expectations, and developing relationships with coworkers) are the areas in which youth with emotional disabilities have the largest deficits (Carter & Lunsford, 2005). Often the lack of these social skills is linked to poor formation and maintenance of intimate relationships and friendships. The result is that adults with emotional disabilities are less likely to be married or to live with others than are their peers without disabilities (Armstrong et al., 2003).

#### *Definition of Social Skills*

There are many different definitions of social skills in the literature (Goldstein, 1984; Gresham & Elliott, 1987; Gresham, 2002; Irwin & Walker, 1993; Nelson, 1988). While the wording of each definition is different, they all focus on the same aspects of human interaction. Social skills are defined as the personal and social competencies that allow an individual to problem solve, read social cues, and perform competently when interacting with others (Gresham, 2002). Individuals rely on social skills to make personal decisions and interact with their environments and a difficulty in any social skill area often results in a lack of coping skills (Stumbo, 1995).

In several training programs, such as *Boys Town* (Tierney, Dowd, & O'Kane, 1993) and *Skillstreaming* (Goldstein, 1984), the term social skills has been broken down into over 100 individual skills such as: (a) listening, (b) following directions, (c) dealing with peer pressure, and (d) using self-control. Each skill then is broken down into a series of

steps that students are taught in order to master each skill (Dowd & Tierney, 1995; Goldstein, 1984; Warger & Rutherford, 1996). Students learn the skill by practicing the individual steps and then putting them all together.

### *Need for Social Skills Instruction*

Because many students with emotional disabilities have inadequate social interaction skills, they require direct instruction of the skills to overcome deficits (Stumbo, 1995). Nelson (2000) believes that when a student begins school without the necessary social skills to be successful academically he or she experiences frustration. This frustration can lead to challenging behavior. Many times the exhibition of challenging behavior results in the student being removed from the classroom. This begins a cycle of failure. While the student is not in the classroom, he or she is not receiving any academic instruction. This often results in the student falling further behind academically, more frustration, and more challenging behavior.

Social skills deficits in children appear to be precursors to serious problems in adolescence and adulthood (Armstrong et al., 2003; Davis & Vander Stoep, 1997). Some documented problems are: (a) high drop out rates, (b) high arrest rates, (c) low employment rates, (d) marital difficulties, (e) substance abuse, (f) violent behavior, and (g) an inability to live independently (Bullis & Davis, 1997; Webber & Scheuermann, 1997).

Ogden (2001) maintains that providing students with emotional disabilities social skills instruction results in more socially competent behavior. Socially competent students are better at making friends and maintaining friendships, have more effective ways to deal with authority, and are less engaged in problem behavior (Ogden, 2001).



Effective social skills training contributes to improved employment, stronger personal relationships, and fewer encounters with law enforcement for these students (Carter & Lunsford, 2005).

### *Historical Perspectives and Current Practices in Social Skills Instruction*

Until the 1970s, psychodynamic approaches such as psychoanalytic and behavior modification were used to alter inappropriate behavior. In the 1970s, psychological skills training began to emerge and evolved into the social skills training currently used in schools (Goldstein, 1984). The current philosophy of social skills instruction maintains that punishing a youth with emotional disabilities is counter productive (Nelson et al., 2002). Punishment ignores the prosocial behaviors that the youth possesses and does not teach the desired skills (Tierney et al., 1993).

Social skills training consists of direct and deliberate instruction of specific desired social behaviors between a trainee and a trainer (Goldstein, 1984; Sugai & Lewis, 1996). There are four main components of social skills training: (a) direct teaching, (b) modeling, (c) practice, and (d) programming for generalization (Elksnin & Elksnin, 1998; Gresham, Sugai, & Horner, 2001; Quinn et al., 1999). The most effective strategies for teaching social skills include a combination of modeling, coaching, and practicing (Gresham, 2002). In order for generalization to occur, the skills taught must be ones that students, teachers, and parents view as critical for success (Lane et al., 2004). The mode of instruction must provide enough motivation and practice to overcome competing behaviors and provide the student with immediate gratification (Gresham, 1998). Gresham (1998) recommends that social skills training be reconfigured with the goal of enhancing its effectiveness.

### *Assessment of Social Skills*

Before any social skill training begins, it is necessary to assess the social skills of the students (Goldstein, 1984; Gresham, 1998; Tierney et al., 1993). Assessments are used to screen the social competence of the individual students. These instruments should provide information concerning the antecedents of a student's social problems. The results of the assessments guide the selection, modification, and design of social skill instruction. A variety of assessments are used to monitor and evaluate student progress in social skill instruction (Sugai & Lewis, 1996). Although many of the commercially available resources include formal assessments, educators can set goals for their students with the assistance of other teachers, parents, and the students. Resources such as observation and student records help to provide a holistic picture of the students and their needs (Elksin & Elksin, 1998). It is important that the assessment of a student's social skills continue throughout the program. This enables the program to be adapted and modified to meet the needs of the student on a continual basis.

### *Challenges Faced in Social Skills Instruction*

The most frequently cited problems in social skills instruction are retention of learned skills, motivation, and generalization (Gresham, 2002). Training programs typically are conducted in classrooms or residential treatment settings. Both settings are artificial, providing the students with little real life value. Hence, a student's knowledge does not typically transfer to other settings such as the home, playground, or lunchroom (Gresham, 2001). The rate of transfer is directly related to the degree to which the specific training procedures are designed to enhance transfer and maintenance and whether or not the skills will be reinforced beyond the training setting (Lane et al., 2004).

## Classroom Technology Use for Students with Emotional Disabilities

The most commonly studied applications of technology use by students with emotional disabilities are in the areas of academic and problem solving skills (Cheney, 1990). Several studies have shown positive results, such as the increase of on-task behavior of students with emotional disabilities (Dawson et al., 2000; Plienis & Romanczyk, 1985; Wetzel, 2001). The results of these same studies indicate that computer-assisted instruction is as effective as teacher-directed instruction in several subject areas, including science, social studies, and English. Fink (1990) suggests that using computer-assisted instruction with students with emotional disabilities increases attention and improves both academic and behavioral performance, as well as providing a motivating learning environment.

### *Types of Technology Available*

There are two basic types of technology used with students who have emotional disabilities and social skills deficits. They are software and videotapes. Hedley (1987) compiled a list of computer programs to use in social skills training. She noted that the formats of the programs were either simulations or commonsense activities. Most of the software listed involved resisting drugs, peer pressure, life skills, and employment readiness. Stumbo (1995) also compiled a list of commercially available resources to teach social skills, but very few items on the list involve technology beyond videotapes and no research involving any of the products is cited. One publisher, Ripple Effects (2004), produced social skills training software for both elementary and secondary students. The programs are called *Relate for Kids* (2004) and *Relate for Teens* (2004) and involve the instruction of a number of social skills broken down into steps, real-life

scenarios, and games for motivation and reinforcement. Studies suggest that using the software in the classroom results in less aggressive behavior and more pro-social behavior (Ripple Effects, 1998-2003; Ripple Effects, 1999; Roona et al., 2003).

Overall, there is limited research available regarding the use of technology with students with emotional disabilities or the use of technology to teach social skills (Fitzgerald, 2005). More research is necessary to determine the effectiveness of videotapes, software, and other technologies in the teaching of social skills to youth with emotional disabilities.

### *Multimedia Education*

It is possible to design learning environments that encourage students' construction of knowledge and active problem solving (Ferretti, MacArthur, & Okolo, 2002). Multimedia technologies can serve as tools to advance these educational goals (Ferretti & Okolo, 1997). Ferretti and Okolo (1997) define educational multimedia technology as text, graphics, animation, sound, voice, music, still pictures, and motion video that is incorporated into a single system. They suggest that the use of educational multimedia technology allows students to exercise control over their own learning in ways not possible with traditional instructional materials. Multimedia education also helps students to focus on the information that is most important to them, set personal learning goals, and acquire information in highly individualized ways to facilitate connections with prior knowledge (Ferretti & Okolo, 1997). In short, it provides the relevance and motivation necessary in well-designed social skills instruction.

The argument for multimedia education has been made based on the theory of anchored instruction. Anchored instruction was originally proposed by the Cognition and

Technology Group at Vanderbilt University (Cognition and Technology Group at Vanderbilt University, 1990, 1992a, 1992b, 1993) to help students solve problems and become independent thinkers. Anchored instruction is based on the idea that classroom learning is very different from natural learning environments. Natural learning environments often are contextualized, where participants share a common frame of reference. In anchored instruction, the tasks required of the learner are authentic, the knowledge being learned is a tool to accomplish the tasks, and the learner sees the knowledge as valuable and applicable to new situations (Cognition and Technology Group at Vanderbilt University, 1992a). Most classroom learning environments lack these features and, as a result, students often do not perceive the knowledge learned in the classroom to be applicable in the real world.

Student-generated multimedia projects provide students the opportunity to engage in a complex set of tasks, work cooperatively with peers, and present their work to peers and other audiences (Ferretti & Okolo, 1996). This allows students to discuss and defend their ideas, deepen their understanding, and learn to work with others in productive and socially appropriate ways (Okolo & Ferretti, 1998). The characteristics of multimedia production enable students to gain control over their learning and make the connections between classroom knowledge and the real world. Student-generated multimedia scenarios can be used to teach and practice a problem-solving process (Fitzgerald, 2005). This process lends itself well to the practice/role play portion of social skills instruction.

Much of the research on social skills instruction has focused on direct instruction through task analysis and modeling (Goldstein, 1984; Gresham & Elliott, 1987; Sugai & Lewis, 1996). Unfortunately, even with technological advances, there has been little

research in the area of using technology to teach social skills. The use of multimedia by students to author social skills lessons has the potential to be an effective social skill intervention in the areas of motivation, retention, and generalization. Research indicates that students with emotional disabilities are particularly motivated when using technology (Fitzgerald, 2005; Walker & Williamson, 1994). Project-based learning provides for the extra practice necessary to support direct instruction so that students fully learn and retain information (Fitzgerald, 2005). Multimedia authoring also provides an appropriate forum for cooperative learning. Cooperative learning has been found to foster the acquisition of the social and interpersonal skills that many students with emotional disabilities lack (Walker & Williamson, 1994). Working cooperatively on a multimedia project also provides students the opportunity to use skills within a naturalistic environment, which is necessary for the generalization of social skills.

### Statement of the Problem

Many students with emotional disabilities do not receive the social skills training required for success in inclusive school settings or for life after graduation (Desbiens & Royer, 2005). This results in poor interpersonal relationships for these students (Desbiens & Royer, 2005). Often, faced with school and personal failure, students with emotional disabilities become aggressive and may become involved in the juvenile and/or criminal justice system (Quinn et al., 2005). A meaningful, motivating method of learning social skills increases student opportunities for success both in and out of the school setting (Fitzgerald, 1994). The purpose of this study was to develop a teaching sequence designed to enable students, placed in middle school self-contained classrooms for

students with emotional disturbance, to create and utilize their own multimedia social skills training modules. Specifically, the following research questions were addressed:

Research Question 1: Does the combined social skills intervention (traditional instruction paired with student multimedia authoring) increase the use and maintenance of social skills of the students with emotional disabilities more than the use of the traditional social skills intervention:

- a. as perceived by the students when measured by the *Student Skillstreaming Questionnaire*?
- b. as perceived by their teachers when measured by the *Teacher Skillstreaming Questionnaire*?
- c. as perceived by their parents when measured by the *Parent Skillstreaming Questionnaire*?

Research Question 2: Is student knowledge of social skills steps greater after the combined social skills intervention (traditional instruction paired with student multimedia authoring) than after the traditional social skills intervention?

### Significance of the Study

Students with emotional and behavioral disabilities can be some of the most difficult students to keep in the regular school setting, let alone include in general education classes (Desbians & Royer, 2005). Often, higher percentages of students with emotional disabilities are placed in the most restrictive settings (e.g., homebound, hospitals, and residential settings) than students with any other disability (Nelson et al., 2002). One of the keys to success for these students is consistent and systematic instruction in the areas

of behavior and social skills (Williams & Reisberg, 2003). Frequently, this need is not met in the specialized or general education classroom (Williams & Reisberg, 2003).

It appears that success in general education settings dictates success in later life (Webber & Scheuermann, 1997). Students who are unsuccessful in general education often are unsuccessful as adults in employment and may become involved in the criminal justice system (Webber & Scheuermann, 1997). The reason for this lack of success in school and in the adult world is a lack of social skills (Armstrong et al., 2003). Social skills training is an integral part of specialized self-contained programs for students with emotional and/or behavior disorders. Motivation, generalization, and maintenance are the major challenges to social skills instruction in these environments (Gresham, 2002).

Much of the social skills research is focused on task analysis and modeling (Dowd & Tierney, 1995; Goldstein, 1999a). There has been little research in the area of using technology to teach social skills (Fitzgerald, 2005). While research indicates that students with emotional and behavioral disabilities are motivated when using technology, research is needed in the areas of designing and developing specialized applications to address the unique needs of students with emotional and behavioral disorders (Fitzgerald, 2005).

Due to the limited research concerning the use of technology to teach social skills to students with emotional and behavioral disabilities, this study explored the use of multimedia, student-generated social skills lessons coupled with teacher facilitation to improve the social skills of the students. The findings of this study contribute to the knowledge-base of effective strategies concerning: (a) social skills in self-contained classrooms for students with emotional disabilities, (b) the use of social skills training to improve social skills, (c) the use of technology to improve students' social skills, and (d)



the use of technology to improve the maintenance of social skills. In this study, the effectiveness of teacher-led social skills instruction and the combination of teacher-led and technology-based, student-generated social skills instruction on the improvement of social behaviors were compared. The maintenance of the social skills over time was examined as well as the perceptions of students, teachers, and parents.

### Definitions

*Anchored Instruction.* Anchoring or situating instruction in the context of information-rich, video-disc environments that encourage students and teachers to pose and solve complex, realistic problems (Cognition and Technology Group at Vanderbilt University, 1993).

*Combined Intervention Group.* The students in this intervention group received social skills training based on *Skillstreaming the Adolescent* (Goldstein & McGinnis, 1997) and created their own social skills DVDs.

*Computer Assisted Instruction.* The use of a computer in the instructional process. This includes tutorial, drill and practice, instructional games, modeling, simulation, and problem solving (Fitzgerald & Koury, 1996).

*DVD.* Digital video disc. A high-capacity optical disk capable of storing billions of bytes of information (Lindsey, 2000).

*Emotional Disability.* A severe emotional disorder exhibited by a person for at least three months that adversely affects academic performance and includes one or more of the following: (a) an inability to learn that is not caused by an intellectual, sensory, or health factor, (b) an inability to engage in or maintain interpersonal relationships with

peers and teachers, (c) inappropriate behavior or feelings, (d) a general pervasive mood of unhappiness or depression, (e) a physical symptom associated with a personal or academic problem, or (f) the expression of fears regarding personal or academic problems (Nevada Administrative Code, 2005a).

*Imagemixer* (Pixela Corporation, 2002-2006). Video editing software that allows the user to move video from a camera to the computer. The software can then be used to edit the video and put it on a DVD.

*Inclusive Settings*. Settings outside of the specialized classroom such as the general education classroom, home, or community (Friend, 2004).

*Modeling*. Providing an example of a specific social skill through role playing and demonstration (Goldstein & McGinnis, 1997).

*Multimedia Technology*. Text, graphics, animation, sound, voice, music, still pictures, and motion video that is incorporated into a single system (Ferretti & Okolo, 1997).

*Observers*. For the purpose of this study, the individuals that observed the teachers implementing both the traditional and combined social skills interventions.

*Positive Reinforcement*. Presenting a stimulus after a behavior occurs in order to increase the rate of the behavior (Zirpoli, 2005).

*Simulations*. Computer programs that require the user to play a role in a specific situation. The situation presents alternative choices to help solve a problem or move through an experience (Howe, 1989).

*Social Readiness Skills*. Skills necessary for positive school outcomes, including the ability to make friends, get along with peers, and communicate well with peers and teachers (Nelson, 2000).

*Social Skills.* The personal and social competencies that allow an individual to problem solve, read social cues, and perform competently when interacting with others (Goldstein, 1984; Gresham, 1986; Gresham & Elliot, 1984; Irwin & Walker, 1993; Nelson, 1988). The social skills taught in this study were listening, following instructions, dealing with someone else's anger, asking permission, using self-control, keeping out of fights, dealing with group pressure, and concentrating on a task.

(a) *Listening.* The student looks at the person who is talking, thinks about what is being said, waits his or her turn to talk, and says what he or she needs to say.

(b) *Following Instructions.* The student listens to instructions, asks questions, decides whether or not to follow the instructions, repeats the instructions, and completes the instructions.

(c) *Dealing with Someone Else's Anger.* The student listens to the angry person, tries to understand what is being said, decides if anything can be said or done to deal with the situation, and does what he or she decides to do.

(d) *Asking Permission.* Student decides what he or she needs permission to do, who to ask, how to ask, picks the right time and place, and asks for permission.

(e) *Using Self-Control.* Student is aware of the physical warning signs of loss of control, decides what happened to elicit that reaction, thinks about ways to control himself or herself, chooses the best way and does it.

(f) *Keeping Out of Fights.* Student stops and thinks about why he or she wants to fight, thinks about what the desired end result is, brainstorms other ways to handle the situation besides fighting, decides on the best way, and does it.

(g) *Dealing with Group Pressure.* The student thinks about what the group wants him or her to do and why, decides what to do, decides how to tell the group what he or she decided to do, and tells the group what he or she decided to do.

(h) *Concentrating on a Task.* Student decides what the task is, determines when to work on it, gathers the required materials, finds a place to work, and decides if he or she is ready to concentrate.

*Social Skills Deficits.* Specific social skills that a particular student is lacking that negatively impact personal interactions (Goldstein, 1984; Gresham, 1986; Gresham & Elliot, 1984; Irwin & Walker, 1993; Nelson, 1988).

*Social Skills Instruction.* Instruction conducted in behavioral areas that promotes more productive/positive interaction with others (Goldstein, 1984; Gresham, 1986; Gresham & Elliot, 1984; Irwin & Walker, 1993; Nelson, 1988).

*Specialized Self-Contained Classroom.* A specialized self-contained classroom in which students, eligible for special education, receive all instruction and supports as outlined by their Individualized Education Programs (Nevada Administrative Code, 2005b).

*Student-generated Social Skills DVDs.* In this study, the multimedia social skills lessons that were designed and created by the students.

*Student Prompts.* A verbal direction provided by a teacher to a student for the purpose of reminding the student to remain on-task or to assist a student with an activity.

*Student Triads.* A triad in this study consisted of three students in the same classroom picked at random to participate in both the traditional and combined interventions.

*Task Analysis.* Instructional process that breaks complex tasks into distinct small steps. These steps are taught separately at first and then in combination (Dowd & Tierney, 1995; Goldstein & McGinnis, 1997).

*Teacher.* A trained special education teacher used both the traditional intervention and the combined intervention to teach the students in the study.

*Traditional Intervention.* In this study, the traditional social skills intervention that consisted of only direct instruction from the teacher.

*Trainer.* An experienced special educator who trained the classroom teachers to use the traditional intervention and the combined intervention.

*Video Camera.* The video camera used in this study was a Sony Handycam DCR HC21 MiniDV Camcorder. It was used to record the traditional and combined classroom social skills lessons.

### Limitations of the Study

The limitations of this study are:

1. The data in this study were collected in self-contained special education classrooms. The results should be generalized to inclusive settings judiciously.
2. The focus of this study was the social skills of children with emotional disabilities. Care should be taken when generalizing the results to other student populations.
3. Data were collected over a twelve-week time period. Intervention over a longer or shorter period of time may yield different results.
4. The number of students in this study was small. There were 25 students in the study. A larger number of students may produce different results.

5. The data collected was in the form of parent, teacher, and student responses to a questionnaire. The data are therefore measures of perceptions of social skill ability.

6. The schools used in the study were referred by a region administrator. Therefore, the schools were not randomly selected.

### Summary

Research supports both social skills training (Dowd & Tierney, 1995; Gresham, 2002) and the use of computer-assisted instruction (Fitzgerald, 1994; Goldsworthy, Barab, & Goldsworthy, 2000) for students with emotional disabilities. Research concerning the use of computer-assisted instruction with this population is just beginning, but preliminary results are promising (Fitzgerald, 2005). More research is needed to demonstrate the effectiveness of using technology to teach social skills. Identifying effective combinations of social skills training and technology has the potential to increase student motivation, retention, and generalization for students with emotional disabilities.

The purpose of this study was to evaluate the effectiveness of a combination of traditional social skills instruction and student-generated social skills DVDs as compared to traditional social skills instruction for students with emotional disabilities. The results of this study contribute to the literature by describing effective ways to incorporate technology into social skills training for students with emotional disabilities.

## CHAPTER 2

### REVIEW OF RELATED LITERATURE

The increase of problem behavior in public schools continues to be a concern among teachers, families, and community members (Lewis, Sugai, & Colvin, 1998). This is particularly true for students with emotional and behavioral disabilities who have a higher prevalence of aggression and problem behavior than typical children/youth (Fink, 1990). Without intervention, these students are likely to experience negative outcomes within and beyond the school setting (e.g., low graduation rates, high rates of unemployment, and high arrest rates) (Davis & Vander Stoep, 1997). Students who receive interventions that build social skills are more likely to demonstrate success in general education settings and experience better overall transition outcomes than those who don't receive instruction (Carter & Lunsford, 2005).

Over the years, social skills curricula have become accepted interventions to address the behavior problems of children/youth in both special education and general education environments. Much of the existing research literature in this area was conducted 15 to 20 years ago (Cosden, Iannaccone, & Wienke, 1990; Filipczak, Archer, & Friedman, 1980; Goldstein, 1984; Keefe, 1988; Nelson, 1988). New research focusing on the current educational environment is necessary in order to evaluate the effectiveness of social skills

instruction as well as the maintenance and generalization of skills taught (Gresham, 2004).

New technologies may be a promising medium to meet the curriculum needs of students with emotional disabilities (Fitzgerald, 2005). Carman and Kosberg (1982) suggested that computer-assisted instruction be used to help students with emotional disabilities decrease disruptive behavior and increase motivation. New multimedia technology allows students to: (a) exercise control over their own learning, (b) focus on information that is important, (c) set personal learning goals, and (d) acquire information in an individualized manner (Ferretti & Okolo, 1997). Educational technology has the potential to provide the relevance and motivation that is integral to well-designed social skills instruction.

### Social Skills Instruction

Social skills instruction is the teaching specific behaviors believed to contribute to the success of interpersonal interactions (Miller, Lane, & Wehby, 2005). Gresham (2004) maintains that social skills instruction used by educators, counselors, and psychologists will change the social behavior of children and youth. The skills taught range from the most basic (e.g., greeting someone) to the most complex (e.g., making a decision) (Goldstein & McGinnis, 1997). The skills typically are broken down into steps via task analysis and taught through discussion, modeling, role-playing, and feedback.

#### *Need for Social Skills Instruction*

As adolescents progress through school they are expected to meet social, behavioral, and academic expectations. Students must attain certain social skills in order to be



successful in all of these areas (Lane, Wehby, & Cooley, 2006). Colvin et al. (1993) noted that social skills deficits may lead to low peer and teacher acceptance. Children who exhibit deficits in peer- and teacher-related social skills are at risk for academic, social, and emotional problems leading to delinquency and aggression later in life (Goldstein & McGinnis, 1997).

Lane et al. (2006) conducted a study to determine the social skills considered by special and general education teachers as essential for school success. A questionnaire was used to gather opinions from 717 teachers at seven elementary, eight middle, and four high schools in a large, economically diverse school district in Tennessee. A modified version of the *Teacher Expectations for School Success* questionnaire (Lane et al., 2004) was used to survey teachers. The questionnaire contained 30 social skills that were categorized into three domains: (a) cooperation, (b) assertion, and (c) self-control. Teachers rated the importance of each skill for student success on a 3-point Likert scale.

The elementary and middle school teachers rated ten items as critical for school success (controls temper with peers, resists peer pressure, uses free time appropriately, controls temper with adults, follows directions, responds to physical aggression, ignores peer distractions, attends to directions, transitions well, and gets along with people who are different). The high school teachers rated seven items as critical (controls temper with peers, controls temper with adults, follows directions, attends to directions, transitions well, produces correct schoolwork, and listens to classmates present their work). All of these skills were part of the Self-Control and Cooperation domains. None of the teachers rated any skills from the assertion domain as critical (e.g., introducing oneself, giving compliments to members of the opposite sex).

Lane et al. (2006) suggested that special education teachers in elementary, middle, and high schools have similar views regarding social skills that are essential for student success. Given that both cooperation and self-control skills are rated as highly important by both special and general education teachers across all grades levels, these skills should be addressed in the classroom through direct instruction in order to prepare students to effectively meet teacher expectations. Lane et al. (2006) concluded that further studies should utilize direct observation data to determine if the skills rated as critical by teachers are the same skills that are reinforced by the teachers in the classroom.

A survey of state correctional systems was conducted by Quinn et al. (2005) to determine the percentage of students with disabilities in the juvenile justice system and to identify the percentage of the students served in each disability category. The participants in the study were 51 administrators of state juvenile corrections systems. The administrators were asked to include every juvenile under the age of 22 incarcerated on December 1, 2000 when filling out the survey.

Thirty-eight state agencies returned the survey for a response rate of 76%. The participants reported a total of 33,831 juveniles incarcerated. The breakdown by gender was 11% female and 89% male. The number of youth eligible for special education and related services as mandated by IDEA (2004) was 8,613. Approximately 33% of incarcerated youth had a documented disability. Emotional disturbance and learning disabilities were the largest categories of primary disabilities, with percentages of 47.7 and 38.6, respectively.

These data indicated that the number of youth identified and receiving special education services in juvenile corrections was four times higher than the 8.8% of students

ages 6 to 21 in the United States served under IDEA (U. S. Department of Education, 2001). Quinn et al. (2005) maintain that the number of students with disabilities in the juvenile justice system is underestimated.

Quinn et al. (2005) concluded that future research is needed in the areas of prevention, education services, transition, and aftercare of juvenile offenders. They also maintain that there is a lack of empirical research concerning effective educational practices with adjudicated youth. Quinn et al. (2005) suggest that educational and behavioral interventions are necessary to prevent students with high incidence disabilities from becoming involved with the juvenile justice system.

In a study designed to determine the extent to which students with emotional/behavior disorders (E/BD) experience academic achievement deficits, Nelson, Benner, Lane, & Smith (2004) focused attention on age and gender differences. They also examined different types of problem behaviors that can interfere with academic achievement. A cross-sectional study of 155 students (126 boys and 29 girls) with emotional/behavioral disabilities was conducted.

Standardized scores from the *Woodcock-Johnson III Tests of Achievement* (Woodcock, McGrew, & Marher, 2001) were analyzed as an indication of the extent to which students with emotional and behavior disabilities experience academic achievement deficits and the impact of age and gender differences on the academic achievement of the students. A dimensional classification system, the *Teacher Report Form* (Achenbach, 1991), was used to examine the types of problem behaviors that might interfere with academic achievement. Each student's special education teacher completed this measure. Data were collected over a 4-month time span.

Independent *t* tests were conducted for each of the *Woodcock Johnson III* subtests (Woodcock et al., 2001) to determine if there were significant differences in the mean scores of children (ages 5-12) and adolescents (ages 13-18) as well as for gender. The results of the analyses indicated that students experienced large achievement deficits across all content areas (e.g., reading, math, and written language). The effect size discrepancies for the content areas were .94 in all cases, indicating that 83% of students scored below the mean of the norm group across the content areas and subtests. Adolescents in the study were more likely to experience academic achievement deficits than were young children. The results of the *t* tests indicated that there were no statistically significant differences between boys and girls in the area of academic achievement.

Multiple regression analyses were used to assess the contribution of particular problem behaviors (externalizing and internalizing) to the prediction of reading, written expression, and mathematics achievement. Students with emotional and behavior disabilities who exhibited externalizing behaviors (e.g., aggression, delinquent, attention problems) were more likely to experience academic achievement deficits than students who exhibited internalizing behaviors (e.g., withdrawal, somatic complaints, anxiety/depression, social problems).

Nelson et al. (2004) concluded that students with emotional/behavioral disorders are likely to exhibit academic deficits early in their school careers. They maintain that this finding supports the development of effective prevention programs. The data also indicate that the achievement deficits of students with emotional and behavior disabilities who exhibit externalizing behaviors may be more severe and that specific instructional

programs are necessary to improve their social skills. However, Nelson et al. (2004) caution that more research is needed in the area of effective instructional programs for these students.

Caldarella and Merrell (1997) conducted a review, analysis, and synthesis of two decades of research concerning child and adolescent social skills. From this review they developed a taxonomy. Only peer-reviewed research or test manuals were included in the analyses. The criteria for inclusion in the study were that the studies had to use factor analysis, cluster analysis, or related multivariate techniques to derive common dimensions or constructs of child or adolescent social skills. Nineteen studies were included and coded into three categories: (a) subject characteristics, (b) methodological characteristics, and (c) outcomes.

In the subject characteristics category, 75% of the study subjects were between the ages of 3 years old and 6 years old. There were an almost equal number of males and females across the studies. More than 22,000 subjects were represented in the 19 studies selected.

The methodology category indicated that over half of the studies used a social validity approach, with a behavioral definition used in 33% of the studies, and a peer acceptance definition used in 10% of the studies. Most of the studies used teacher rating scales, with parent ratings and youth self-reporting used less frequently.

Similar social skills factors were identified and grouped into the following common dimensions: (a) peer relations, (b) self-management, (c) academic, (d) compliance, and (e) assertion. Each group was examined to determine the most common social skills associated with it. The peer relations dimension occurred in 52.38% of the studies

reviewed. Twelve social skills (e.g., complimenting others, inviting others to play) were found to be commonly associated with this group. The self-management dimension also occurred in 52.38% of the studies reviewed, with six social skills (e.g., controlling temper, following rules) commonly associated with the group. Eight social skills (e.g., finishing tasks, following directions) were found to be commonly associated with the academic dimension, which occurred in 47.62% of the studies. The compliance dimension occurred in 38.09% of the studies. Eight skills (e.g., cooperation, sharing things) were consistently associated with this group. Finally, the assertion dimension occurred in 33.33% of the studies. Ten social skills were commonly associated with this group (e.g., inviting others to interact, acknowledging compliments).

Caldarella and Merrell (1997) concluded that the results indicate the dimensions in which children or adolescents are strong or have deficits, and that the information should be used to design behavioral interventions. They further suggested that empirically derived lists of steps to teach each of the identified social skills be developed to support their validity. Caldarella and Merrell (1997) maintain that research in the area of assessment and treatment of social skills is important because social skill deficits are strongly associated with future negative outcomes.

The need for social skills instruction is evident through research that suggests children's social skills are an important factor for school success (Lane et al., 2006). The disproportionate number of students with emotional and behavioral disabilities involved in the juvenile justice system may be due to deficits in social skills. Students with emotional and behavioral disabilities require social skills instruction to remediate their deficits and increase their chances for success in school, home, and community settings.

### *Components of Social Skills Instruction*

In order for social skills instruction to be effective, certain training components must be included (Gresham, 2004; Goldstein & McGinnis, 1997) These include defining and modeling the skill, role playing, feedback, and practice (Goldstein & McGinnis, 1997). A study using these components was conducted by Kamps and Ellis (1995). The study investigated the effects of peer-inclusive social skills groups for young children with behavioral problems. The teachers in the study participated in a 2-hour training session to learn the social skills instruction procedures. The children were Head Start students between the ages of 2 years old and 4 years old who had been nominated by their teachers as having behavioral risks. The children received the social skills program over a 2-year period. Data were collected on two cohorts of children in Year One (34 students) and Year Two (20 students).

The 10-minute direct instruction of social skills took place three times a week over a 12-to 15-week time period. The social skill instruction was followed by 10 minutes of structured play. Each instructional group consisted of two to three children with identified behavioral risks, and two to three peer models. For each specific skill (e.g. sharing, persistence, play, requesting to share, agreeing, helping, compliments, and conversation) the teaching sequence included: (a) demonstration of the skill, (b) child-peer role-play of the skill, (c) skill reviews, and (d) persistence training for the peers to engage the target children in appropriate social behaviors. Teachers monitored the structured play segment that followed the direct instruction. During this time, the children were encouraged to use the skill that they had just learned and were rewarded with smiley faces on a chart when they did.

Written surveys and interviews with the participating teachers were used to evaluate the effectiveness of the intervention. Almost all of the teachers (91%) agreed that the target children had increased their rates of appropriate socialization. Most of the teachers (81%) stated that they would continue to teach social skills in this manner. The length of the children's positive interaction times also was analyzed. After two years, Kamps and Ellis (1995) found that the children who received social skills instruction showed longer positive social interaction times than did the control group classes.

Kamps and Ellis (1995) concluded that a social skills intervention containing: (a) demonstration of the skill, (b) child-peer role-play of the skill, (c) skill reviews, and (d) persistence training was an effective means to increase the positive social interactions of young children. They summarized that the most powerful effects occurred when teachers taught social skills lessons and combined them with behavioral techniques such as increased supervision during play and consequences for inappropriate behaviors. Kamps and Ellis (1995) suggest that social skills lessons provide critical early intervention for young children with behavioral risks.

Desbiens and Royer (2005) evaluated the effectiveness of a social skills program for elementary school students with behavior problems who had been integrated into the general education classroom. The study was based on the theory that cooperative learning, peer tutoring, and project learning foster positive social skills and improve peer understanding of children with behavioral disabilities.

Nine, third grade classes participated in the study. The classes were randomly assigned to one of three groups: (a) Group I received a social skills training program, (b) Group II received a social skills training program combined with educational activities



based on a cooperative teaching model, and (c) Group III was the control group. There were a total of 212 children in the study, 110 girls and 102 boys. The students with behavioral problems were identified by their teacher based on a systematic screening procedure, the *Systematic Screening for Behavior Disorders* (Walker & Severson, 1994). Of the 212 participants, 54 students were identified as having behavioral problems.

Groups I and II received social skills training based on a cognitive behavioral approach. The students received the lessons for one hour, twice a week over 10 weeks. The lesson for each skill contained the following components: (a) role playing, (b) positive reinforcement, (c) modeling, (d) shaping, and (e) cooperation. Group II also participated in cooperative teaching activities with those peers identified as having strong prosocial skills. These activities took place for a minimum of two hours (divided into 30-minute sessions) per week.

Peers and teachers completed pre- and post-questionnaires evaluating students on different levels of social and academic ability. The data measured acceptance and appreciation by peers, level of social integration into the class, and self-perception of social competency. During the pre-test phase, chi-square analyses of the data confirmed that children with behavior problems were more prone to peer rejection. A *t* test used to analyze data from the teachers showed that students with behavioral difficulties were perceived as being less skilled academically and tended to be aggressive and disruptive in class.

To assess the effectiveness of the social skills training program, a covariance analysis with orthogonal representation was performed. When the effect size for each of the dependent variables was assessed, it indicated that the students with behavioral

difficulties improved modestly after participating in the program, as compared to the control group. There were no significant differences between Group I and Group II, however.

Desbiens and Royer (2005) suggested that social skills training programs should contain: (a) role playing, (b) positive reinforcement, (c) modeling, (d) shaping, and (e) cooperation in order to produce significant acceleration in children's prosocial skills. They determined that children with behavior difficulties require social skills intervention to increase their social abilities. They also suggest that social ability is critical to students' peer acceptance both in and out of the classroom setting.

A study evaluating the effect of a 12-week social skills program on outpatient boys was conducted by Frankel, Myatt, and Cantwell (1995). The participants ranged in age from 7 to 13 years old. All had applied for treatment in the University of California Los Angeles Children's Social Skills Program. Exclusionary criteria for participants were psychosis or developmental disabilities. Participants were randomly assigned to either to a treatment group (n=36) or a no-treatment group (n=17). The *Social Skills Rating System (SSRS)* (Gresham & Elliott, 1990) was completed by all parents prior to intervention. Each boy's general education teacher was contacted and asked to complete the *Pupil Evaluation Inventory (PEI)* (Pekarik et al., 1976), a questionnaire that measures the teachers' perceptions of student social skills. The dependent variables in this study were the scores on both of these instruments.

The students attended the social skills class once a week for 60 minutes over a span of 84 weeks. Each class session was broken down into four segments: (a) discussion of homework given in the previous session, (b) direct teaching, student role-play, and

coaching, (c) coached play, and (d) parent conferencing about the week's homework assignment. The classes were taught by two doctoral-level psychologists with at least one year of experience in social skills training. Parents and teachers completed the *SSRS* (Gresham & Elliott, 1990) and the *PEI* (Pekarik et al., 1976) a second time after the conclusion of the intervention.

The results of the *SSRS* (Gresham & Elliott, 1990) showed that the parents of the boys in the treatment group reported a significantly greater increase in their child's social skills than the parents of the boys in the no treatment group. The outcome measures for the *PEI* (Pekarik et al., 1976) indicated that 84.2% of students in the treatment group showed at least a 15% improvement of social skills, compared to 35.3% of the students in the no treatment group. Both parents and teachers reported significant benefits to the students in are area of peer relationships.

Frankel et al. (1995) concluded that it is possible to obtain significant improvement in the parent and teacher ratings of boys' social skills through the use of a training intervention that includes: (a) discussion of homework given in the previous session, (b) direct teaching, student role-play, and coaching, (c) coached play, and (d) parent conferencing. They suggest that future research should include a peer assessment to assess peer acceptance.

DeRosier (2004) examined the efficacy of a social skills intervention for children experiencing peer dislike, bullying, or social anxiety. The participants were 415 students from 11 schools in North Carolina who ranged in age from 7 to 10 years old. The sample was evenly distributed across gender. The students were selected through sociometric status determined by group-administrated peer nomination and self-report questionnaires.

The selection criteria for eligibility were: (a) high peer dislike, (b) bullied by peers, and (c) high social anxiety. From the eligible pool, 18 students from each school were randomly assigned to the treatment group (n = 198), and the remainder of the students were assigned to the no-treatment control group (n = 217).

Students in the treatment group participated in 60-minute group sessions once a week for eight weeks. Groups were held during school hours. A trained counselor from each school and a trained undergraduate intern administered the group intervention. The social skills program used for the group sessions included: (a) direct instruction, (b) role-playing, (c) modeling, and (d) hands-on activities. The control group attended classes as usual, but received no social skills intervention. The social skills program was the independent variable of the study. The dependent variables were scores on each area of pre- and post-questionnaires and teacher reports of aggressive student behavior.

The researchers examined individual change scores to evaluate the effectiveness of the social skills intervention. The change scores were calculated by subtracting the pre-questionnaire scores from the post-questionnaire scores. A 2x6 MANOVA was conducted. Students in the treatment group showed significant improvement while students in the control group showed declines in functioning in the areas of peer likeability, self-esteem, self-efficacy, and lower social anxiety. Participants in the control group also reported affiliating with antisocial peers more frequently, whereas students in the treatment group reported lower antisocial affiliations. Students in the treatment group who were considered aggressive at the beginning of the study showed significantly lower aggressive behavior problems than did the aggressive children in the control group.

DeRosier (2004) concluded that the results support the use of a social skills intervention comprised of: (a) direct teaching, (b) role-play, (c) modeling, and (d) hands-on activities to improve the quality of students' social relationships, self-esteem, and social behavior. She maintains that the results of the study also support the use of the social skills intervention by school counselors and teachers to combat bullying, social isolation, and rejection. DeRosier (2004) suggests that additional studies including teacher, parent, and student behavioral observations be conducted.

A study that evaluated the effectiveness of a social skills training program was conducted by Wise and Bundy (2004). The effectiveness of the program on a group of 22, sixth-grade middle school students in a social studies classroom was examined. A group of 20 students in another social studies classroom served as the control group. All students completed a pre-test, post-test, and follow-up test to measure their social skills in the areas of: (a) assertion, (b) aggression, and (c) knowledge of their consequences. The post-test was administered immediately after the training, and the follow-up was administered 6 months later.

The students in the intervention group participated in six, 40-minute lessons. Each lesson was followed by a short quiz with feedback. The lessons consisted of social skills instruction that included: (a) direct teaching, (b) modeling, (c) role-play, (d) hands-on activities, and (e) homework. The intervention was administered six times, semiweekly in 40-minute sessions.

A 2x3 (treatment x repeated measures) ANOVA was used to analyze the social skills test data. The intervention group performed significantly better than the control group on both the post-test and the follow-up. The intervention group showed significant

improvement on both the post-test and the follow-up, as compared to the pre-test. The control group performed almost identically on all three tests.

Wise and Bundy (2004) concluded that their findings support the use of a systematic social skills intervention program to enhance young adolescents' learning of social skills. They maintained that developing a systematic program of assertiveness social skills training is potentially beneficial for adolescents. Wise and Bundy (2004) suggest that further research should include a larger student sample.

Based on previously discussed literature, social skills training programs that contain: (a) direct teaching, (b) modeling, (c) role-play, and (d) homework are beneficial to children and adolescents with behavioral problems (Kamps & Ellis, 1995; Desbiens & Royer, 2005; Frankel et al., 1995; DeRosier, 2004; Wise & Bundy, 2004). All of these elements should be included in order to optimize student learning and generalization. When social skills interventions are implemented correctly, students show significant improvement in peer relations, assertiveness, and classroom behavior.

#### *Outcomes of Social Skills Instruction*

Providing social skills instruction to students with emotional disabilities results in more socially competent behavior (Ogden, 2001). When students with emotional and behavioral disabilities participate in effective social skills training, a positive effect is seen in employment maintenance, satisfactory personal relationships, and fewer encounters with law enforcement (Carter & Lunsford, 2005). Social skills instruction is the most widely accepted intervention for combating the behavior problems of youth with emotional and behavioral disabilities (Ison, 2001). Students with emotional disabilities who receive social skills training experience improved outcomes (Ogden, 2001).

A study conducted by Mathur, Kavale, Quinn, Forness, and Rutherford (1998) examined the effectiveness of social skills interventions for students with emotional/behavioral problems. A meta-analysis of 64, single-subject social skills intervention studies was conducted. The criteria for inclusion in the study were: (a) students had emotional/behavioral problems, conduct disorders, autism, or delinquency, (b) one or more components of social skills instructional procedures were used, (c) a valid single-subject research design was used, and (d) a direct measure of overt behavior change was employed.

Research articles included in the study were coded across variables including subject data, disability category, type of design, target social skills, age, or grade level. The reliability of coding was established by five independent judges who coded 12 randomly selected studies. Interrater agreement was 94% between the judges and the authors.

A percentage of nonoverlapping data (PND) between baseline and successive intervention phases of the single-subject data displays approach was used for the meta-analysis. The selected studies included 283 participants, 72% of whom were boys. The average IQ of participants was 87. The single-subject studies generated a total of 463 graphs from which a PND could be calculated. The studies used multiple baseline designs across participants (34%), behaviors (17%), and settings (6%); a reversal design was used in 34% of the studies; and, multi-element designs were used in 11% of the studies.

The mean PND across all of the studies was 62% with a standard deviation of 33%. This represents mild treatment effectiveness. Twenty-two percent of the graphs showed 100% PND, while 10% of the graphs showed 0% PND. This indicates a tendency toward more positive treatment. There was no correlation between the number of data points and

PND in the intervention phase, suggesting no relationship between the treatment efficacy and the length of instruction.

Students who were categorized as delinquent were most responsive to intervention (PND 76%), followed by those categorized as having emotional/behavioral disabilities (PND 64%). Students with autism were the least responsive to intervention (PND 54%). Significant differences across preschool, elementary, and secondary levels were found. The data indicated that social skills intervention effects were less pronounced at the preschool level. The largest PND was 66% at the secondary level, indicating mild effectiveness.

Mathur et al. (1998) concluded that social skills instruction was most effective with secondary students with E/BD. They also maintained that the limited effects of this study appeared to be linked to the fact that the instructional programs used were specifically designed for research purposes and had limited validity. Overall, Mathur et al. (1998) concluded that there is a need for developing more effective social skills interventions, with future research focusing on interventions that fit the specific social skills needs of students with emotional/behavioral disabilities.

The effectiveness of academic and social skills interventions were compared in a study conducted by Lane (1999). The participants were first grade students who had been identified by their teachers as at risk for behavior problems. The goal of the study was to intervene with children at risk for antisocial behavior early in order to prevent the development of antisocial behaviors.

Two, year-round schools in Southern California took part in the study. Six first-grade teachers and 53 students participated in the study. The students ranged in age from 6.2 to



7.8 years. The six classrooms were randomly assigned to one of three conditions: (a) academic intervention, (b) social skills intervention, or (c) treatment control group. All groups met four days a week, for 30 minutes. The intervention lasted 6 weeks.

The academic intervention was a reading intervention. *The Phonological Awareness Training for Reading (PATR)* (Torgesen & Bryant, 1994) was used to supplement the reading instruction provided in the general education setting. The social skills intervention consisted of direct instruction of social skills using lessons from *Social Skills Intervention Guide: Practical Strategies for Social Skills Training* (Elliott & Gresham, 1991). The participants in the treatment control group received instruction in the areas of social studies and science.

All of the students' social and academic skills were evaluated three times throughout the study: (a) prior to the onset of intervention, (b) at the end of the intervention, and (c) three weeks after the intervention. Social skills were evaluated using the *Social Skills Rating System (SSRS)* (Gresham & Elliott, 1990). Academic skills were evaluated using the *Word Attack Subtest* of the *Woodcock Reading Mastery Test-Revised (WRMT-R)* (Woodcock, 1987). The experimental design for this study was a mixed model, repeated measures, hierarchical analysis of variance.

The results of the repeated measures ANOVA indicated that the social and academic skills of the students in the academic intervention group did not change over time at a rate different from the skills of the participants in the other two groups. The social skills intervention group had significant increases in prosocial behavior, but not in academic skills, when compared to the other groups. Data analyses indicated that the students in the control group had a decrease in appropriate social skills over time. The students in all

three groups improved their academic skills over the 6-week period. No significant changes were found on the post *SSRS* (Gresham & Elliott, 1990), between post intervention, and follow-up conditions, indicating that although there were no statistically significant improvements, the improvements that did take place were maintained.

Lane (1999) concluded that social skills training was an effective early intervention for young children at risk for behavior problems. She also maintained that a reading intervention could not remediate both academic and behavior problems. Lane (1999) suggested that in future studies, the duration of the social skills intervention be increased and the effects of parent involvement be studied.

Lo, Loe, and Cartledge (2002) evaluated the effects of social skills instruction on students who were at risk for being labeled as having emotional or behavioral disorders. The researchers examined whether social skill instruction reduced anti-social behavior in third and fourth grade students in a predominantly African American elementary school. Five students were selected from a group of 49 students identified by their general education teachers as exhibiting frequent behavior problems and a deficiency in social skills. Five typical peers were selected to participate in the social skills instruction sessions. A teacher delivered the social skills instruction, which was based on the curriculum *Working Together: Building Children's Social Skills Through Folk Literature* (Cartledge & Kleefeld, 1994). The students received the social skills instruction in three 20-minute sessions per week.

Observations were conducted by special education graduate students in the classrooms and the lunchroom. The observers coded student behaviors as either AS (antisocial behavior) or PS (prosocial behavior) using a 10-second, partial interval

recording system. Classroom observations took place three times a week during regular academic instruction. The observations in the lunchroom were conducted to assess generalization effects. These observations also occurred three times a week. The observations continued over a 5-month period.

The number of antisocial behaviors exhibited by the students was measured and analyzed. The behaviors were defined as any poor social interaction, rule violation, aggression or attacking others by physical action that caused harm. A multiple-baseline across-subjects design was used to assess the effects of the social skills intervention on the social behaviors of students at risk for emotional/behavioral disabilities. All students showed a mean decrease in antisocial behavior after intervention over baseline, ranging from 1.45 to 5.05 mean decreases in the classroom, and .99 to 3.64 mean decreases in the lunchroom.

Lo et al. (2002) maintain that the students demonstrated improvement in that they exhibited less frequency of antisocial behavior. Also, the time period between the occurrences of the antisocial behavior was greater, and the intensity and duration of each occurrence of antisocial behavior was less severe. They noted that the students showed improvements in both the behaviors being taught during the intervention and behaviors that were not taught. Lo et al. (2002) concluded that social skills instruction produced positive effects on the students' behavior, but that further investigation is necessary.

Bienert and Schneider (1995) investigated the benefits of grouping mildly withdrawn and aggressive students in elementary school for social skills training. The average age of the student students was 11.5 years old. There were 22 boys and 16 girls identified as

aggressive-disruptive and 17 boys and 2 girls identified as sensitive-isolated. All participants participated in the study for 2 years.

Social skills lessons based on Goldstein and McGinnis' (1987) *Skillstreaming* method were used as the intervention. Each intervention sequence consisted of ten, 1-hour sessions held once a week, after school. The two intervention sequences contained 10 skills modules, consisting of: (a) audiotaped vignettes, (b) modeling displays, (c) role plays, and (d) feedback. Each session was audiotaped.

The assessments used to measure intervention effects were pre- and post-questionnaires adapted from the *Skillstreaming Checklists* (Goldstein & McGinnis, 1987) that were completed by students, peers, and teachers. A mixed within and between Deficit x Treatment Specificity repeated measures profile analysis was used to analyze the data. Both the aggressive-disruptive and sensitive-isolated groups had a significant positive change in peer likeability over time. At follow-up, this increase was maintained. The aggressive-disruptive group showed significant reductions of aggression, while the students in the sensitive-isolated group demonstrated no significant change in aggression. No group attained significance in the area of social withdrawal. Both groups experienced significant positive change in their mean social self-perception scores.

Bienert and Schneider (1995) concluded that social skills training was superior to no treatment in improving participants' social self-perceptions and peer-rated likeability as well as improving student levels of aggression. Improvements made by the students were maintained after one year. Bienert and Schneider (1995) suggested that future studies should include adapting the intervention for use with adolescents.

A year-long study was conducted by Ciechalski and Schmidt (1995) to determine the effectiveness of social skills training on: (a) peer acceptance, (b) self-esteem, (c) social attraction, and (d) self-confidence of students with disabilities. The study involved 54, fourth-grade students enrolled in two social studies classes (experimental and control). The students were assigned to the classes using a stratified random sampling method. The class that served as the treatment group consisted of six gifted students, one general education student, and seven students with disabilities. The control class consisted of six gifted, fifteen general, and six students with disabilities.

The *Self-Esteem Inventories* (Coopersmith, 1981) were used to measure the students' attitudes in the areas of academic, family, and personal experience. These inventories were completed by the students in both groups at the beginning and again at the end of the school year. An early version of the *Skillstreaming* curriculum (Goldstein & McGinnis, 1987) was used in the weekly social skills training sessions. The social skills were taught through: (a) modeling, (b) role playing, (c) performance feedback, and (d) homework. The control group received the regular social studies instruction.

An ANOVA was used to analyze the results of the pretest scores of the self-esteem inventories. No significant differences were found between the treatment and the control group. A MANOVA was used to analyze each factor of the post-test inventories (e.g., social attraction, peer acceptance, self-esteem, self-confidence). Only the students in the treatment group experienced significant increases in the area of social attraction. Social attraction was defined as the attractiveness of a child to his or her peers when playing or working together. No significant differences were found between the two groups in the areas of peer acceptance, self esteem, or self-confidence.

Ciechalski and Schmidt (1995) concluded that the students who had identified disabilities improved in Social Attraction after receiving social skills training. They maintained that this finding was important in that social attraction is highly correlated with self esteem. Ciechalski and Schmidt (1995) suggested that receiving social skills instruction with their typical peers provided opportunities for the students with disabilities to learn and practice the social skills needed to be successful in school and in their communities.

In a study designed to explore the effects of a social skill interaction program as part of a school-wide discipline program, Lewis et al. (1998) conducted a study with students in an elementary school located in a lower-middle class neighborhood. Five general education and two special education teachers also participated. The target settings for the study were the cafeteria, recess, and the transition to lunch. All students attended lunch and recess at the same time.

The social skills lessons were developed by a team of teachers at the school and were taught through a three-step process. First, during the 30-minute homeroom period, the teachers provided direct social skills instruction on skills related to one of the targeted settings (e.g., cafeteria, recess, transition to lunch). Skills were taught through explanation, demonstration, and review. Second, the teachers reviewed the school rules and provided examples everyday for three weeks. And, finally, the social skills and rules were integrated across the curricula through the use of a thematic unit (e.g., writing stories about school rules, creating posters illustrating the rules). After the week of direct instruction and the three weeks of rule review, all direct instruction and review of social skills was discontinued. Group contingencies were used in the cafeteria and at recess. For

the transition setting, the teachers developed an active supervision strategy that involved school staff members positioning themselves in such a way that they could observe all students during the transition.

A multiple baseline across setting design was used to examine the effect of the social skill instruction and direct intervention on student problem behavior. Baseline data were collected for one week prior to the intervention. One month follow-up data were collected following the completion of the intervention. Data on the problem behaviors identified by staff in each setting were collected by two university graduate students. A minimum of 80% interobserver agreement was reached prior to the start of the study, and reliability measures were collected through interobserver agreement in 30% of the sessions in each setting.

The data indicated that the combination of social skills training and group contingencies produced a reduction in the overall number of problem behaviors across all the settings (e.g., the cafeteria, recess, and the transition to lunch). Baseline data indicated increasing trends in problem behavior across all three settings and clear trend changes were produced by the intervention across the three settings. Data also suggested that the observed changes were maintained through a period of three months.

Lewis et al. (1998) concluded that the combination of social skills instruction and direct intervention produced reductions in the levels of problem behavior in all three target settings. They suggested that the intervention was successful in promoting maintenance of the skills that the students learned. With this study, Lewis et al. (1998) demonstrated that social skills training can be extended beyond individual and small groups to a whole school population and still produce positive results.

The literature describing the outcomes of social skills training in reducing problem behaviors is promising (Mathur et al., 1998; Lane, 1999; Lo et al., 2002; Bienert & Schneider, 1995; Ciechalski & Schmidt, 1995). Social skills training is an effective intervention for reducing the antisocial behavior of students in both elementary and secondary settings (Mathur et al., 1998; Lane, 1999). Students who receive social skills training demonstrate greater peer likeability, which may lead to more satisfactory personal relationships (Bienert & Schneider, 1995). When social skills interventions are implemented correctly, the maintenance of students' learned skills is increased (Bienert & Schneider, 1995). Social skills training produces positive outcomes for students in both small groups and school-wide settings (Lewis, et al., 1998), and should be considered an effective intervention for remediating behavior and social skill deficits.

Despite the success of social skills instruction, certain challenges exist (Gresham, 2004). Maintenance and generalization of learned skills can be problematic (Gresham, 2004). The use of emerging technologies, such as multimedia education, may not only be the answer to these challenges, but also serve as a motivator for student learning (Fitzgerald, 2005).

### Multimedia Education

Multimedia education is an instructional medium that may help to combat some of the challenges faced in social skills instruction. Ferretti and Okolo (1997) define educational multimedia technology as text, graphics, animation, sound, voice, music, still pictures, and motion video that is incorporated into a single system. Many students find computer-assisted and media forms of instruction preferential to traditional



teaching/learning methods (Fitzgerald & Koury, 1996). Based on this premise, multimedia education holds promise in improving student motivation in the area of social skills learning.

### *Anchored Instruction*

The argument for multimedia education has been made based on the theory of anchored instruction. Anchored instruction maintains that to effectively learn and generalize information, students must learn through authentic tasks in as natural a learning environment as possible (Cognition and Technology Group at Vanderbilt University, 1992a). This allows students to learn how to problem solve, become independent thinkers, and see knowledge as applicable to the real world (Cognition and Technology Group at Vanderbilt University, 1990).

The Cognition and Technology Group at Vanderbilt University, (1992a) created the *Jasper Woodbury Series*, a technology-based program designed to motivate students while assisting them in learning to think and reason about complex math problems. In a study designed to assess the effectiveness of the program, 739 students enrolled in fifth-grade, sixth-grade, and mixed-grade classrooms from 11 school districts used the video disc program. The classrooms were split into 10 *Jasper* classrooms and 10 control classrooms. According to standardized reading and math scores, there were no significant differences between the experimental and control groups at the onset of the study.

Students in the *Jasper* group received instruction in three Jasper adventures. Students spent one week on each adventure. This activity took the place of time that normally was devoted to solving word problems. Four assessments were developed for the study and used to assess the effectiveness of the *Jasper* program: (a) Basic Math Concepts Test, (b)

Word Problem Test, (c) Planning Test, and (d) Math Attitudes Questionnaire.

Standardized math achievement test scores also were used. These instruments were administered to students by their teachers during the first three months and again during the last month of the school year.

On the Basic Math Concepts Test, both the *Jasper* Group and the Control Group improved at the same rate over the school year. On the Word Problem Test, the performance of the Jasper group at post-test was significantly superior to that of the Control Group. The Planning Test measured higher-level planning and comprehension of complex problems. The students in the *Jasper* Group scored much higher at the end of the year on the Planning Test than the Control Group. All of the participants' attitudes about math were assessed with a 35-item questionnaire at both the beginning of the year and the end of the year. The *Jasper* students showed significantly improved attitudes as compared to the Control Group.

The Cognition and Technology Group at Vanderbilt University (1992a) concluded that the *Jasper Woodbury Series* was an effective intervention to improve problem solving and math skills. They also concluded that anchored instruction was a motivating way to provide instruction. Finally, the Cognition and Technology Group at Vanderbilt University (1992a) suggested that anchored instruction was applicable to problem solving curricula and has the potential to assess and enhance higher-level planning and comprehension of complex problems in many subject areas. Although this is a seminal article in the area of anchored instruction, the authors did not provide comprehensive information on the research design, data collection, and results of this study.

In a study designed to explore the impact of anchored instruction on teacher and student behaviors in inclusive secondary language arts classrooms, Rieth et al. (2003) randomly assigned 62 ninth grade students to two inclusive language arts classes taught by the same teacher. The behaviors studied were the length and level of teacher and student questioning and responding. Teacher questions were coded: (a) short questions, (b) long questions, (c) factual questions, and (d) interpretive questions. Student questions and responses were coded: (a) short, (b) long, (c) high-level, and (d) low level. Four trained observers used an observation system to record the length and levels of teacher and student questioning and responding for data collection. The observational data were collected during the 50-minute class period, which was divided into 5-minute intervals. These data were collected for six weeks during baseline, and during the 2-month intervention phase.

Information gathered from teacher and student interviews also was also evaluated. The teacher was interviewed before implementing the anchored instruction and again at the end of the 2-month instructional period. A group of eight randomly selected students per class were interviewed before and after participating in the anchored instruction.

The baseline phase lasted 6 weeks. During this phase, the teacher used her preferred instructional approach, lecturing to teach *Romeo and Juliet*. A textbook and audiotapes were used as instructional materials. Observational data on the length and level of student and teacher questions and responses were recorded during eight 5-minute observation intervals.

During the intervention phase, the commercial videodisc *To Kill a Mockingbird* was used as the multimedia anchor. The students watched the videodisc instead of reading the

novel. The videodisc was used as a focal point for class discussion and to foster interaction between the teacher and the students. Five phases of intervention were implemented during this 6-week period: (a) setting the stage, (b) watching the anchor/retelling, (c) segmenting, (d) characterization, and (e) student research and presentations. Students had access to six computers, a scanner, a printer, a projector, and the Internet to create presentations during the last phase.

During baseline, the mean number of short questions asked by the teacher was 7.4 per class period, and the mean number of long questions asked was 3.4. After intervention, the mean number of short questions fell to 5.81 per class, but the number of long questions rose to 4.05. The mean number of factual questions asked by the teacher dropped from 7.40 at baseline to 3.33 after intervention. The mean number of interpretive questions rose from 3.40 at baseline to 6.43 after the intervention. During baseline, the mean number of short teacher responses was 1.50 per class period, and the mean number of long teacher responses was .50. During the anchored instruction intervention, the mean numbers of short and long teacher responses were 1.38 and 1.52, respectively.

The mean number of short questions asked by students during the baseline condition was 1.90 per class period. The mean number of long questions asked by students during baseline was .20 per class period. These means rose to 2.48 and 2.14, respectively. The mean number of low-level questions asked by the students during baseline was 1.90 per class period. This mean rose slightly to 2.24 per class period after the intervention. The mean number of high-level questions that students asked during baseline was .20 per class period. This rose to 1.24 after the anchored instruction intervention. The mean number of short responses provided by the students at baseline was 12.30 during

baseline. This dropped to 10.19 after the intervention phase. The mean number of long responses provided by students at baseline was 1.70, this number increased to 7.57 per class period after the intervention. The mean number of low-level responses provided by the students decreased from 9.50 at baseline to 4.40 after the intervention phase. The mean number of high-level responses provided by the students increased from 4.62 at baseline to 13.14 after the anchored instruction intervention.

The teacher indicated in her post-interview that she felt that the students reached higher levels of understanding of the second novel and participated in more analytical discussions during the anchored instruction phase. She also reported lower levels of student questions such as, “Why do we have to do this?” Students supported these statements by reporting that they had learned more by watching the video and participating in discussions rather than just reading the text. The teacher also reported that the students with disabilities needed less assistance from her and that they seemed more secure in their understanding of the content. The teacher reported higher rates of class attendance during the multimedia phase.

Rieth et al. (2003) concluded that the use of anchored instruction is an effective intervention for high school students, including those with high-incidence disabilities (e.g., emotional disabilities and learning disabilities). They suggested that anchored instruction produced increased levels and length of teacher and student questions, student participation in learning activities, and increased school attendance. Rieth et al. (2003) also concluded that student research and multimedia presentations were effective learning activities when anchored instruction was implemented.

Langone, Shade, and Clees (1999) evaluated the use of a multimedia computer-based instructional program in establishing match-to-sample skills, as well as to evaluate the generalization of the skills to the natural setting. The participants were four middle school students (three boys and one girl) with moderate/severe intellectual disabilities. The participants were chosen for the study based on teacher recommendation, IEP goals related to independent shopping skills, and parental consent. All students had participated in a functional skills curriculum that included community-based instruction and were familiar with the computer equipment used in the study. Instruction was conducted in the students' classroom at a computer workstation. Pre- and post- intervention probes requiring students to match 18 pictures of cereal boxes to the actual boxes of cereal were conducted in a local grocery store to evaluate generalization of the effects of the discrimination training.

A computer-based instructional program was developed using 36 photographs of cereal boxes displayed on grocery store shelves. From all of the photos taken, the final instructional program included 63 *Hyperstudio* (Wagner, 1995) cards distributed randomly across five levels of difficulty: (a) four cards with two cereals each, (b) six cards with three cereals each, (c) 12 cards with four cereals each, (d) 18 cards with two rows of 12 to 16 cereal boxes on each card, and (e) 23 cards with three rows of 28 cereal boxes. The final program was copied onto a CD-ROM and used for the intervention. Students matched a target cereal in the left hand corner of the card to the corresponding cereal by clicking on it with the computer mouse.

During baseline, the grocery store probes were conducted. The four students were taken to the grocery store and asked to select cereal based on verbal and picture prompts.

A stopwatch was started at the conclusion of the prompt. If the student correctly selected the target cereal within 30 seconds, it was scored as a correct response. This was repeated for six target cereals. After the computer intervention, both probes were repeated. They were conducted in the same manner as the pre-intervention probes.

During the multimedia intervention, a trained observer scored each selection of a cereal box as a correct or incorrect match to the displayed target cereal on the computer screen. These scorings were also prompted by the computer program. A correct response resulted in the selected box moving to the match and back, while incorrect answers resulted in no changes in the display on the screen. All four students correctly matched the boxes above 80% on all levels of the matching task within three intervention sessions. The results measured were the percentage of cereal boxes correctly matched during the pre- and post-intervention probes and during the intervention sessions. The duration in seconds required by the students to locate the target cereals in the pre- and post-intervention grocery store probes also was collected.

A multiple probe across subjects design was used to evaluate the effectiveness of the multimedia program on the discrimination of cereal boxes. Each student went through all five levels of the multimedia program, matching the target cereal to the corresponding box on the screen. All four students matched above 80% across all pre-intervention probes. Their post intervention probes were all at 100%. The other participants' performance average was 24.8% during the pre-intervention probes and averaged 66% accuracy on the post-intervention probes. All students experienced decreases in duration for finding the target cereals in the pre- and post-intervention probes at the grocery store.

They decreased their time for correct selection by means of 54.7%, 48%, 48.2%, and 19.8%, respectively.

Langone et al. (1999) concluded that the results of this study support the effectiveness of multimedia instruction for teaching functional skills. They suggested that the use of multimedia instruction assists students in gaining more efficient location strategies. Langone et al. (1999) further concluded that multimedia instruction supports direct instruction by the teacher and allows for unlimited practice.

Embedded multimedia is a term used to describe teaching methods that embed video content within teachers' lessons. Chambers, Cheung, Madden, and Slavin (2006) evaluated the effectiveness of the *Success for All* (Slavin & Madden, 2001) reading program with and without embedded, brief video components. The participants were 394 first grade students from 10 schools. The students were randomly assigned to treatment and control groups by school. The study used a cluster randomized trial design.

The treatment group used multimedia content (on videotape and computer CDs) embedded in the teachers' 90-minute *Success for All* (Slavin & Madden, 2001) reading lessons. The multimedia material consisted of short skits and demonstrations (e.g., computer animated alphabets, videotaped skits, live puppet shows) that were integrated into the lessons. The control group received traditional reading instruction. All participants were pretested in October and posttested in May. The pretests were the *Peabody Picture Vocabulary Tests-Revised* (Dunn & Dunn, 1981) and the Word Identification subtest from the *Woodcock Reading Mastery Test-Revised* (Woodcock, 1987). The posttests were the reading fluency test from the *Dynamic Indicators of Basic Early Literacy Skills* (Good & Kaminski, 2002) and the Word Identification, Word



Attack, and the Passage Comprehension scales from the *Woodcock Reading Mastery Test-Revised* (Woodcock, 1987).

The data from the pre- and post-tests were analyzed with hierarchical linear modeling. The *PPVT* (Dunn & Dunn, 1981) and the Word Identification pretests were used to adjust for initial differences between the two groups. After the intervention, the treatment group scored significantly higher than the control group on the Word Attack post-test. The treatment group also scored higher on the Word Identification, Passage Comparison, and *Dynamic Indicators of Basic Early Literacy Skills* (Good & Kaminski, 2002) post-tests, but the differences in scores was not found to be statistically significant.

Chambers et al. (2006) concluded that the use of embedded multimedia has potential to enhance students' reading achievement. They suggested that there may have been undetected positive effects on students with limited English proficiency. Chambers et al. (2006) recommended that a larger analysis, involving 40 schools or more is needed to provide sufficient statistical power for the analysis used and to obtain sufficient data for analysis.

Okolo and Ferrietti (1996) conducted a study to ascertain the appropriateness of multimedia design projects for diverse student populations. They asked students with and without learning disabilities in inclusive social studies classrooms to construct multimedia design projects to demonstrate what they had learned and that could be used to instruct other students. Students completed a knowledge test on the Industrial Revolution pre- and post-intervention. A 52-item attitude scale that assessed students' self-efficacy, intrinsic motivation, and attitudes toward cooperative learning was designed for the study. The assessment was completed by students pre- and post-

intervention. Students also completed a 10-item, post-study questionnaire to assess their opinions of multimedia design projects. Observational data were collected through the use of videotaping.

The participants were 65 students in two fourth-grade inclusive classrooms. The ratio of students with and without disabilities in the classrooms was typically 1 to 3. Each classroom had two teachers, a general education teacher and a special education teacher.

Students developed projects about the Industrial Revolution. Room A was assigned the task of investigating the advantages of industrialization and Room B was assigned the disadvantages. Students were assigned to heterogeneous cooperative learning groups of four (one student with disabilities and three without). Each group was asked to develop a multimedia presentation about their issue that could be used to teach other students. The groups created the presentations using *HyperAuthor* (The Learning with Hypermedia Group, 1989-1991). The intervention period lasted two months.

The knowledge test scores were analyzed with a repeated-measures ANOVA to determine pre- to post-test, with disabilities versus typical learner, and classroom. The attitude scale was separated into its three parts and then each was analyzed using a repeated-measures ANOVA to determine the effects of pre- to post-test, classification, and classroom. The post-questionnaire was analyzed using descriptive statistics to determine if students with and without disabilities differed in their opinions of the project.

Data analysis indicated that students' knowledge of the topic improved significantly over the course of the study. All students experienced significant improvement in their attitudes toward cooperative learning. All students also increased self-efficacy, although

those with disabilities experienced lower self-efficacy than those without disabilities. The observational data indicated that the students were off-task for only 10% of the time, which is lower than off-task rates observed in other elementary and secondary classrooms.

Okolo and Ferritti (1996) concluded that multimedia design projects can have a significant impact on the knowledge, self-efficacy, and attitudes for students both with and without disabilities in an inclusive social studies classroom. They suggested that creating their own instructional materials kept the students on task for longer periods of time. Okolo and Ferretti (1996) maintained that technology is a tool that can facilitate complex learning activities and that access to technology may enhance the ability of students to comprehend and communicate information.

The literature supports anchored instruction as an effective intervention to improve problem solving, math, and reading skills (Cognition and Technology Group at Vanderbilt University, 1992; Chambers et al., 2006). Anchored instruction can be used with students with high-incidence disabilities to increase student participation and attendance (Rieth et al., 2003). It appears that anchored instruction is an effective supplement to traditional instruction because it allows for unlimited student practice (Langone et al., 1999).

#### *Social Skills Computer Instruction*

There is limited research available regarding the use of technology to supplement social skills instruction (Fitzgerald, 2005). The studies available suggest that using social skills software in the classroom results in less aggressive behavior and more pro-social student behavior (Ripple Effects, Inc., 1998-2003; Ripple Effects, 1999; Roona et al.,

2003). Social skills software may be a dynamic supplement to traditional social skills instruction (Fitzgerald, 2005).

A computer-assisted social skills learning program was evaluated by Margalit, Malka, Weisel, and Amatziga (1990). Social conflict scenario software created for the study, integrated with strategy training was used to train 12 adolescents with mild mental retardation who had not been successful academically and behaviorally in the general education setting. The 12 participants in the study ranged in age from 14 years to 17 years. The students were referred to the study by school counselors. The counselors and teachers described the students as socially isolated, lonely and passive.

The participants were randomly paired for the training intervention that took place over ten sessions that were 45 minutes in length. The intervention software created for use in the study consisted of school scenarios with episodes of conflict in social situations such as peer teasing and problems with authority figures. At the beginning of each computer lesson, the student was presented with a description of a conflict situation and asked to choose from proposed solutions. Points were gained or lost according to the student's answer. Points over the course of the lesson were accumulated and combined into a general score, ranging from 0-690. In a session, each student completed one lesson.

The pre- and post-assessment of the students' social skills consisted of teacher questionnaires that rated the social skills of each student and student questionnaires that provided information about the students' solution patterns in social conflicts. Both the teachers and the students were administered their respective questionnaires before the intervention took place. The post-questionnaires were administered at the conclusion of the intervention.

A Wilcoxon Matched-Pairs Signed Rank Test was used to compare the pre/post scores of the questionnaires. Significant differences were found for both the teacher and student questionnaires. Analysis of the student and teacher questionnaires revealed that the students improved their social skills and their social understanding. Teachers also reported decreased levels of aggression and hyperactivity during the intervention phase.

Margalit et al. (1990) concluded that using social skills training software encourages more positive social interactions for students with behavioral problems. They maintained that the computer scenarios enabled the teacher to provide a more individualistic approach to social skills instruction. Margalit et al. (1990) also suggested that a combination of computerized and non-computerized activities may help students to better deal with every day environmental social and behavioral challenges.

Personnel involved in the STAR project developed a computer game to support the development of a learner's social problem solving skills (Goldsworthy et al., 2000). The multimedia intervention consisted of an immersive environment with digital videos of social situations, combined with embedded questions and instruction. The participants for the study were 59 male and female adolescents, ranging in age from 10 to 16 years. All participants had been diagnosed with Attention Deficit Hyperactivity Disorder. The students were randomly assigned to one of three groups: (a) multimedia intervention, (b) therapist-directed, or (c) no treatment or control.

The students in all groups met with an adult facilitator twice a week for four weeks. The first and last sessions involved pre- and post-test activities. The multimedia intervention group spent the sessions working in pairs on the computer, progressing through the modules. The modules covered the same material being addressed in the

therapist-directed sessions. The therapist-directed group participated in problem solving training. The training consisted of direct teaching of problem solving skills by the therapist and role-playing exercises. The control group discussed issues of importance to adolescents and worked on reading skills. A facilitator was present to guide discussions and maintain control over the students' behavior.

An assessment of transfer of the social problem-solving skills was created to measure student progress. It consisted of problem-solving activities in video and text formats. The transfer assessment was given both pre- and post-intervention. The *Social Skills Rating System (SSRS)* (Gresham & Elliot, 1990) was completed pre- and post-intervention by teachers, parents, and students to assess social competence. Finally, levels of student engagement were measured by a Likert assessment. Attendance was included in the engagement assessment as a measure of motivation.

A 2x3 repeated-measures ANOVA was used to determine if there were significant differences among the improvement on the video transfer assessment of the three groups. There were significant differences among the three groups, between pre- and post-test scores, and a significant difference between group and occasion. There was a significant increase in problem solving skills performance for the multimedia group, with no significant increase in the other two groups. An ANOVA was used to determine if there were differences among the three groups on the text-based transfer assessment. Results showed no significant differences among the three groups. The multimedia group had the highest social problem-solving scores, but the scores were not significantly higher than those of the other two groups.

The parent, teacher, and student social competence questionnaires were analyzed with repeated-measure ANOVAs to determine if there were differences between groups from pre- to post-assessment in social skills, problem behaviors, and academic competence. No significant differences were found. A repeated-measures ANOVA was conducted to analyze whether there were significant differences in the levels of engagement among the three groups. No significant differences were found with respect to the groups or over time. An ANOVA was conducted to determine if there were significant differences among attendance of students. There were significant differences among the groups. The multimedia group had significantly higher attendance rates than the other two groups.

Goldsworthy et al. (2000) concluded that multimedia technology can potentially be an effective intervention to enhance social problem solving skills and increase social competence. They suggested that the high attendance rates of the multimedia group indicate that multimedia technology is motivating to students. Finally, Goldsworthy et al. (2000) concluded that multimedia programs could prove to be a cost-effective means of providing social problem-solving instruction to large numbers of students.

Holsbrink-Engels (2001) piloted a learning environment with computer-based role-plays to examine its effect on the development of the interpersonal skills of 41 (24 females and 17 males) university students. A pretest/posttest control group design was used to evaluate learning outcomes. The participants were randomly assigned to either an experimental or control group.

The experimental group received an instructional program with the use of computer-based role-plays. All sessions took place in a computer class. Students were told to work

individually, at their own pace. The control group received a similar instructional program without computer-based role-plays.

Three pre- and posttests were given to measure learning outcomes. The first pre- and post-test was a performance test that consisted of two social communicative problems. A 31-item coding system was developed. Scores on the 31 items were added together for each student. High scores indicated high conversation skills. The second pre- and post-test was a knowledge test containing six questions about their interpersonal skills. The third pre- and post-test was a conversation-type classification test that contained ten yes-no questions.

There were no significant differences among participants on the pre-tests. Wilcoxon's Signed-Rank scores showed that both groups improved significantly on the Performance test and the Knowledge test. The computer role-play group performed significantly better than the control group on the Knowledge test. Only the role-play group improved significantly on the Classification test.

Holsbrink-Engels (2001) maintained that both programs were effective in the area of learning outcomes. The data suggested that computer-based role play intervention assists in interpersonal skills development through the use of a conversational model and using individual learning. Holsbrink-Engels (2001) recommended that computer-based role-plays be used in the beginning of training in order to provide more practice for more students at the same time.

A study examining the effects of a computer-assisted social skills intervention on the social competence of students with special needs was conducted by Malka (1995). The study's participants were 114 male students, between the ages of 11 and 15 years. They



were divided into two groups. Group A was comprised of 52 students with learning disabilities (LD) and Group B was comprised of 62 students with emotional and behavioral disabilities (EBD). All students were enrolled in special education classes and had chronic behavioral difficulties.

The intervention used was the *I Found a Solution* (Margalit, 1990) computer-assisted social skills package. The program consisted of situations involving conflict with proposed alternatives from which the students could choose. Students gained or lost points according to their answers. Points were accumulated into a general score ranging from 0-690. The intervention took place over a 4-month period with 45-minute sessions two times a week. Each student worked individually on a computer while teachers provided guidance and facilitated group discussions.

Three assessments were used to gather data. The *Social Skills Rating Scales (SSRS)* (Gresham & Elliott, 1990) were used to assess teachers' ratings of each student's social skills and problem behaviors. The *Loneliness and Social Dissatisfaction Questionnaire* (Asher, Parkhurst, Hymel, & Williams, 1990) was used to assess each student's feelings of loneliness and isolation. A five-point Likert scale was developed to measure peer ratings of their classmates.

A pre-test/post-test design was used to determine the effectiveness of the computer-assisted social skills instruction. No significant differences between groups were found on the pre-test using chi square. Assessment instruments included teacher ratings of student behavior, student ratings of feelings of loneliness, and peer ratings of social acceptance. A 2x3x2 repeated measures ANOVA was used to compare the effects of training between groups. Following the intervention, students in both groups rated

themselves as significantly less lonely. Peers also reported higher levels of social acceptance of the students in both groups. Both groups improved significantly on the teacher ratings of student behavior. The LD/BD comparisons showed no significant differences.

Malka (1995) concluded that computer-assisted instruction was an effective means to improve the behavior and peer acceptance of adolescent boys. She found that the intervention was equally effective for students with learning disabilities and emotional disabilities. It appears that computer-assisted social skills instruction may be an effective way to conduct individual social skills instruction for students with high-incidence disabilities (Malka, 1995).

Multimedia technology may provide educators with the answer to the challenge of motivating students to participate fully in social skills instruction (Goldsworthy, et al., 2000). Not only is computer-assisted social skills instruction motivating for students, but it is also an effective intervention to increase the social competence of students (Malka, 1995). Using emerging technologies to enhance traditional social skills instruction may be an effective way to improve the social skills of students with emotional disabilities (Malka, 1995).

#### *Video Modeling and Video Self-Modeling*

Many studies exist in the literature that support video modeling and video self-modeling as effective interventions to teach social or academic behaviors (Graetz, Mastropieri, & Scruggs, 2006). Both interventions consist of students viewing a videotaped vignette of an exemplary model of a target behavior. Video modeling uses peers or adults as models, while video self-modeling involves the student watching him

or herself performing the behavior. These interventions have been successfully implemented to teach students home and school behaviors (Campbell, 2003).

*Video Modeling.* Video modeling is a teaching technique that entails peers or adults modeling a desired behavior on videotape. Students view the video as a form of observational learning . Video modeling has been used successfully as an intervention to remediate behavioral deficits of children with autism. Maione and Mirenda (2006) investigated the effectiveness of the use of video modeling and video feedback for teaching a child with autism to use social language with typical peers during play. The participant was a 5-year old boy with autism who had participated in regular, structured peer play sessions at home for 6 months prior to the study. The child demonstrated significant difficulty interacting with peers, particularly in the area of social language during play. Two typical peers, a 7-year-old girl and a 5-year-old boy, also participated in the study.

A total of nine videotaped vignettes were developed for the study. The vignettes consisted of adults talking to each other while playing with the toys that were chosen for the study. The actors used short phrases that were consistent with the child's expressive language abilities. The language skills modeled included those already in the child's repertoire and those not displayed. All sessions, including the video modeling sessions, occurred in the child's home. Two tutors who usually worked with the child or his mother implemented the sessions.

The data examined were: (a) the total number of verbalizations, (b) the frequency of both scripted and unscripted verbalizations, and (c) the frequency of initiations and responses. Scripted verbalizations were defined as verbalizations that were identical to

the video model. Initiations were defined as comments or questions that were not contingent on a peer's immediate prior verbalization. Responses were defined as verbalizations that were contingent on a peer's immediate prior verbalization. A multiple baseline across three play activities (Play Doh, toy cars, and a playhouse) was used to evaluate the effects of the intervention.

The design consisted of three phases. The video modeling intervention was introduced into each activity in a staggered, multiple baseline design fashion. Baseline stability was established for each activity before the intervention phase began. Follow-up probes occurred 7, 16, and 18 days after the completion of the intervention phase.

During the baseline and intervention phases, 15-minute activity sessions were held three times a week in the child's home. The child and one of the two peers engaged in all three play activities. All sessions were videotaped, transcribed, and coded. The frequency of the target behaviors for each activity was counted.

During baseline, no videotape modeling occurred. Once a stable baseline was established for an activity, the intervention phase was initiated. During the intervention phase, the child watched three 1-minute vignettes for each activity in which an intervention had begun. This took place 30 to 60 minutes prior to the activity session.

After five sessions of video modeling for the second activity, because there was no evidence of change in the frequency of the child's verbalizations during that activity, a video feedback intervention was introduced. This intervention consisted of the child being shown the video of the previous play session and working with him to evaluate whether or not he was engaged in *good talking*. The video feedback intervention was implemented for all play activities.

Follow-up data were collected 7, 16, and 18 days after the conclusion of the intervention phase. No video modeling or feedback occurred after the intervention phase and the child had no access to the experimental materials. These sessions were conducted in the same manner as the baseline and intervention sessions.

The data suggest that the video modeling intervention was responsible for a significant increase in social language in two of the three activities (play doh and the playhouse). In the third activity (toy cars), video feedback plus prompting were required as well as video modeling to produce a significant change in the target behaviors. Both scripted and unscripted behaviors increased, and the data show that the child achieved over double the amount of unscripted verbalizations compared to scripted verbalizations.

Maione and Mirenda (2006) concluded that video modeling can be a useful intervention to increase the responses and initiations of children during play with their peers. They also suggested that video modeling is an effective intervention to increase the scripted and unscripted language of children during play with their peers. Maione and Mirenda (2006) concluded that video modeling may be an effective intervention for parents and interventionists to use in home and school settings.

The effects of using video modeling to teach perspective taking was studied by Charlop-Christy and Daneshvar (2003). Perspective taking was defined as the ability to determine the mental states of others in order to predict or explain behavior. Three boys with autism enrolled in an after-school behavior management program participated in the study. Two of the boys were 6 years old, and the third was 9 years old. All of the children displayed inappropriate behaviors such as rigid behavior, tantrums, and self-injurious

behavior. All displayed a preference for solitary play and low interest in social interactions.

A multiple baseline across participants and within-child across tasks were used in the study. Five first-order perspective-taking tasks were used for the study. The dinosaur and rabbit task was used as both a pretest and a posttest. The other tasks consisted of: (a) an M&Ms task, (b) a hide-and-seek task, (c) a tiger and zebra task, (d) a pizza task, and (e) a tiger false-belief task. Separate videotapes were made for each task. The purpose of the videotapes was to teach the children to correctly answer all of the tasks. The tapes featured familiar adults performing the tasks and explaining their problem-solving strategies. No instructional videotapes were made for the dinosaur and rabbit task.

The dinosaur and rabbit task was administered to the children first as a pretest to ensure that they did not already possess the ability to answer perspective-taking questions. During baseline, the participants were tested on the perspective-taking tasks. When baseline for the first task was complete, video training for that task began while the remaining tasks remained in baseline.

The students viewed the instructional videotapes for a specific task while the other perspective-taking tasks were still in baseline. The child watched the video twice, and was then tested three times on the perspective-taking task. The viewing of the tape for the next task began when criterion was met for the previous task (two out of three correct responses in a row). The remaining tasks remained in baseline. When criterion was reached for all tasks, the children were given the posttest. Maintenance data were collected after the intervention phase for all sessions was complete.

The behavior measured was the correct response for each task. This response could be verbal or nonverbal. The child was given a score of one if he answered the perspective-taking test question correctly and a score of zero if he answered incorrectly or not at all. The participants' responses were recorded on videotape. Each video was scored by a primary observer and an interrater observer.

All three students failed the pretest. Students A and B successfully passed all five tasks. After multiple trainings, Student C could only pass three out of the five tasks. Students A and B passed both the posttest and the maintenance tests, but Student C was unable to pass either test.

Charlop-Christy and Daneshvar (2003) concluded that video modeling is a fast and effective way to teach skills to some children with autism. They suggested that perspective-taking ability is an important precursor to learning other social skills. Charlop-Christy and Daneshvar (2003) also concluded that video modeling may be an effective method to teach children other complex social skills.

Shipleigh-Benamou, Lutzker, and Taubman (2002) conducted a study to determine whether video of a functional task filmed from the participant's perspective (rather than modeled by a person) could produce skill acquisition in children with autism. The participants in the study were three, 5-year-old children (two boys and one girl) with autism. None of the children exhibited any significant challenging behavior, and all had been known to possess the ability to attend to a visual model for 5 to 10 minutes. The research was conducted in an assessment room at the students' school.

A multiple probe design across tasks, replicated across participants was used to evaluate the effectiveness of the intervention, which was instructional video modeling.

The study consisted of five phases: (a) baseline, (b) intervention, (c) replication probes, (d) post-treatment, and (e) 1-month follow-up. The sessions in each phase were videotaped and viewed at a later time by a trained observer. The observers used task analysis data sheets to record the steps completed for each task. Interobserver agreement was obtained for one third of the sessions for each child. Interobserver agreement was calculated by dividing the number of agreements plus disagreements and multiplying the total by 100%. Interobserver agreement ranged from 96%-100%.

A total of five tasks were selected for the three participants. Student A's tasks were making orange juice, preparing a letter for mailing, and setting the table. The tasks for Student B were cleaning a fish bowl and setting the table, and the tasks for Student C were feeding a cat, putting a letter in a mailbox, and setting the table. Each child was given a favorite reinforcer for successfully completing a task. Videotaped segments of the task analysis for each task were recorded from the perspective of a child completing the task. The only narration on the videos consisted of the narrator telling the participant to watch the task being completed. In order to establish initial attention to the video, a 5-second cartoon segment was dubbed in at the beginning of the tape.

Baseline data were completed in the assessment room over a 2-week period. Sessions were 20 minutes and took place three times a week. Each child was brought into the room and seated at a table that contained all of the materials necessary to complete the task. The session was considered over when the child indicated verbally or nonverbally that he or she was finished with the task.

Intervention sessions were conducted in the same manner as baseline sessions, with the exception of a viewing of the instructional video for the target task. This video was



viewed only once. Immediately following the video, the student was asked to complete the target task. Replication probes were conducted in the student's home to assess skill performance during all phases. A post-treatment phase and a 1-month follow-up session were conducted to assess whether the behavior change was maintained without the video. These sessions were conducted in the same manner as the baseline sessions.

The results suggest that instructional video modeling was effective in promoting skill acquisition across all three children and was maintained during the post-treatment and 1-month follow-up. All three students' correct responding increased dramatically after the introduction of the video intervention. For Student A, appropriate responding increased from 23% across all three behaviors at baseline to 100% during the intervention phase. Student B improved from 0% across tasks to 94% during the video intervention, and Student C improved from below 20% to 100%. All children maintained the behaviors during the replication phase, post-treatment, and the 1-month follow-up.

Shiple-Benamou et al. (2002) concluded that correct responding on acquisition tasks greatly improved after the video viewing. They maintained that instructional video modeling may be effective in increasing attending behaviors by directing the children's attention to relevant stimuli. Shiple-Benamou et al. (2002) also indicated that the results of the home replication phase demonstrated that generalization may be possible.

*Video self-modeling.* Video self-modeling involves a student observing a videotape of him/herself engaging in a specific behavior (Graetz et al., 2006). The behavior depicted is usually an exemplary example of a desired behavior and is usually five minutes or less in length (Hitchcock, Dowrick, & Prater, 2003). Most video self-models are produced by a two-step process that includes videotaping the student attempting or performing a target

behavior and then editing out any errors or distracting footage (Dorwick, 1999). Staff or parents usually discuss the observed behaviors with the student and decide how often and when the video is viewed.

Many interventions involving self-modeling have been applied to situations where other interventions have failed. Video self-modeling can be successfully applied to seven different categories (Dorwick, 1999): (a) increasing adaptive behavior that is intermixed with nondesired behaviors, (b) transfer of behavior to other environments, (c) use of hidden support for anxiety-based disorders, (d) improved image for mood-based disorders, (e) recombining component skills, (f) transferring role play to the real world, and (g) engagement of low-frequency skills. Graetz et al. (20006) suggests that video self-modeling is most successful with students who have difficulty with social interactions, are visual learners, and find television reinforcing.

Neisworth and Wert (2003) tested the effectiveness of video self-modeling to improve social-communication skills by increasing the spontaneous request behaviors in children with autism. The participants were four preschool boys, ages 3 to 6 years old, with autism. The children displayed either minimal or nonexistent spontaneous request behavior. The behavior measured was the frequency of spontaneous requesting, which was defined as asking for an object or action without assistance. A multiple baseline across subjects design was used to evaluate the effectiveness of the video modeling intervention.

A videotape of each child's spontaneous requesting behavior was created. To make the video, spontaneous requesting behaviors were elicited from each child during a

30-minute play session in the home setting. The resulting videotape was edited to show only the desired behavior, not the prompts or negative child behaviors. The completed tapes were 5 minutes in length.

This study had three phases: (a) baseline, (b) intervention, and (c) maintenance. Baseline data were collected in the school setting during 30-minute play sessions. Probes were administered to determine the baseline for each participant. During the intervention phase, the children watched their own videotape at home once each day within an hour of the start of school, for five consecutive school days. Data were collected in the school settings during the intervention and maintenance phases. There was no adult prompting during these phases. The children's spontaneous requests were tallied using event recording.

All of the children increased their average number of spontaneous requests significantly. At baseline, Student A engaged in a mean of .83 spontaneous requests. During intervention, his spontaneous request behaviors increased to a mean of 10.2. In the maintenance phase, the mean increased to 23.6. Student B demonstrated a mean of 2.7 spontaneous requests at baseline, a mean of 17.5 during intervention, and a mean of 20.5 during maintenance. During baseline, Student C engaged in a mean of one spontaneous request. During intervention, the mean increased to 12.6, and during maintenance it was 21. Student D engaged in a mean of 1.2 spontaneous requests during baseline, 13.2 during intervention, and did not continue with the study during the maintenance phase.

Neisworth and Wert (2003) concluded that video self-modeling was an effective intervention for increasing spontaneous request behaviors in children with autism. They

also suggested that skills learned through video self-modeling were maintained by the students over a six-week maintenance period. Neisworth and Wert (2003) further concluded that skills learned through video self-modeling generalized from school to home settings.

Buggey, Toombs, Gardener, and Cervetti (1999) analyzed the effects of video self-modeling on the acquisition and maintenance of appropriate verbal responses to questions. Three students with autism between the ages of 7 and 12 (two boys and one girl) participated in the study. All were developmentally delayed in the areas of language and adaptive behavior. All sessions took place in the child's home.

A multiple baseline across participants was used to evaluate the effectiveness of the video self-modeling intervention. Three trained raters rotated weekly to conduct play sessions in the children's home. The same questions typically asked during a play session were asked of all the children. All play sessions were video taped. The raters met twice a week to view the tapes and record whether or not the children provided an appropriate verbal response to the question. All of the videotapes were transcribed and rated.

Baseline data were collected over a 4 to 6 week period across all children. Baseline sessions were 90 minutes long and took place three times a week. Once the baseline was determined, the researchers created a 5-minute self-modeling tape for each child. This was accomplished by splicing together examples of appropriate responses from the baseline videotapes. The independent variable in this study was- the videotaped self-modeling intervention. The introduction of the video self-modeling intervention was staggered one week apart across participants. During the intervention phase, each child viewed his or her movie before starting the play session. The session then continued in

the same manner as the baseline sessions. This phase lasted 2.5 weeks to 4 weeks. The follow-up phase consisted of a debriefing of the families.

All three children showed an increase in appropriate responding behavior after the introduction of the videotaped self-modeling intervention. The increase was apparent in all three students soon after the introduction of the intervention, and remained consistent. Student A's mean percentage of appropriate responses rose from 21% to 45%, Student B's increased from 23% to 47%, and Student C's jumped from 37% to 72%.

Buggey et al. (1999) maintained that the video self-modeling intervention is readily learned by parents and teachers, and produces relatively quick results. They also suggested that video self-modeling fits well with the Individuals with Disabilities Education Act 1997 requirements for positive behavior supports. Buggey et al. (1999) concluded that video self-modeling may offer an effective positive intervention for children with autism.

A study by Hartley, Bray, and Kehle (1998) investigated the effect of a video self-modeling intervention to increase student participatory behavior in the classroom. The participants in the study were three, 8-year-old, second grade students (two males and one female) from a suburban public elementary school. The students were selected based on teacher recommendation and verification of the low participation rates of the students. All three students were of average academic ability. A fourth student was used as a control to reflect the varying level of activity in the classroom during large group instruction.

A multiple baseline design across participants was employed to evaluate the effectiveness of the intervention. The study consisted of three phases: (a) baseline, (b)

intervention, and (c) follow-up. The intervention phase began immediately after baseline. Intervention data were collected for 8 to 12 weeks, staggered across the students. Immediately following the intervention, follow-up data were collected once a week for 6 weeks for each student. Data were collected on student rates of hand raising in response to a teacher question directed to the class. All data were collected using a frequency within interval method. The observers recorded the frequency of teacher questions directed to the class and the frequency of students raising their hands to answer these questions. The three target students and the one control student were all in the same class for all sessions. During baseline and intervention, data were collected 3 days a week. During follow-up, data were collected once a week.

The intervention videotapes were made during a regularly scheduled class. The teacher asked questions during the lesson, and the target student was cued to raise his/her hand. The videotapes were edited to retain only the desired behavior of hand raising. Two 5-minute tapes were made for each student. During the intervention phase, the videos were viewed 21, 15, and 11 times by Students A, B, and C respectively. The intervention took place in the school psychologist's office. Following the viewing of the videotape, the student was sent back to class and data were collected in class.

All three students increased their hand raising frequency during the intervention phase and maintained these gains during the maintenance phase. During baseline, the students' mean frequencies were compared to the control student, with Student A being 8% versus 63% by the control student, Student B being 6% versus 57% by the control student, and Student C being 24% versus 53% by the control student. During intervention, the hand raising rates of all students became less divergent from the Control

student, with Student C surpassing the Control by a rate of 60% versus 43%. By maintenance, Students A and B also surpassed the Control student by over 20%.

Hartley et al. (1998) maintained that student participation is a crucial element of classroom success. They also believe that video self-modeling is a non-intrusive intervention for both the student and the teacher. Hartley et al. (1998) concluded that their findings support the use of video self-modeling as an effective intervention to increase classroom participation.

Lasater and Brady (1995) examined the effects of self-assessment, behavior rehearsal, and video self-modeling on the self-help skills of adolescents in their homes. The participants in this study were two boys with disabilities who attended public high school and received additional in-home training. Student A was 15 years old and Student B was 14 years old. Both students demonstrated the ability to perform self-help tasks, but with slow or inaccurate performance. Four tasks were selected for the study. Two were designated as training tasks, and two were designated as generalization tasks. The generalization tasks were never exposed to any training, in order to assess generalization effects of the video intervention. All tasks were selected by the students and their parents.

The study consisted of three phases: (a) task assessment, (b) natural baseline, (c) no-prompt baseline, (d) intervention, and (e) withdrawal. During baseline and intervention, four types of data were collected: (a) the number of steps of each task that were completed independently and accurately, (b) the number of prompts, minutes required to complete the task, and (c) the percentage of 10-second intervals during which the interfering behavior occurred. Adult prompting was defined as verbal instructions. No

adult modeling or physical assistance was given during the study. Interfering behaviors were defined as behaviors that interfered with the completion of the task.

The tasks selected by Student A and his parents were: (a) shaving with a razor and shaving cream, (b) making a peanut butter and jelly sandwich, (c) getting lunch ready for the next day, and (d) laundry sorting and loading the washing machine. Student B's selected tasks were: (a) shaving with an electric razor, (b) hanging up a shirt, (c) hanging up a pair of pants, and (d) making his bed. The number of steps for each task was determined during baseline. Normative rates for each task were established to compare the participants' rates of task completion to nonhandicapped individuals on the same task. Observation forms for the tasks were developed that included each step in the task analysis. Data collection took place three to five days a week in the boys' homes.

A multiple baseline across tasks design was used to evaluate the training effects of the video self-modeling intervention. Generalization effects were evaluated using concurrent baselines on the tasks not exposed to the intervention. Potential maintenance was assessed during a follow-up period once the intervention was removed.

During natural baseline, participants were given prompts toward task completion (e.g., verbal commands, modeling, and physical assistance). During no prompt baseline, the participants were given only a general cue, such as, *Shave your face*. During intervention, each participant viewed a series of vignettes of himself performing the training tasks. As the boys watched the videos, the trainer questioned them about what was going on. After the questioning, the tape was replayed and the trainer asked the student about specific correct and incorrect behaviors. Following this discrimination



training, the trainer and the participant role-played the correct behavior. Finally the student performed the task independently.

In order to fade the intervention, the video for the first task was withdrawn while the participants continued to view the video for the second task. The video for the second task was then withdrawn after two days. Maintenance of task performance was assessed by intermittent probes once a week.

During baseline, Student A performed shaving at a 12% accuracy rate and sandwich making at an 11% accuracy rate. After intervention, his accuracy for both tasks increased to 96% and 99% for shaving and sandwich making, respectively. Following the withdrawal of the intervention, the improved accuracy remained stable. Student B increased his accuracy for shaving and hanging his shirt up in the closet from 10% and 18% to 94% and 97%, respectively. Following withdrawal, his accuracy remained at 100% and 98%. Student A's accuracy on his generalization tasks (making lunch and doing laundry) increased from 16% and 26% at baseline to 100% and 98%. Student B's accuracy rates on his generalization tasks (making the bed and hanging up pants) were 10% and 6% at baseline. These rates increased to 59% and 40%. Both students' performance exceeded the established normative rates for their tasks.

Lasater and Brady (1995) concluded that the video self-modeling intervention demonstrate social validity in that it targets relevant behaviors, has the potential to improve the quality of life of all in the home, and is easy to replicate by the family. Anecdotal records collected during the study revealed that both students enjoyed participating in the study, which affected their motivation in a positive manner. Lasater

and Brady (1995) concluded that video self-modeling may be an effective intervention for improving task fluency and accuracy.

Video self-modeling as an intervention for disruptive behavior was examined by Possell, Kehle, Mcloughlin, and Bray (1999). The participants in the study were four boys enrolled in a suburban elementary school. The boys were from 5 years to 8 years of age. Two of the boys were in a general education class, and two boys were in a self-contained special education classroom for students with social emotional disabilities. All of the students had average intelligence and exhibited a high frequency of disruptive behaviors.

The dependent variable in this study was the frequency of disruptive behavior. Disruptive behavior was defined as any of seven behaviors: (a) out-of-seat, (b) touching, (c) vocalization, (d) playing, (e) disorienting, (f) making noise, and (g) aggression. Behavior observations were conducted during regularly scheduled classes, in the subject area identified by the teacher as the most problematic. A partial time-sampling procedure was used to record disruptive behaviors during 15-second intervals. Each teacher completed a *Conners' Teacher Rating Scale (CTRS)* (Conners, 1989) at baseline and again at follow-up to measure their perceptions of the students' behaviors across conditions.

Baseline data were collected for a period of 1 to 4 weeks, staggered across students. Videotaping was conducted during two or three baseline sessions. All inappropriate behavior was edited out of the videotapes. Instances of the students being reinforced for appropriate behavior were included in the videotapes. Each videotape was 5 minutes in length. The intervention phase began immediately after the final videotaping and editing.

Data collection continued with direct observations. The students viewed their videotapes six times over a 2-week period. Each student viewed his videotape in the school psychologist's office and then returned to class. Follow-up data were collected both at the end of the intervention and at the end of a 6-week period.

Student A and Student B showed a modest decrease in disruptive behavior, from 59.4% at baseline to 54% at follow-up and 50% to 40%, respectively. Student C and Student D showed more substantial decreases, from 55.25% to 31% and from 53.75% to 22%. Students C and D also maintained improvement during follow-up, while Students A and B showed only a 5% and 10% decrease respectively in their behavior at follow-up. The results of the *CTRS* were consistent with the observational data, with the ratings for Students C and D improving significantly from baseline to follow-up, and the ratings for Students A and B remaining consistent from baseline to follow-up.

Possell et al. (1999) attributed the idiosyncratic effects across subjects in the study to the ages of the participants. Students A and B were younger than Students C and D. They surmised that in order to benefit from video self-modeling, students must be able to attend, retain, and reproduce the modeled behavior. The students also viewed the videotapes outside of the classroom, so it is possible that they experienced difficulty generalizing across time, settings, and behavior. Possell et al. (1999) suggested that video self-modeling may be an effective intervention for older children with emotional and behavioral disabilities. They suggested that video self-modeling should be considered as an intervention because it is less intrusive than most behavioral interventions and requires less student time.

The literature supports the use of video modeling and video self-modeling as interventions to remediate the social skills of students with disabilities (Charlop-Christy & Daneshvar, 2003; Maione & Mirenda, 2006; Neisworth & Wert, 2003). These interventions are easily learned by both parents and teachers (Buggey et al., 1999; Lasater & Brady, 1995; Maione & Mirenda, 2006) and produce quick results (Buggey et al., 1999; Hartley et al., 1998; Possell et al., 1999). The findings of these studies suggest that video self-modeling may be an effective intervention to teach social skills to adolescent students with emotional disabilities.

#### Summary

The literature supports the use of social skills training as a means to increase the prosocial behavior of students with behavioral deficits (Goldstein & McGinnis, 1997; Desbiens and Royer, 2005; Lane, 1999). This is especially important as students with emotional and behavioral disabilities generally have serious deficits in the areas of behavior and social skills. Having a repertoire of appropriate social skills enables students with emotional and behavioral disorders to participate in general education classes (Lane et al., 2006). Effective social skills intervention programs contribute to the academic and social achievement of students with emotional and behavioral disabilities (Nelson et al., 2004).

The literature suggests that social skills interventions should have the following components: (a) direct teaching, (b) modeling, (c) role play, and (d) homework (Desbiens & Royer, 2005; DeRosier, 2004; Frankel et al., 1995; Kamps & Ellis, 1995; Wise & Bundy, 2004). Social skills interventions that contain the correct components and are

implemented correctly can significantly improve students' peer relations, assertiveness, and classroom behavior (DeRosier, 2004; Frankel et al., 1995; Wise & Bundy, 2004). When social skills interventions contain the correct components, the generalization and maintenance of student skills is improved (Desbiens & Royer, 2005; Kamps & Ellis, 1995).

The results of studies analyzing the outcomes of social skills training are promising (Bienert & Schneider, 1995; Ciecchalski & Schmidt, 1995; Lane, 1999; Lo et al., 2002; Mathur et al., 1998). Social skills training is an effective intervention in both the elementary and secondary setting (Lane, 1999; Mathur, et al., 1998). When implemented correctly, social skills training increases the acquisition and maintenance of students' social skills (Bienert & Schneider, 1995).

According to the literature, anchored instruction can be an effective intervention to improve problem solving, math and reading skills (Chambers et al., 2006; Cognition and Technology Group at Vanderbilt University, 1992). Anchored instruction, when used as a supplement to traditional instruction, is an effective way to offer students unlimited practice (Langone et al., 1999). Okolo and Ferretti (1996) suggest that anchored instruction has the potential to improve the comprehension and communication skills of students with high-incidence disabilities.

A multimedia approach that combines computer and traditional activities may help students learn social skills more efficiently and increase their social competency (Goldsworthy, et al., 2000). Practicing the use of a conversational model through computer-based role-play interventions may increase students' interpersonal skill development (Margalit et al., 1990). Students with learning disabilities and

emotional/behavioral disabilities may benefit significantly from computer-assisted social skills instruction (Malka, 1995).

Video modeling and video self-modeling can be beneficial in the area of social skills instruction with students with disabilities (Charlop-Christy & Daneshvar, 2003; Maione & Mirenda, 2006; Neisworth & Wert, 2003). These interventions are effective in increasing students' generalization of learned behavior from the school to the home setting (Maione & Mirenda, 2006; Neisworth & Wert, 2003; Shipley-Benamou, et al., 2002). Two advantages of video modeling and video self-modeling are that they are easily learned and used by both parent and interventionists (Buggey et al., 1999; Lasater & Brady, 1995; Maione & Mirenda, 2006). As supplements to traditional social skills instruction, interventions using video modeling and video self-modeling produce quick results, are easy to use, and are non-intrusive (Buggey et al., 1999; Hartley et al., 1998; Possell et al., 1999).

Studies indicate that using anchored instruction in the form of student-generated multimedia projects is a promising intervention to remediate social skills deficits in secondary students with emotional and behavioral disabilities. Based on this review of literature, this dissertation study was designed to evaluate the effectiveness of a combination of traditional social skills instruction and student-generated DVDs as compared to traditional social skills instruction for middle school students with emotional and behavioral disorders.

## CHAPTER 3

### METHOD

#### Overview

Social skill instruction is one of the most researched and accepted practices to ensure the success of students with emotional disabilities (Colvin et al., 1993; Ison, 2001; Ogden, 2001; Poulou, 2005). Research supporting the use of computer-assisted instruction with students with emotional disabilities is in its infancy, but the existing research suggests that its use may help decrease disruptive behavior, raise self-esteem, increase motivation, and increase time on task (Carman & Kosberg, 1982; Fitzgerald et al., 1986; Plienis & Romanczyk, 1985; Wetzel, 2001). Discovering an effective strategy that incorporates the use of computer-assisted instruction to teach social skills may result in increased motivation and generalization of the skills taught.

In this study the use of student-generated social skills DVDs combined with traditional teacher-led lessons was compared to teacher-led social skills instruction only. While both interventions are designed to increase social skills, they were being compared to determine the effects on perception (student, teacher, and parent) and maintenance of the skills over time as well as to ascertain the usefulness of the addition of computer-assisted instruction.

This study was designed to compare student, teacher, and parent perceptions of the social skills of eight triads of junior high students with emotional disabilities ( $n = 25$ ) who created original social skills lessons and role plays and recorded them on DVDs combined with traditional teacher-led social skills instruction (combination intervention) to the perceived social skills of the same eight triads of junior high school students with emotional disabilities ( $n = 25$ ) who received traditional teacher-led social skills instruction only (traditional intervention). The triads received social skills instruction using the *Skillstreaming* method (Goldstein & McGinnis, 1997). The results were evaluated using a  $2 \times 3$  (intervention  $\times$  time) factorial ANOVA with repeated measures on both factors. The researcher also compared the effects of the traditional intervention and the combined intervention on the students' knowledge of social skills. The results were evaluated using paired  $t$  tests.

For the first four weeks of the study, the triads participated in traditional social skills instruction for a 50-minute period daily in their special education classroom. Teachers used a set protocol to teach the skills (see Appendix A). Each week the teachers introduced, defined, and facilitated the students' role playing a skill. The students participated in activities that reinforced their learning of the skill. At the end of each week, the students were tested on the skill they learned by listing the skill and all of its steps. A 1-week maintenance period followed the 4 weeks of instruction. Next, the teachers implemented the combined intervention. The teachers again used a protocol to teach the 50-minute lessons (see Appendix A). Again they introduced and defined a new skill weekly as well as facilitated student role-play. However, for this 4-week period, a multimedia component was added. Students created their own multimedia social skills



lessons with role-plays and the teachers facilitated during this process. The culmination of the weekly skill lessons was student screenings of their digital work.

In both intervention conditions, data were collected using a modified form of the *Self, Parent, and Teacher/Staff Skillstreaming Checklists* (Goldstein & McGinnis, 1997) (see Appendices B, C, D).

### Research Questions

This study focused on the following questions:

Research Question 1: Does the combined social skills intervention (traditional instruction paired with student multimedia authoring) increase the use and maintenance of social skills of the students with emotional disabilities more than the use of the traditional social skills intervention:

- a. as perceived by the students when measured by the *Student Skillstreaming Questionnaire*?
- b. as perceived by their teachers when measured by the *Teacher Skillstreaming Questionnaire*?
- c. as perceived by their parents when measured by the *Parent Skillstreaming Questionnaire*?

It was predicted that the combined social skills intervention would increase the use of social skills by the students with emotional disabilities more than the use of the traditional social skills intervention as perceived by students, teachers, and parents, and measured by the *Student, Teacher, and Parent Skillstreaming Questionnaires*.

Research Question 2: Is student knowledge of social skills steps greater after the combined social skills intervention (traditional instruction paired with student multimedia authoring) than after the traditional social skills intervention?

It was predicted that the students' knowledge of social skills steps would be greater after the combined social skills intervention (traditional instruction paired with student multimedia authoring) than after the traditional social skills intervention.

### Participants

The students selected to participate in this study were students attending middle school in the northeast region of a school district located in a large southwestern city. The students ranged in age from 11-years-old to 14-years-old. Only students who signed an informed assent form (see Appendix E) and whose parents signed an informed consent form (see Appendix F) participated in this study. The readability of the student assent form was at the 3.0 grade level. The readability of the parent form was at the 5.0 grade level.

### *Students*

The 25 students selected for this study were students with identified emotional disabilities who were placed in self-contained junior high school special education classrooms. All students were eligible for special education services as students with emotional disturbance under Nevada Statute (Nevada Administrative Code, 2005a), as specified on each of their Individualized Education Plans. The definition of emotional disturbance in Nevada is: A severe emotional disorder exhibited by a person for at least three months that adversely affects academic performance and includes one or more of

the following: (a) an inability to learn that is not caused by an intellectual, sensory, or health factor, (b) an inability to engage in or maintain interpersonal relationships with peers and teachers, (c) inappropriate behavior or feelings, (d) a general pervasive mood of unhappiness or depression, (e) a physical symptom associated with a personal or academic problem, or (f) the expression of fears regarding personal or academic problems (Nevada Administrative Code, 2005a).

Three self-contained special education classrooms were used in the study. Each classroom had eight students who spent a minimum of 60% of their school day in the class, as defined by Nevada State Law (Nevada Administrative Code, 2005b). The students completed modified versions of the *Student Skillstreaming Checklists* (Goldstein & McGinnis, 1997) (see Appendix B) as pre-, post-, and maintenance questionnaires during the time allotted for social skills instruction in both the traditional intervention and the combined intervention.

There was a total of eight triads in the three classrooms ( $n = 25$ ). Demographic information was collected for each child who participated in the study (see Table 1).

Table 1

*Demographics of Students*

Characteristics	Class A	Class B	Class C
<b>Gender</b>			
Male	3	8	12
Female	0	1	1
Total	3	9	13
<b>Age</b>			
Mean	12.6	12.2	12.0
Range	12-14	11-14	11-13
<b>Ethnicity</b>			
Caucasian	1	3	1
African			
American	2	3	6
Hispanic	0	3	5
Native			
American	0	0	0
Asian/Pacific			
Islander	0	0	1
Other	0	0	0
Total	3	9	13

### *Teachers*

Three special education teachers participated in this study. All three teachers were assigned to self-contained special education classrooms. All teachers signed an informed consent form prior to participation in the study (see Appendix G). The teachers delivered the traditional and combined interventions after extensive training. All of the teachers completed a modified version of the *Teacher/Staff Skillstreaming Checklist* (Goldstein & McGinnis, 1997) (see Appendix C) for each of their students as pre-, post-, and maintenance questionnaires. Demographic information for the teachers is provided in Table 2.

Table 2

*Demographics of the Special Education Teachers*

Characteristic	Teacher A	Teacher B	Teacher C
Gender	Female	Female	Female
Age	40	40	35
Ethnicity	African American	Caucasian	Caucasian
Degree	Master of Education	Master of Education	Master of Education
Total Years Teaching	5	8	10
General Education	0	0	0
Self- Contained for Students with EBD	1	1	7
Other Areas of Special Education	4	7	3

### *Instructional Assistants*

Each classroom had one full-time instructional assistant provided by the school district. The assistant's role was to help the teacher with instructional and clerical duties. The instructional assistants participated in the teacher trainings. All instructional assistants signed an informed consent form prior to participation in the study (see Appendix H).

### *Parents*

The parents of the 24 students were asked to participate in the pre-, post-test, and maintenance segments of this study for both interventions. Parents signed an informed consent for their participation in the study (see Appendix I). One of each student's parents filled out a modified version of the *Parent Skillstreaming Checklist* (Goldstein & McGinnis, 1997; Goldstein et al., 1997) (see Appendix D). Parents rated their child's social skills before each intervention began, at the completion of each intervention, and two weeks after each intervention ended. Parents also completed a demographic questionnaire the first time they filled out the *Parent Skillstreaming Questionnaire*. The demographics that were collected from the parents are in Table 3. The teachers distributed the questionnaires in sealed envelopes to the students for them to take home to the parents. The parents returned all completed questionnaires in postage-paid envelopes. If a parent did not return the questionnaire, another was sent home to increase the return rate. The return rate over the course of the study was 100% for the 24 students.

**Table 3**

*Demographics of Parents*

Characteristics	Class A	Class B	Class C
<b>Gender</b>			
Male	1	2	3
Female	2	7	10
Total	3	9	13
<b>Age</b>			
Mean	31.6	31.2	33.2
Range	28-37	30-52	29-43
<b>Ethnicity</b>			
Caucasian	1	3	1
African	2	3	6
American			
Hispanic	0	3	5
Asian/Pacific	0	0	1
Islander			
Native	0	0	0
American			
Other	0	0	0
Total	3	9	13



### *Trainer*

The trainer who was responsible for providing the intervention strategy training holds a Master's Degree in Special Education with an emphasis in emotional disturbance and has 15-years teaching experience. She was a school district regional behavior mentor who trained teachers in the area of behavior management.

### *Interrater Observers*

The trainer and two other individuals were responsible for assuring that all teachers implemented the social skills interventions as directed through the training and lesson protocols. All interrater observers were doctoral students in special education who had experience working with students with emotional disabilities. All observers were involved in all of the teacher training sessions. They collected reliability data on the teachers' presentation of the lessons and on the scoring of the questionnaires.

*Teacher reliability.* The three observers viewed the teachers as they taught the social skills and technology lessons. They checked off the implementation steps of the traditional social skills instruction and the combined intervention using a checklist (see Appendix J). The teachers' fidelity to instruction was calculated using a percentage. The observers provided feedback to the teachers on their fidelity percentage after each lesson.

*Questionnaire scoring reliability.* The trainer scored all questionnaires, social skills pre-tests, and post-tests. The other interrater observers rescored 25% of each of these measures. Reliability was determined by  $[\text{agreements}/(\text{agreements} + \text{disagreements})] \times 100\% = \text{percent of agreement}$ .

## Setting

This study was conducted in classrooms in three comprehensive middle schools in the northeast region of a large Southwestern school district. These schools serve students in grades six through eight and have both general education and special education classes. The schools in this region serve a wide range of racial, language, family, and economic groups. Consent of each school's principal was obtained prior to the study (see Appendix K).

### *Classrooms*

This study was conducted in three self-contained special education classrooms. These classrooms have been designated to serve students identified as having emotional disabilities in grades six through eight. The main focus of the classrooms is behavior, with social skills training being an integral part of the curriculum. Each classroom is taught by one special education teacher and has one instructional assistant. Each classroom has at least three computers for the students to use during the instructional day.

## Instrumentation

Permission was obtained to use a modified form of the *Teacher/Staff, Parent, and Student Skillstreaming Checklists* (Goldstein & McGinnis, 1997) in this study (see Appendix L). These questionnaires (see Appendices B, C, & D) were used as pre-, post, and maintenance measures of the participating students' social skills as they were perceived by themselves, their parents, and their teachers. They are Likert-scale questionnaires that focus on adolescent social skills. The complete *Teacher/Staff, Parent, and Student Skillstreaming Checklists* (Goldstein & McGinnis, 1997) focus on fifty social

skills that may be exhibited by adolescents. However, the teachers, students, and parents were asked to rank only the eight behaviors taught in the study. Teachers used a traditional intervention to teach four skills (listening, following directions, dealing with someone else's anger, and asking permission) and the combined intervention to teach four skills (using self-control, keeping out of fights, dealing with group pressure, and concentrating on a task).

The skills were ranked by the students, parents, and teachers from almost never performing a skill (1) to almost always performing a skill (5). Parents completed the questionnaire for their own child, teachers completed the questionnaire for each of their students, and each student completed the questionnaire for him or herself. The parent, teacher, and self-rankings of the pre-, post- and maintenance questionnaires for the traditional and combined interventions were compared over time on the eight identified social skills.

## Materials

### *Social Skills Training*

This study used *Skillstreaming the Adolescent* (Goldstein & McGinnis, 1997) as the social skills training program. This program is designed to teach prosocial skills to adolescents. The program uses planned and systematic instruction to teach 50 prosocial skills to adolescents. All of the students in the study were taught eight skills from this program. The eight skills are: (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

for inclusion in the study because secondary general education teachers rated them as essential for student success in school (Lane et al., 2004).

The students received instruction at the rate of one skill per week. This instruction was taught five times a week, for 50 minutes. Each skill was taught using a controlled predetermined lesson format (see Appendix A). Teachers were trained on the use of all materials and the lesson format. The format and the training were designed to minimize differences in teacher instruction across the three classrooms and skills being taught.

### *Cameras*

Each classroom had the use of a video camera. The cameras were used by the students to videotape their role-plays during the combined intervention. All three classrooms used a Sony DCR-TRV33. Students were trained how to use the cameras (see Appendix M).

### *Computers*

Each classroom had at least three computers. These computers had the capability of burning DVDs. Classroom A had three Gateway DX310S computers. Classroom B had three Dell Dimension E510 computers. Classroom C had four Gateway DX310S computers. The computers were placed in centers in each of the classrooms. The students worked together on the computer in their triads as they edited their presentations.

### *Software*

The students in this study used *Imagemixer* (Pixela, 2002-2006) as their video editing software. This software allows the students to download their movies, edit recorded work, add special effects, and burn the results onto a DVD that can be viewed on a computer or on a television with a DVD player. This provided students the opportunity to

share their work with others. Students were trained on the use of the software (see Appendix M).

### Training

Teachers, instructional assistants, and students participating in this study were trained in order to maximize the effects of the intervention. All special education teachers were trained to use the social skills program *Skillstreaming the Adolescent* (Goldstein & McGinnis, 1997) and all of the equipment (e.g., camera, software, and computers). They were taught the teaching format for both the social skills lessons and the technology lessons. The students also were trained in their classrooms to use the equipment. The special education teachers trained their own students.

#### *Special Education Teachers and Instructional Assistants*

*Traditional Delivery.* The special education teachers and assistants attended two training sessions at the University of Nevada Las Vegas. This training lasted two hours and took place after school. The teachers and assistants were taught the instructional sequence in the *Skillstreaming the Adolescent* program (Goldstein & McGinnis, 1997) during the first training. The participants viewed a thirty-minute video, *Skillstreaming the Adolescent* (Goldstein, 1999b) and were given scripted lessons for each day of the week (see Appendix A). They were taught how to apply the lesson to each skill in the study. The teachers and assistants practiced by role-playing the lesson scripts. Teachers also received the problem situation worksheets to use in the traditional intervention (Appendix N) and the homework worksheets to be used in the traditional and combined

interventions (Appendix O). The teachers were provided with these teaching materials to standardize instruction across classrooms and social skills taught.

Each teacher demonstrated mastery of the intervention by teaching a mock lesson. The trainer provided feedback on the lesson. An outline of this training session is in Appendix P.

*Combined method.* The second training session focused on the use of the technology necessary for the combined intervention portion of the study. This session lasted three hours and was conducted in a computer lab on the campus of the University of Nevada Las Vegas. An outline of this training session is in Appendix Q. Teachers were given step-by-step instructions on the use of the video camera and *Imagemixer* (Pixela, 2002-2006) (Appendix M) to use with their students. To demonstrate mastery, teachers created and screened a 5-minute DVD using the cameras and software. The trainer provided the teachers with feedback.

### *Students*

*Technology training.* The students participating in the study received training on the technology necessary for the combined intervention portion of the study. Teachers conducted the technology training in their classrooms over the course of two class periods. The trainer was present to assist the teacher in case of unforeseen problems. During the first training, students learned how to use the camera. The second training involved teaching students how to transfer video from the camera to *Imagemixer* (Pixela, 2002-2006). During the third training, students learned how to edit their videos and save them to DVDs. See Appendix M for a complete outline of the training sessions.

### *Interrater Observers*

The observers in this study were two special education doctoral students and the trainer. The doctoral students participated in a total of eight hours and thirty minutes of training. They attended all of the teacher trainings and were given reliability checklists (see Appendix J) to record teacher adherence to the lesson sequence. The interrater observers were trained by viewing videos of teachers using the *Skillstreaming* method to teach social skills and determining whether or not the steps were followed by using the lesson sequence checklist. The observer's check sheets were compared to the trainer's check sheets for accuracy and reliability of observation was calculated. An 80% level of agreement was used.

### Social Skills Instruction

The students who participated in this study received social skills instruction in their specialized classrooms during five, 50-minute social skills training sessions per week (see Appendix A). The instruction was based on the *Skillstreaming the Adolescent* program (Goldstein & McGinnis, 1997). The three special education teachers taught the lessons. A different skill was taught each week.

### *Traditional Lessons*

The traditional lessons lasted 4 weeks and followed the format found in Appendix A. The social skills lesson for each week (listening, following instructions, dealing with someone else's anger, and asking permission) began with the teacher reviewing the skill and its steps. For the remainder of the week, the students participated in various problem solving (see Appendix N), role playing, class discussion, and journaling activities. To

demonstrate proficiency, students role-played the skill and took a quiz on the skill at the end of the week. The quiz consisted of listing the skill and its steps.

### *Combined Lessons*

For the second 4 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 (see Appendix A). On Monday, teachers defined the skill to the students and broke it down into steps (see Appendix R). Teachers modeled the skill to show students what it should look like. The students' need for the skill was established through a class discussion (e.g., "Why is it important to concentrate on a task? What can happen if you get into a lot of fights?"). The students practiced the skill. The teacher provided the students with feedback and assigned homework (see Appendix O). The 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 (Appendix M) 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. The class 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.



## Design and Procedures

This study was conducted over a twelve week period and consisted of five phases. The phases included training, pre-testing, traditional social skills intervention, post-testing, maintenance, pre-testing, combined intervention, post-testing, and maintenance.

### *Phase One*

Phase one was the training phase of the study. During this phase, the trainer obtained consent from all participants, conducted participant training, and randomly assigned the student participants to triads within their classrooms.

*Consent.* Informed consent forms were obtained from parents, teachers, and instructional assistants. Assent forms were obtained from the student participants. The trainer visited the participating schools and explained the study to the teachers and students. Consent and assent forms were distributed and collected. The parental informed consent forms were sent home with the students and mailed back to the trainer in the postage-paid envelopes provided with the forms.

*Training.* During this phase, the special education teachers and instructional assistants were trained to use the *Skillstreaming the Adolescent* program (Goldstein & McGinnis, 1997). This training was 150-minutes long (see Appendix P). The teachers and assistants viewed a 30-minute video, *Skillstreaming the Adolescent* (Goldstein, 1999b) and role-played the lesson scripts. They also received the scripts for the lessons (Appendix A), the problem situation worksheets (Appendix N), and the homework worksheets (Appendix O).

The interrater observers were trained with the teachers in the use of the traditional social skills intervention. They were given the teacher accuracy checklists (see Appendix

J) along with an explanation of their use. Interrater reliability was established by the observers watching the same video and marking the checklists. The formula  $[\text{agreements}/(\text{agreements} + \text{disagreements})] \times 100\% = \text{percent of agreement}$  was used to establish interrater reliability.

*Triad assignment.* Each student, with a parental informed consent form, was assigned to one of eight triads. Classroom A had one triad, Classroom B had three triads, and Classroom C had four triads. Students were assigned to triads randomly, by picking names out of a container (see Table 4).

#### *Phase Two*

After the teacher and parent consent forms were returned, the special education teachers completed the pre-questionnaire *Teacher Skillstreaming Questionnaire* for each of their students. This is a modified questionnaire (see Appendix C) designed to measure the teachers' perceptions of their students' social skills specific to the study.

Teachers distributed the pre-questionnaire *Student Skillstreaming Questionnaire* to the students and instructed them to complete it. This is a modified questionnaire designed to assess the students' perceptions of their own social skills (see Appendix B). To ensure confidentiality, each questionnaire was distributed and collected in an individually numbered envelope. Each student was assigned a number that was his or hers throughout the study. Each student was also pre-tested on the four skills that were taught during the traditional intervention phase of the study.

The pre-questionnaire *Parent Skillstreaming Questionnaire* was distributed to parents and collected. This is a modified questionnaire (see Appendix D). The students brought the pre-questionnaire home to their parents in sealed envelopes and the parents mailed

them back to the trainer in a postage paid envelope. Parents were assigned the same number as their child. If a parent did not return the questionnaire, another was sent home to increase the return rate.

### *Phase Three*

Phase three was the traditional intervention phase of the study and lasted for four weeks. Teachers implemented the traditional social skills intervention using the lesson protocols (Appendix A). They taught four skills (listening, following instructions, dealing with someone else's anger, and asking permission) at the rate of one skill a week. The interrater observers observed and videotaped each lesson and provided feedback to the teachers concerning their adherence to the structured lesson format.

### *Phase Four*

*Post-questionnaire.* During Phase Four, the teacher, parent, and student questionnaires for the traditional instruction were redistributed and completed. Teachers completed a teacher questionnaire for each student. Students completed the questionnaire during their social skills class and took home the parent questionnaire. Parents completed the questionnaire and mailed it back in a postage paid envelope. If a parent did not return the questionnaire, another was sent home to increase the return rate. Students took post-tests on the four skills taught. The data were entered into a database.

*Maintenance.* During this phase, students did not receive any instruction on the social skills specified in this study. No classes were observed. This phase was one week long, and took place immediately after Phase Three. At the end of the week, the teacher, parent, and student questionnaires were redistributed and completed by teachers, parents, and students.

**Table 4***Triads of Students*

<b>Triad</b>	<b>Class</b>	<b>Students</b>	<b>Age</b>	<b>Gender</b>
1	A	A1	12	Male
		A2	14	Male
		A3	12	Male
2	B	B1	14	Female
		B2	11	Male
		B3	11	Male
3	B	B4	12	Male
		B5	12	Male
		B6	13	Male
4	B	B7	12	Male
		B8	12	Male
		B9	13	Male
5	C	C1	11	Male
		C2	11	Male
		C3	11	Male

Table Continues

Table 4 continued

*Triads of Students*

Triad	Class	Students	Age	Gender
6	C	C4	13	Male
		C5	13	Female
		C6	12	Male
7	C	C7	12	Male
		C8	11	Male
		C9	12	Male
8	C	C10	13	Male
		C11	12	Male
		C12	13	Male
		C13	12	Male

*Combined intervention teacher training.* During Maintenance, the teachers and instructional assistants attended a three-hour training session (Appendix Q) to learn how to implement the combined intervention (traditional instruction paired with student multimedia authoring). The trainer followed the scripted lessons to teach the participants how to: (a) use the camera, (b) move the video from the camera to the computer editing program, (c) use the editing program, and (d) save their finished product on DVD. The teachers practiced their new skills and demonstrated proficiency by creating and editing a five-minute movie. They screened their movie and received feedback from the

participating teachers and trainer. A question and answer period was provided to assist teachers in structuring the combined intervention in their respective classrooms. The teachers were provided with a lesson format to use to train the students to use the technology (Appendix M).

The interrater observers received their combined intervention training at this time. They were given the teacher accuracy checklists (see Appendix J) along with an explanation of how to use them. Interrater reliability was established by the observers watching the same video and marking the checklists.

*Student training.* Students received instruction on the use of the video camera and *Imagemixer* (Pixela, 2002-2006) during this phase. The special education teachers used the lesson protocols (see Appendix M) to teach the use of the video camera, the computers, and *Imagemixer* (Pixela, 2002-2006) during two 50-minute class periods. The trainer was present to facilitate the training. Students demonstrated proficiency by creating a five-minute movie in their triads.

#### *Phase Five*

Phase five began the combined intervention portion of the study. Students were taught four new social skills (using self-control, keeping out of fights, dealing with group pressure, and concentrating on a task). A multimedia component was added to the traditional intervention.

*Pre-questionnaire.* The teacher, parent, and student questionnaires were distributed and completed for all students participating in the study. This questionnaire elicited the teacher, student, and parent perceptions of the students' knowledge of the skills that were taught using the combined intervention.

Teachers completed a teacher questionnaire for each student. Students were given the student questionnaires in sealed, numbered envelopes and were asked to complete the questionnaire during their social skills class. Each student was also pre-tested on the four skills that were taught during the combined intervention phase of the study. Students took home the parent questionnaire in sealed envelopes. Parents completed the checklist and mailed it back to the trainer in a postage paid envelope. If a parent did not return the questionnaire, another was sent home to increase the return rate.

*Combined intervention.* Teachers taught the next four social skills (using self-control, keeping out of fights, dealing with group pressure, and concentrating on a task) using the combined intervention. Students were taught one skill per week, but the format of the lessons changed to include a multimedia element (see Appendix A). The teacher began the week by introducing and demonstrating the new skill. As the week progressed, students created their own role-plays, videotaped them, and edited them into a multimedia presentation that was presented to the class on Friday.

*Post-questionnaire.* Teachers, students, and parents completed the post-questionnaires. Teachers completed a teacher questionnaire for each student. Students were given the student questionnaire in sealed, numbered envelopes and completed the questionnaire during their social skills class. Each student was also post-tested on the four skills that were taught during the combined intervention phase of the study. Students took home the parent questionnaires in sealed envelopes. Parents completed the checklist and mailed it back to the trainer in a postage paid envelope. If a parent did not return the questionnaire, another was sent home to increase the return rate.

*Maintenance.* The maintenance part of this phase lasted for one week after the end of the combined intervention. During this phase, students did not receive any instruction on the social skills specified in this study. No classes were observed.

*Post-questionnaire.* Teachers, students, and parents completed the questionnaires a final time. Teachers completed a teacher questionnaire for each student. Students were given the student questionnaires in sealed, numbered envelopes and completed the questionnaire during their social skills class. Students took home the parent questionnaires in sealed envelopes. Parents completed the checklist and mailed it back in a postage paid envelope. If a parent did not return the questionnaire, another was sent home to increase the return rate.

#### Data Collection

Interrater reliability on the scoring of the modified *Skillstreaming Checklists* (Goldstein & McGinnis, 1997) was determined by  $[\text{agreements}/(\text{agreements} + \text{disagreements})] \times 100 = \text{percent of agreement}$ . Interrater reliability on the teacher accuracy checklists was determined by  $[\text{agreements}/(\text{agreements} + \text{disagreements})] \times 100 = \text{percent of agreement}$ . The pre-, post-, and maintenance data for both the traditional and combined interventions was entered into SPSS.

#### Treatment of the Data

Data from the *Teacher, Student, and Parent Skillstreaming Questionnaires* was analyzed to answer the following questions:



Research Question 1: Does the combined social skills intervention (traditional instruction paired with student multimedia authoring) increase the use and maintenance of social skills of the students with emotional disabilities more than the use of the traditional social skills intervention:

- a. as perceived by the students when measured by the *Student Skillstreaming Questionnaire*?
- b. as perceived by their teachers when measured by the *Teacher Skillstreaming Questionnaire*?
- c. as perceived by their parents when measured by the *Parent Skillstreaming Questionnaire*?

Analysis: In order to ascertain significant differences between the combined intervention and the traditional intervention, a 2 x 3 (intervention x time) factorial ANOVA with repeated measures on both factors was used to compare the groups. An alpha level of .05 was set.

Research Question 2: Is student knowledge of social skills steps greater after the combined social skills intervention (traditional instruction paired with student multimedia authoring) than after the traditional social skills intervention?

Analysis: In order to ascertain significant differences in student knowledge between the combined intervention and the traditional intervention, a paired t-test was used to compare the interventions. An alpha level of .05 was set.

## CHAPTER 4

### RESULTS

Social skills training is an important component of the curriculum for students with emotional and behavior disabilities (Desbiens & Royer, 2005). Acquisition of these skills is instrumental for student success in both the general education classroom and in life after graduation. The current literature reflects concerns with motivating students to learn, use, and maintain social skills (Gresham, 2004). Carman and Kosberg (1982) suggested that computer-assisted instruction could be used to increase students' motivation to learn. There has been little research in the area of using technology to teach social skills (Fitzgerald, 2005). A method of learning social skills that is meaningful and motivating increases student opportunities for success both in and out of the school setting (Fitzgerald, 1994).

The purpose of this study was to develop a teaching sequence designed to enable students, placed in middle school self-contained classrooms for students with emotional disturbance, to create and utilize their own multimedia social skills training modules. Two interventions were developed and data were collected with triads of students in three self-contained classrooms in suburban public middle schools. Twenty-five students participated in the study (see Table 1).

During the first four weeks of the study, students received traditional social skills instruction. This instruction took place in their specialized classrooms during five 50-minute periods. The three teachers that participated in the study (see Table 2) were trained to deliver the instruction based on a teaching protocol (see Appendix A). Interrater observers observed and videotaped each lesson. The observers used a checklist of the lesson protocol to ensure that the teaching protocol was used. Intervention was followed by a 1-week maintenance period. The combined intervention phase lasted 4 weeks. During this phase, the same students received the traditional social skills instruction combined with a multimedia authoring component. Students created their own role-plays and recorded them with a digital video camera. They transferred the movie from the camera to the computer, edited the clips using movie editing software, and transferred the finished product to a DVD. This phase was followed by a 1-week maintenance period.

Data were collected one week before each intervention phase. These data consisted of *Teacher, Parent, and Student Skillstreaming Questionnaires*. The questionnaires measured teacher, parent, and student perceptions of the students' proficiency in the social skills studied. The questionnaires also were completed by the teachers, parents, and students after each intervention, and after each maintenance period.

Students completed a pretest before the traditional intervention to measure their knowledge of the social skills taught (e.g., listening, following instructions, dealing with someone else's anger, asking permission). They completed a posttest of the skills following the intervention. The students also completed a pretest before the combined intervention to measure their knowledge of the social skills taught (e.g., using self-

control, keeping out of fights, dealing with group pressure, concentrating on a task). They completed a posttest of the social skills following the intervention.

### Demographic Data

The students who participated in this study were students attending middle school in the northeast region of a school district located in a large southwestern city. The participants were 23 male and 2 female students ranging in age from 11-years-old to 14-years-old with identified emotional disabilities who were placed in self-contained junior high school special education classrooms. All students were eligible for special education services as students with emotional disturbance under Nevada Statute (Nevada Administrative Code, 2005a), as specified on each of their Individualized Education Plans. This group was chosen for the study because the current literature indicates that there is a need for social skills training for adolescents with emotional and behavioral disorders (Lane et al., 2006). Despite this need, the literature contains few studies (Goldsworthy, et al., 2000; Malka, 1995) that incorporate technology-assisted social skills training for adolescents with emotional and behavioral disabilities.

### Interscorer Reliability

Observers A, B, and C performed interscorer reliability checks to insure reliability on teacher fidelity to instruction. Interscorer reliability was also computed for the *Teacher, Parent, and Student Questionnaires* and the *Student Tests of Social Skills Knowledge*.

### *Teacher Fidelity to Instruction*

Teacher fidelity for implementing the traditional and combined interventions was measured through the use of protocol checklists (see Appendix J). Instruction was observed, coded, and scored by Observers A, B, and C. There was a total of 528 items on the checklists. The scores were compared and an interscorer agreement score was computed by  $[\text{agreements}/(\text{agreements} + \text{disagreements})] \times 100 = \text{percent of agreement}$ . Interscorer agreement for teacher fidelity was 98.4%. Reliability scores for teacher fidelity are presented in Table 5.

Table 5

#### *Interscorer Agreement for Teacher Fidelity*

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Source	Observers A, B & C	Percent of Agreement
Protocol Checklist Items	520/528	$520 \div 528 = 98.4\%$

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Overall Interscorer Agreement 98.4%

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### *Teacher, Parent, and Student Questionnaires*

In order to ensure that the questionnaires were scored correctly, the scores on the pre-, post- and maintenance questionnaires were compared. Observer A scored all of the parent, teacher, and student questionnaires. Observer B scored 25% (113 questions total) of the questionnaires. The scores were compared and an interscorer agreement score was computed (e.g.,  $[\text{agreements}/(\text{agreements} + \text{disagreements})] \times 100 = \text{percent of}$

agreement). Interscorer agreement for the parent, teacher, and student questionnaires was 100%. Agreement scores for the questionnaires are presented in Table 6.

Table 6

*Interscorer Agreement for Questionnaires*

Source	Observers A & B	Percent of Agreement
Teacher, Parent, & Student Questionnaire Items	113/113	$113 \div 113 = 100\%$
Overall Interscorer Agreement 100%		

*Student Tests of Social Skills Knowledge*

Observer A scored all of the student social skills pre- and post-tests. Observer B scored 25% of the tests (450 items total). The scores were compared and an interscorer agreement score was computed (e.g.,  $[\text{agreements}/(\text{agreements} + \text{disagreements})] \times 100 =$  percent of agreement). Interrater agreement for the student knowledge pre- and post-tests was 97.5%. Reliability scores for the pre- and post-tests are presented in Table 7.

Table 7

*Interscorer Agreement for Student Knowledge Pre- and Post-Tests*

Source	Observers A & B	Percent of Agreement
Number of Correct Items on Pre- and Post-Tests	439/450	$439 \div 450 = 97.5\%$
Overall Interscorer Agreement 97.5%		

Teacher, Parent, and Student Skillstreaming Questionnaires

The *Teacher, Parent, and Student Skillstreaming Questionnaires* (see Appendix L) are behavior rating scales that measure teacher, parent, and student perceptions of the frequency with which an adolescent uses the 50 social skills on the questionnaires. The questionnaires use a 5-point Likert-scale to rate the frequency of the behaviors (e.g., 1-almost never, 2-seldom, 3-sometimes, 4-often, 5-almost always). The eight skills examined in this study were: (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 for inclusion in the study because they are rated as essential for student success in school by secondary general education teachers (Lane et al., 2004).

The pre-, post- and maintenance questionnaires were analyzed to determine perceived gains in the students' social skills over the course of the study. Descriptive and inferential statistics were used to compare pre, post, and maintenance scores on the *Teacher, Parent,*

*and Student Skillstreaming Questionnaires* to determine if the type of intervention (e.g., traditional or combined) used to teach social skills had an effect on the perceptions of teachers, parents, and students in regard to the students' social skills abilities (see Table 8).

Table 8

*Summary of Means and Standard Deviations for the Pre, Post, and Maintenance Questionnaires*

Source	Pretest		Posttest		Maintenance	
	SD	Mean	SD	Mean	SD	Mean
<b>Teacher</b>						
(n = 25)						
Traditional	3.35	10.60	4.45	12.68	4.60	12.84
Combined	2.65	10.76	4.61	13.52	3.71	15.36
<b>Parent</b>						
(n = 25)						
Traditional	2.75	10.60	3.44	12.60	3.13	12.84
Combined	2.96	10.08	3.60	12.64	3.66	13.12
<b>Student</b>						
(n = 25)						
Traditional	4.08	12.44	3.27	13.56	3.16	13.16
Combined	3.42	11.12	2.64	12.84	2.81	13.00



The questionnaires were completed by teachers, parents, and students as pre-, post-, and maintenance measurements in this study. The data from these questionnaires were analyzed and used to answer the following questions.

1. Will the combined social skills intervention (traditional instruction paired with student multimedia authoring) increase the use and maintenance of social skills of the students with emotional disabilities more than the use of the traditional social skills intervention:

- a. as perceived by the students when measured by the *Student Skillstreaming Questionnaire*?
- b. as perceived by their teachers when measured by the *Teacher Skillstreaming Questionnaire*?
- c. as perceived by their parents when measured by the *Parent Skillstreaming Questionnaire*?

It was predicted that the combined social skills intervention (traditional instruction paired with student multimedia learning) would increase the perceived use and maintenance of social skills of the students with emotional disabilities more than the use of the traditional social skills intervention.

The *Teacher, Parent, and Student Skillstreaming Questionnaires* were analyzed using a 2 x 3 (intervention x time) factorial ANOVA with repeated measures on both factors to compare the groups and ascertain if there was a significant interaction effect (see Table 9). An alpha level of .05 was set for this analysis.

Table 9

*Summary of ANOVAs for the Teacher/Parent/Student Skillstreaming Questionnaires*

Skillstreaming Checklists	Source	<i>F</i>	<i>p</i>
Teacher perceptions	Intervention	8.465	.0077*
	Time	10.206	.0002*
	Intervention x Time	4.023	.0243*
Parent perceptions	Intervention	.036	.8513
	Time	31.796	.0000*
	Intervention x Time	1.090	.3445
Student perceptions	Intervention	2.283	.1439
	Time	4.912	.0115*
	Intervention x Time	.878	.4221

*Note.* \*  $p < .05$ .

The results of the 2x3 factorial ANOVA indicated that there was a significant main effect for teacher perceptions over time [ $F(2, 24) = 10.206, p = .0002$ ], a significant main effect for the intervention [ $F(1, 24) = 8.465, p = .008$ ], and a significant intervention by time interaction [ $F(2, 24) = 4.023, p = .0243$ ]. This indicates that the teachers perceived a difference in the effects of the two social skills interventions (e.g., traditional and combined) over the course of the study. Follow-up tests were conducted to ascertain where the difference occurred. The results of the paired *t*-tests indicated a significant difference between the traditional intervention ( $M = 12.84$ ) and the combined

intervention ( $M = 15.36$ ) during the maintenance phase  $t(25) = -3.783, p < .0001$ . This suggests that the teachers perceived the students' social skills as being maintained better after the combined intervention (the traditional intervention combined with the student-generated multimedia component).

There was a significant main effect for parent perceptions over time [ $F(1, 24) = 31.796, p = .0001$ ]. There was not a significant main effect for parent perceptions over interventions [ $F(1, 24) = .036, p = .8513$ ]. There was no intervention by time interaction for parents [ $F(2, 48) = 1.09, p = .3445$ ]. This suggests that the parents did not perceive a difference in the effects of the two interventions on their children's social skills over the course of the study.

There was a significant main effect for student perceptions over time [ $F(2, 24) = 4.912, p = .0115$ ]. There was not a significant main effect for student perceptions over interventions [ $F(1, 24) = 2.283, p = .1439$ ]. There was no intervention by time interaction for students [ $F(2, 48) = .878, p = .4221$ ]. This suggests that the students did not perceive a difference in the effects of the two interventions on their social skills over the course of the study.

### Student Tests of Social Skills Knowledge

The pre- and post-tests of student social skills knowledge consisted of the teacher writing a list of the eight social skills used in the study on the board and the students writing the steps for each skill. Each skill had between three and five steps, for a total of 30 correct steps possible for each test. For each skill, students took the pre-test before the intervention phase (e.g., traditional and combined), and the post-test immediately after

the intervention was discontinued. The data from the pre-and post-tests of social skills knowledge were analyzed to answer the following question.

2. Will the students' knowledge of social skills steps be greater after the combined social skills intervention (traditional instruction paired with student multimedia authoring) than after the traditional social skills intervention?

It was predicted that the students' knowledge of social skills steps would be greater after the combined social skills intervention (traditional instruction paired with student multimedia authoring) than after the traditional social skills intervention. (see Table 10).

Table 10

*Summary of Means and Standard Deviations for the Student Social Skills Knowledge Pretests and Posttests*

Intervention	n	SD	Mean
Traditional	25	3.69	4.04
Combined	25	4.76	12.2

The pre- and post-test data were analyzed using a paired *t*-test to ascertain if there was a significant growth in learning over time. An alpha level of .05 was set for this analysis. There was a statistically significant increase in scores on the *Test of Social Skills Knowledge* during the traditional intervention from pre-test (M = 4.04, SD = 3.69) to post-test (M = 12.2, SD = 4.76),  $t(25) = -10.980, p < 0.0001$ . The eta squared statistic

(.83) indicated a large effect size, demonstrating that students' knowledge of social skills increased significantly from pre- to post-test.

There was a statistically significant increase in scores on the *Test of Social Skills Knowledge* during the combined intervention from pre-test (M = 3.80, SD = 3.59) to post-test (M = 12.88, SD = 4.52),  $t(25) = -11.412, p < .0001$ . The eta squared statistic

(.84) indicated a large effect size, demonstrating that students' knowledge of social skills increased significantly from pre- to post-test.

These analyses suggest that the students' knowledge of social skills improved significantly from pre- to post-test with both the traditional intervention and the combined intervention. This suggests that both interventions are effective means of teaching social skills to adolescents with emotional and behavioral disabilities. A summary of the results is presented in Table 11.

Table 11

*Summary of Paired t-tests for the Student Social Skills Knowledge on Pretests and Posttests*

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Social Skills Knowledge Scores	Source	Mean	Standard Deviation	<i>t</i>	<i>p</i>
Traditional	Pre-test	4.04	3.69	-10.98	.0001*
Intervention	Post-test	12.20	4.76		
Combined	Pre-test	3.80	3.59	-11.41	.0001*
Intervention	Post-test	12.88	4.52		

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*Note. \*p < .05*

## CHAPTER 5

### DISCUSSION

Youth with emotional disabilities often have poor social skills, lower academic achievement, and higher incidences of conduct problems than their typical peers (Armstrong, et al., 2003). In school, students must possess appropriate social skills to be successful academically and socially and as adults are expected to be contributing members of the community. Unfortunately, students with emotional disabilities struggle in the school setting and the social skills that are essential for success in the workplace continue to be skills that youth with emotional disabilities experience the largest deficits (Carter & Lunsford, 2005). Thus, it is essential that students with emotional disabilities receive social skills instruction in order to improve their socially competent behavior while in school and as a transition tool to the workplace (Ogden, 2001).

The current social skills literature focuses on direct instruction through task analysis and modeling (Goldstein, 1984; Gresham & Elliott, 1987; Sugai & Lewis, 1996). There has been little research in the area of using technology to teach social skills. However, the emerging research indicates that the use of multimedia technology to teach social skills has the potential to be an effective intervention in the areas of motivation and retention (Chambers et al., 2006; Goldsworthy, et al., 2000; Langone et al., 1999; Okolo & Ferretti, 1996).

The purpose of this study was to develop a teaching sequence designed to enable students, placed in middle school self-contained classrooms for students with emotional disabilities, to create and utilize their own multimedia social skills training modules. The premise of the study was that students should receive a social skills intervention to increase the rate of their appropriate social interactions. It was believed that the combined intervention (e.g., traditional instruction paired with student multimedia authoring) would increase the student knowledge of social skills steps and the student use of social skills more than the use of the traditional social skills intervention.

This study involved 25 students with emotional disabilities from three self-contained special education classrooms in three public middle schools. All of the schools were in low income areas of a large school district, with at least half of the student population eligible for the free lunch program (Nevada Department of Education, 2006). The student populations of the schools were culturally diverse (e.g., 20% Caucasian, 44% African American, 32% Hispanic, and 4% Asian/Pacific Islander).

The students received traditional social skills instruction in their specialized classrooms during five, 50-minute social skills training sessions per week. A different skill was learned each week, for a period of four weeks. This was followed by a one-week maintenance period. 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. This phase also was followed by a one-week maintenance period.

This study used strategies introduced in previous research (Goldstein, 1997; Goldstein & McGinnis, 1999; Gresham, 2004) to teach social skills to students with



disabilities as well as their typical peers. This study expands the research by combining the traditional social skills intervention with a multimedia authoring component.

#### Teacher, Parent, and Student Perceptions of Student Social Skills

The participating teachers, parents, and students completed the *Teacher/Staff Skillstreaming Questionnaires* prior to each intervention, following each intervention, and following each maintenance period. The social skills measured were: (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 chosen as target skills for intervention because they were identified in the literature as skills deemed as essential for student success in the inclusive classroom (Lane et al., 2006).

Question One examined the effect of both interventions (traditional and combined) on teacher, parent, and student perceptions of student social skills as measured by the *Teacher, Parent, and Student Skillstreaming Questionnaires*. Data were analyzed to ascertain if there was an interaction effect due to the intervention (differences over time), the type of intervention (traditional versus combined intervention), and main effect (intervention by time).

#### *Teachers*

The data indicated that there was a significant main effect for teacher perceptions on both interventions over time, meaning that the teachers perceived that the students' social skills improved over the course of the study, regardless of intervention. This indicates that both interventions were effective in improving the behavior of the students. There

was a significant main effect for intervention, meaning that the teachers perceived more improvement in the students' social skills as a result of the combined intervention (e.g., traditional social skills instruction combined with a multimedia component). The data also indicated a significant intervention by time interaction, suggesting that the teachers perceived a difference in the effects of the two social skills interventions (e.g., traditional and combined) over the course of the study. Follow up *t* tests were conducted to ascertain the nature of this difference. Analysis of the *t* tests indicated that the teachers perceived the students' social skills as being maintained better after the combined intervention than after the traditional intervention.

Informal discussions with the teachers indicated that they were satisfied with both interventions, but all three preferred the combined intervention to the traditional intervention. This could be due to the change in teacher roles over intervention phases. During the traditional intervention, teachers held the role of director, lecturing and controlling student behavior. During the combined intervention, the teacher role changed to that of facilitator during the students' self-directed learning. Observers noted that the teachers spent more time correcting inappropriate student behavior during the traditional intervention than during the combined intervention. This role change may have affected both the teachers' satisfaction with the intervention and their perception of the students' social skills.

### *Parents*

There was a significant main effect for parent perceptions over time, meaning that the parents perceived that both interventions were effective in improving the students' social skills over the course of the study. There was not a significant main effect for parent

perceptions over interventions. This suggests that parents perceived that both interventions were equally effective in improving their child's social skills. This may be due to the fact that parents had no way to differentiate between the two interventions, as the homework they participated in was identical for both. There was no intervention by time interaction for parental perceptions of their child's social skills, indicating that they perceived equal improvement over time for both interventions. This could be due to the fact that the students received each intervention for only four weeks.

It is important to note that it appears the parents were interested in both interventions in that they returned all of the questionnaires on time. This interest may have been caused by their involvement in both intervention phases through their child's homework assignments, which required the child to practice the skills with an adult at home. The teachers also reported that student attendance increased during the study. This also may have affected the parents' perceptions of their child's social skills. These informal observations support the current literature that parent involvement is an essential component of an effective social skills intervention (Frankel et al., 1995; Wise & Bundy, 2004).

### *Students*

Data analysis indicated a significant main effect for student perceptions over time, meaning that students viewed their behavior as improving over the course of the study. There was not a significant main effect for student perceptions over interventions. This suggests that students viewed the interventions as equally effective in improving their social skills. There was no intervention by time interaction for students. They perceived their social skills as improving equally over time for both interventions. This may have

been due to the short length of the interventions (four weeks each). It could also be due to the small sample size ( $n = 25$ ) used in the study.

However, observers reported that the students were visibly enthusiastic about using the technology during the combined phase (e.g., traditional social skills instruction with a multimedia component). This was evidenced by their comments (e.g., “Are we taping today? Great!” “Is it my turn to use the computer yet?” and “We can make this role-play better, let’s re-tape it.”) and their actions (e.g., careful handling of the equipment, increased polite interactions with their peers, and increased attention to instruction during this phase). During the traditional phase, student involvement when writing the role-plays was low, with the teachers having to constantly redirect the students to the task. In contrast, during the combined intervention, after the students watched the DVDs of their first role-plays during week one they expressed dissatisfaction with the role-plays they had authored. This caused an increase in student participation and motivation in the authoring of the role-plays in the remaining three weeks of the combined intervention phase.

There also was an observed change in student behavior during role-plays across interventions. During the role-play performances of the traditional intervention, the students were rude to the peers performing the role-plays, offering personal unconstructive criticism (e.g., “Your shoes are from K-Mart,” “You don’t know how to do anything right.”) During the role-play performances of the combined intervention (viewing the DVDs), students offered their peers constructive criticism of the role-play itself, enumerating ways that the role-play could be improved (e.g., “I think maybe you should add more conversation during Step 3,” “You forgot to talk yourself through the

steps all the way.”). These observations support the theory that using technology to create student-generated instructional materials motivate students and improve their behavior (Fitzgerald, 2005, Okolo & Ferretti, 1998; Wetzel, 2001).

Because of their inappropriate and sometimes aggressive behavior, students with emotional and behavioral disabilities are rarely given the opportunity to use expensive technology and participate in self-directed learning. The sense of responsibility that the combined intervention activities provided may have affected the students’ perceptions of their social skills abilities.

#### Student Tests of Social Skills Knowledge

In order to ascertain 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 (see Appendix R) prior to and immediately after the intervention was implemented. Teachers provided the students with a list of the skills and directed them to write the steps necessary to complete each skill. Question two dealt with the effect of the intervention on student knowledge of social skills measured by pre-tests and post-tests of social skills knowledge.

The results of the data analysis indicate that there was a significant increase of the scores on the student tests of social skills knowledge during the traditional intervention from pre-test to post-test, meaning that the traditional intervention was effective in increasing the students’ knowledge of social skills. There also was a statistically significant increase of the scores on the student tests of social skills knowledge during the combined intervention from pre-test to post-test indicating that the combined intervention

was effective in improving the students' knowledge of social skills. This indicates that both interventions were equally effective methods of teaching social skills to adolescents with emotional and behavioral disabilities.

Follow-up *t* tests suggested that the combined intervention was slightly more effective than the traditional intervention in increasing student knowledge from pre-test to post-test. It is possible that the self-directed nature of the learning in the combined phase involved the students more in their own learning. As students wrote their role-plays during the combined intervention phase, they practiced many times because they knew they would be performing for the camera. Viewing the completed DVDs of the role-plays on Fridays also may have reinforced the students' knowledge of the social skills. This supports the supposition that video modeling and video self-modeling can be effective interventions to increase student learning of social skills (Buggey, et al., 1999; Charlop-Christy & Daneshvar, 2003; Mainone & Miranda, 2006).

### Conclusions

Eight conclusions may be drawn from this study. They are based on the quantitative data that were collected. These conclusions must be viewed in light of the limitations of the study.

1. Both the traditional and combined interventions were effective in improving student social skills as perceived by the teachers, parents, and students across the ten weeks of the study as measured by the *Teacher, Parent, and Student Skillstreaming Questionnaires*.

2. Teachers perceived more improvement in student social skills as a result of the combined intervention as measured by the *Teacher Skillstreaming Questionnaires*.
3. The combined intervention was more effective than the traditional intervention in improving the maintenance of student social skills according to teacher perceptions as measured by the *Teacher Skillstreaming Questionnaires*.
4. Both the traditional and combined interventions were effective in improving student knowledge of social skills across the ten weeks of study as measured by pre-tests and post-tests of social skills knowledge.
5. Parents did not perceive any difference in the effectiveness of the two interventions (e.g., traditional or combined) on the social skills demonstrated by their children as measured by the *Parent Skillstreaming Questionnaires*.
6. Parents did not perceive any difference in the effectiveness of the two interventions (e.g., traditional or combined) over time on the social skills demonstrated by their children as measured by the *Parent Skillstreaming Questionnaires*.
7. Students did not perceive any difference in the effectiveness of the two interventions (e.g., traditional or combined) on their social skills performance as measured by the *Student Skillstreaming Questionnaires*.
8. Students did not perceive any difference in the effectiveness of the two interventions (e.g., traditional or combined) over time on their social skills performance as measured by the *Student Skillstreaming Questionnaires*.

## Recommendations for Further Study

Research indicates that adolescents with emotional and behavioral disabilities need social skills instruction to be successful in school, at home, and in the community (Nelson, 2000; Ogden, 2001; Armstrong, et al., 2003). Adolescents with emotional disabilities typically do not interact successfully with peers or people in authority positions, resulting in poor relationships with both peers and adults. Since it is often difficult to motivate and teach students with emotional and behavioral disabilities, special education teachers need to find effective interventions to accomplish these tasks. Research is needed that focuses on using technology to teach social skills to students in a manner that improves motivation, learning, generalization, and maintenance. Based on the results of this study, the following areas are suggested for further study.

1. In order to determine if the interventions studied are more effective over a longer period of time, an extension of this study should be conducted that includes longer intervention and maintenance periods.
2. A study that includes a larger number of participants should be conducted to ascertain if a larger sample produces different results.
3. A study implementing the combined social skills intervention should be conducted to include older students (e.g., high school). Cartledge & Milburn (1986) suggest that students in elementary and middle school may have difficulty with self-reporting of behavior because they have to be able to accurately recognize their own thoughts and feelings before they can report them to others. Self-reporting skills typically improve as children grow older (Cartledge & Milburn, 1986).



4. A variation of this study should be conducted using instruments that evaluate the actual occurrences of behavior, rather than participants' perceptions of behavior.
5. Additional social skills instruction research should be conducted with students both with and without disabilities in inclusive classrooms in order to demonstrate that the results of this study generalize to other students and settings.
6. This study did not measure the maintenance of the students' social skills knowledge. Future studies should evaluate the maintenance of student knowledge of the social skills learned.
7. The schools used in this study were referred by a region administrator. Future studies should include schools and participants that are selected randomly.
8. Additional social skills intervention research should include post-surveys or interviews to evaluate teacher, parent, and student satisfaction with and opinions about the interventions.

### Summary

This study supports previous research that social skills training is a necessary and effective intervention to remediate behavioral deficits in adolescents with emotional and behavioral disabilities (Mathur et al., 1998; Lo et al., 2002; Lane et al., 2006). Previous researchers also have investigated the benefits of multimedia education, computer assisted instruction, and video self-modeling (Malka, 1995; Neisworth & Wert, 2003; Okolo & Ferretti, 1996). Because these students require social skills instruction to be successful in inclusive environments in school, at home, and in the community and it is

often difficult to motivate them, it is imperative that educators find effective interventions that facilitate the motivation, generalization, and maintenance of social skills.

Research has documented that the most effective social skills interventions include the following components: (a) direct teaching, (b) modeling, (c) role-play, and (d) homework. This study contributes to the literature in that two different types of interventions were compared. One intervention was the traditional method of social skills training, which included the four research-based components. The second intervention combined the traditional instruction with a student-authored multimedia component.

The results of this study have several important implications. First, according to observers, the students were very motivated and involved during the combined intervention (e.g., traditional social skills instruction with a multimedia component). Since it is typically difficult to motivate students with emotional disabilities, it appears that the study demonstrated that the students can be motivated to learn social skills by involving them in their own learning. Parents became actively involved by participating in their child's homework and returning all of the forms. This, along with increased positive perceptions of their child's social skills, indicates parent satisfaction with the social skills interventions.

Teachers reported increased positive student behavior during the combined intervention, which indicates that when students are motivated and involved in their own learning, they are more apt to make appropriate choices about how to behave. Lastly, the teachers indicated to the observers that they enjoyed using the combined intervention more than the traditional intervention to teach social skills. This is important because many teachers are hesitant to teach social skills due to time, teacher skills, and resources

(Battalio & Stephens, 2005). If teachers are trained to use a social skills intervention, enjoy using it, and perceive that it is effective, then they are more likely to fit social skills intervention into their day-to-day instruction.

Students with emotional and behavioral disabilities require effective social skills training in order to be successful with their peers and adults, both in school and in the community. As inclusive environments become the preferred method of educating students with disabilities, the need for social skills instruction becomes even greater. It is essential that students increase their knowledge and use of social skills in order to increase their chances for success in school and in their adult lives. Traditional social skills instruction combined with a multimedia component shows promise as an effective means of attaining this goal.

**APPENDIX A**

**LESSON PLAN PROTOCOLS**

*Traditional Intervention (Traditional social skills instruction)*

Monday	Tuesday	Wednesday	Thursday	Friday
<ol style="list-style-type: none"> <li>1. Define skill.</li> <li>2. Model skill.</li> <li>3. Establish student skill need.</li> <li>4. Conduct role plays.</li> <li>5. Provide performance feedback.</li> <li>6. Assign homework.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review skill and students copy steps.</li> <li>2. Discuss homework with students.</li> <li>3. Students read a problem situation and respond to questions individually.</li> <li>4. Class discussion on problem situation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Journal/Discussion.</li> <li>2. Triads of students create scripts for role plays.</li> <li>3. Practice role-plays in triads.</li> </ol> <p><i>Note.</i> Teacher's role is as a facilitator, no direct teaching. Behavior management and assistance only provided if necessary.</p>	<ol style="list-style-type: none"> <li>1. Journal/Discussion.</li> <li>2. Students perform role-plays for class.</li> <li>3. Performance feedback is given to each group after role-play.</li> </ol> <p><i>Note.</i> Teacher leads discussion and assists class in giving feedback.</p>	<ol style="list-style-type: none"> <li>1. Journal/Discussion.</li> <li>2. Review skill, following steps from Monday.</li> <li>3. Quiz on skill.</li> </ol>

*Combined Intervention (Traditional social skills instruction paired with student multimedia authoring)*

Monday	Tuesday	Wednesday	Thursday	Friday
<p>1. Define skill</p> <p>2. Model skill</p> <p>3. Establish student skill need</p> <p>4. Conduct role plays</p> <p>5. Provide performance feedback</p> <p>6. Assign homework</p>	<p>1. Review skill and students copy down steps.</p> <p>2. Discuss homework with students.</p> <p>3. Students read a problem situation and respond to Questions individually.</p> <p>3. In groups of three, students begin to write scripts.</p> <p><i>Note.</i> Teacher's role is as a facilitator, no direct teaching. Behavior management and assistance only provided if necessary.</p>	<p>1. Journal/ Discussion.</p> <p>2. Students finish scripts.</p> <p>3. Rehearsal.</p> <p><i>Note.</i> Teacher's role is as a facilitator, no direct teaching. Behavior management and assistance only provided if necessary.</p>	<p>1. Students perform role plays and record on DVDs.</p> <p><i>Note.</i> Teacher's role is as a facilitator, no direct teaching. Behavior management and assistance only provided if necessary.</p>	<p>1. Groups screen DVDs for class.</p> <p>2. Performance Feedback from teacher and peers.</p> <p>3. Quiz on skill.</p> <p><i>Note.</i> Teacher assists class in giving performance feedback.</p>

**APPENDIX B**

**STUDENT SKILLSTREAMING QUESTIONNAIRES**

Dear Student,

This questionnaire is designed to measure your social skills. The information is confidential and will be used by the author for statistical information only. Participation in this study is completely voluntary.

Please complete the following:

Gender:

Male \_\_\_\_\_

Female \_\_\_\_\_

Age: \_\_\_\_\_

Grade: \_\_\_\_\_

Ethnicity:

Caucasian \_\_\_\_\_ African-American \_\_\_\_\_ Asian-American/  
Pacific Islander \_\_\_\_\_

Hispanic \_\_\_\_\_ Native American \_\_\_\_\_

Other \_\_\_\_\_



## Student Traditional Intervention Skillstreaming Questionnaire

**First Name** \_\_\_\_\_ **Date** \_\_\_\_\_

Directions: Read each statement and decide how well you use each skill by circling:

1 (almost never), 2 (seldom), 3 (sometimes), 4 (often), or 5 (almost always).

**Do I:**

	almost never	seldom	sometimes	often	almost always
(1) Listen to someone who is talking to me?	1	2	3	4	5
(2) Carry out instructions from others quickly and correctly?	1	2	3	4	5
(3) Try to understand, and not get angry, when someone else is angry?	1	2	3	4	5
(4) Understand when permission is needed to do something and then ask the right person for it?	1	2	3	4	5

## Student Combined Intervention Skillstreaming Questionnaire

Name \_\_\_\_\_ Date \_\_\_\_\_

**Directions:** Read each statement and decide how well you use each skill by circling:

1 (almost never), 2 (seldom), 3 (sometimes), 4 (often), or 5 (almost always).

**Do I:**

	almost never	seldom	sometimes	often	almost always
(1) Control my temper when I feel upset?	1	2	3	4	5
(2) Figure out ways other than fighting to handle difficult situations?	1	2	3	4	5
(3) Decide what I want to do when others are pressuring me to do something else?	1	2	3	4	5
(4) Pay full attention to whatever I am working on?	1	2	3	4	5

**APPENDIX C**

**TEACHER SKILLSTREAMING QUESTIONNAIRES**

Dear Special Education Teacher,

This questionnaire is designed to measure the social skills of each student in your class. The information is confidential and will be used by the author for statistical information only. Participation in this study is completely voluntary.

Please complete the following:

- Age \_\_\_\_\_
- Gender
  - Male \_\_\_\_\_
  - Female \_\_\_\_\_
- Ethnicity
  - Caucasian \_\_\_\_\_ African-American \_\_\_\_\_
  - Hispanic \_\_\_\_\_ Native American \_\_\_\_\_
  - Asian-American/  
Pacific Islander \_\_\_\_\_ Other \_\_\_\_\_

Education:

- BA/BS (area) \_\_\_\_\_
- MA/MS (area) \_\_\_\_\_
- EdS (area) \_\_\_\_\_
- EdD/PhD \_\_\_\_\_

Teaching Experience

- Number of Years Teaching \_\_\_\_\_
- Number of Years Teaching Self-Contained EBD \_\_\_\_\_
- Number of Years Teaching in Other Areas of Special Education \_\_\_\_\_
- Number of Years Teaching in General Education \_\_\_\_\_

## Teacher/Staff Traditional Intervention Skillstreaming Questionnaire

**Name of Student** \_\_\_\_\_

**Date** \_\_\_\_\_

**Directions:** Read each statement and indicate how well the student uses the skill by circling:

1 (almost never), 2 (seldom), 3 (sometimes), 4 (often), or 5 (almost always).

**Does the student:**

	almost never	seldom	sometimes	often	almost always
(1) Pay attention to someone who is talking and make an effort to understand what is being said?	1	2	3	4	5
(2) Pay attention to instructions, give his/her reactions, and carry the instructions out adequately?	1	2	3	4	5
(3) Try to understand other people's angry feelings?	1	2	3	4	5
(4) Figure out when permission is needed to do something and then ask the right person for permission?	1	2	3	4	5

## Teacher/Staff Combined Intervention Skillstreaming Questionnaire

Name of Student \_\_\_\_\_ Date \_\_\_\_\_

Directions: Read each statement and indicate how well the student uses the skill by circling:

1 (almost never), 2 (seldom), 3 (sometimes), 4 (often), or 5 (almost always).

**Does the student:**

	almost never	seldom	sometimes	often	almost always
(1) Control his/her temper so things don't get out of hand?	1	2	3	4	5
(2) Figure out ways other than fighting to handle difficult situations?	1	2	3	4	5
(3) Decide what he/she wants to do when others want him/her to do something else?	1	2	3	4	5
(4) Make preparations that will help him/her get a job done?	1	2	3	4	5

**APPENDIX D**

**PARENT SKILLSTREAMING QUESTIONNAIRES**

Dear Parent,

This questionnaire is designed to measure the social skills of your child. The information is confidential and will be used by the author for statistical information only.

Participation in this study is completely voluntary.

Please complete the following:

- Gender
  - Male \_\_\_\_\_
  - Female \_\_\_\_\_
- Age \_\_\_\_\_
- Ethnicity:
  - Caucasian \_\_\_\_\_
  - Hispanic \_\_\_\_\_
  - African-American \_\_\_\_\_
  - Native American \_\_\_\_\_
  - Other \_\_\_\_\_



**Parent Traditional Intervention Skillstreaming Questionnaire**

**Name of Child** \_\_\_\_\_ **Date** \_\_\_\_\_

Directions: Read each statement and indicate how well your child uses the skill by circling:

1 (almost never), 2 (seldom), 3 (sometimes), 4 (often), or 5 (almost always).

**Does your child:**

	almost never	seldom	sometimes	often	almost always
(1) Listen when you or others talk to him/her?	1	2	3	4	5
(2) Carry out instructions from others quickly and correctly?	1	2	3	4	5
(3) Try to understand other people's angry feelings without getting angry himself/herself?	1	2	3	4	5
(4) Understand when permission is needed to do something and then ask the right person for permission?	1	2	3	4	5

**Parent Combined Intervention Skillstreaming Questionnaire**

**Name of Child** \_\_\_\_\_ **Date** \_\_\_\_\_

Directions: Read each statement and indicate how well your child uses the skill by circling:

1 (almost never), 2 (seldom), 3 (sometimes), 4 (often), or 5 (almost always).

**Does your child:**

	almost never	seldom	sometimes	often	almost always
(1) Control his/her temper so things don't get out of hand?	1	2	3	4	5
(2) Figure out ways other than fighting to handle difficult situations?	1	2	3	4	5
(3) Decide what he/she wants to do when others are urging him/her to do something else?	1	2	3	4	5
(4) Pay full attention to the task on which he/she is working?	1	2	3	4	5

**APPENDIX E**

**STUDENT ASSENT TO RESEARCH**

## **STUDENT ASSENT TO PARTICIPATE IN RESEARCH**

### **Social Skills of Secondary Students with Emotional Disabilities: A Technology-based Intervention**

1. My name is Therese Smedley.
2. We are asking you to take part in a research study because we are trying to learn more about using technology to teach social skills.
3. If you agree to be in this study, you will be learning four social skills from your teacher for four weeks. Then, you will learn four more skills for four weeks, but you also will be using computers and video cameras to create your own social skills lessons. You will be filming yourself and your classmates for 15-20 minutes a week for four weeks. You will be completing six questionnaires about your social skills abilities. The study will last for twelve weeks.
4. This study involves me watching you and other students in your classroom and having you fill out questionnaires to track your progress. There is very little risk to you from being in the study (physical, psychological, social, or legal).
5. You will be taught by your classroom teacher how to use the computer, camera, and software that is required in this study.
6. Please talk this over with your parents before you decide whether or not to participate. We will also ask your parents to give their permission for you to take part in this study. But even if your parents say “yes” you can still decide not to do this.
7. If you don’t want to be in this study, you don’t have to participate. Remember, being in this study is up to you and no one will be upset if you don’t want to participate or even if you change your mind later and want to stop.
8. You can ask any questions that you have about the study. If you have a question that you didn’t think of now, you can call me at 895-3205 or ask me next time.
9. Signing your name at the bottom means that you agree to be in this study. You and your parents will be given a copy of this form after you have signed it.

\_\_\_\_\_  
Print your name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Sign your name

**APPENDIX F**

**PARENT CONSENT FOR CHILD FORM**

**INFORMED CONSENT**  
**Parent for Child to Participate**  
**Department of Special Education**

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**TITLE OF STUDY:** Social Skills of Secondary Students with Emotional Disabilities: A Technology-based Intervention

**INVESTIGATOR(S):** Therese Smedley and Kyle Higgins

**CONTACT PHONE NUMBER:** 895-3205

**Purpose of the Study**

Your child is invited to participate in a research study. The purpose of this study is to research the effectiveness of technology to strengthen the maintenance of social skills of secondary students with emotional disabilities.

**Participants**

Your child is being asked to participate in the study because he or she is currently enrolled in a self-contained special education classroom for students with emotional disabilities.

**Procedures**

If you agree to allow your child to volunteer to participate in this study, he or she will be asked to do the following: be involved with both a traditional social skills curriculum for four weeks and a traditional social skills curriculum combined with technology in the form of videotaping and editing for four weeks. The students will receive training in their classroom. The training will be conducted by their special education teacher. The students will be videotaping themselves and each other for approximately 10-15 minutes per week for four weeks. It is anticipated that the study will last twelve weeks.

**Benefits of Participation**

There may be direct benefits to your child such as an improvement in social skills as a participant in this study. However, we hope to validate the practice of using technology as a supplement to traditional social skills instruction to increase the maintenance of the social skills taught.

**Risks of Participation**

There are risks involved in all research studies. This study involves natural observation of the students in the classroom setting and questionnaires to track their progress. Because of this, there is minimal risk to the students from participation (physical, psychological, social, or legal).

**Cost /Compensation**

There will not be financial cost to you or your child to participate in this study, because all activities and observations will take place during the normal course of

the child's day in the child's assigned classroom. The study will last for twelve weeks. You will not be compensated for your child's time. *The University of Nevada, Las Vegas may not provide compensation or free medical care for an unanticipated injury sustained as a result of participating in this research study.*

**Contact Information**

If you have any questions or concerns about the study, you may contact Dr. Kyle Higgins or Therese Smedley at 895-3205. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office for the Protection of Research Subjects at 702-895-2794.**

**Voluntary Participation**

The participation of your child in this study is voluntary. You may refuse to allow your child to participate in this study or in any part of this study. You may withdraw your child at any time without prejudice to his/her relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

**Confidentiality**

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link your child to this study. All records will be stored in a locked facility at UNLV for at least 3 years after completion of the study. After the storage time the information gathered will be destroyed.

**Participant Parental Consent:**

I have read the above information and agree to allow my child to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

\_\_\_\_\_  
Signature of Participant's Parent/Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant Name (Please Print)

By signing below, I agree to allow my student to be videotaped during the course of this study.

\_\_\_\_\_  
Signature of Participant's Parent/Guardian

***Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.***

**APPENDIX G**

**TEACHER CONSENT FORM**



# INFORMED CONSENT

## Department of Special Education

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**TITLE OF STUDY:** Social Skills of Secondary Students with Emotional Disabilities: A Technology-based Intervention

**INVESTIGATOR(S):** Therese Smedley and Kyle Higgins

**CONTACT PHONE NUMBER:** 895-3205

### **Purpose of the Study**

You are invited to participate in a research study. The purpose of this study is to research the effectiveness of technology use to strengthen the maintenance of social skills of secondary students with emotional disabilities.

### **Participants**

You are being asked to participate in the study because you are currently teaching in a self-contained special education classroom for students with emotional disabilities.

### **Procedures**

If you agree to volunteer to participate in this study, you will be asked to do the following: (a) teach both a traditional social skills curriculum and a traditional social skills curriculum combined with technology in the form of videotaping and editing, (b) attend training sessions for both interventions, (c) conduct training sessions for the students, (d) allow yourself to be videotaped using both interventions, and (e) fill out a four-item questionnaire on each student six times throughout the study. It is anticipated that the study will last twelve weeks.

### **Benefits of Participation**

There may not be direct benefits to you as a participant in this study. However, we hope to validate the practice of using technology as a supplement to traditional social skills instruction to increase the maintenance of the social skills taught to students with emotional disabilities.

### **Risks of Participation**

There are risks involved in all research studies. This study involves natural observation of you and the students in the classroom setting and questionnaires to track student progress. Because of this, there is minimal risk to you or the students from participation (physical, psychological, social, or legal).

**Cost /Compensation**

There will not be financial cost to you to participate in this study, because most activities and observations will take place during the normal course of your day in your classroom. The study will last for twelve weeks. You will not be compensated for your time. *The University of Nevada, Las Vegas may not provide compensation or free medical care for an unanticipated injury sustained as a result of participating in this research study.*

**Contact Information**

If you have any questions or concerns about the study, you may contact Dr. Kyle Higgins or Therese Smedley at 895-3205. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office for the Protection of Research Subjects at 702-895-2794.**

**Voluntary Participation**

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

**Confidentiality**

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at UNLV for at least 3 years after completion of the study. After the storage time the information gathered will be destroyed.

**Participant Parental Consent:**

I have read the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant Name (Please Print)

***Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.***

**APPENDIX H**

**INSTRUCTIONAL ASSISTANT CONSENT**

# INFORMED CONSENT

## Department of Special Education

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**TITLE OF STUDY:** Social Skills of Secondary Students with Emotional Disabilities: A Technology-based Intervention

**INVESTIGATOR(S):** Therese Smedley and Kyle Higgins

**CONTACT PHONE NUMBER:** 895-3205

### **Purpose of the Study**

You are invited to participate in a research study. The purpose of this study is to research the effectiveness of technology use to strengthen the maintenance of social skills of secondary students with emotional disabilities.

### **Participants**

You are being asked to participate in the study because you are currently an instructional assistant in a self-contained special education classroom for students with emotional disabilities.

### **Procedures**

If you agree to volunteer to participate in this study, you will be asked to do the following: (a) attend training sessions for both interventions, (b) assist during training sessions for the students, and (c) allow yourself to be videotaped using both interventions. It is anticipated that the study will last twelve weeks.

### **Benefits of Participation**

There may not be direct benefits to you as a participant in this study. However, we hope to validate the practice of using technology as a supplement to traditional social skills instruction to increase the maintenance of the social skills taught to students with emotional disabilities.

### **Risks of Participation**

There are risks involved in all research studies. This study involves natural observation of you and the students in the classroom setting and questionnaires to track student progress. Because of this, there is minimal risk to you or the students from participation (physical, psychological, social, or legal).

### **Cost /Compensation**

There will not be financial cost to you to participate in this study, because most activities and observations will take place during the normal course of your day in your classroom. The study will last for twelve weeks. You will not be compensated for your time. *The University of Nevada, Las Vegas may not provide compensation or free medical care for an unanticipated injury sustained as a result of participating in this research study.*

**Contact Information**

If you have any questions or concerns about the study, you may contact Dr. Kyle Higgins or Therese Smedley at 895-3205. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office for the Protection of Research Subjects at 702-895-2794.**

**Voluntary Participation**

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

**Confidentiality**

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at UNLV for at least 3 years after completion of the study. After the storage time the information gathered will be destroyed.

**Participant Parental Consent:**

I have read the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant Name (Please Print)

***Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.***

**APPENDIX I**

**PARENTAL CONSENT**

**INFORMED CONSENT**  
**Department of Special Education**

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**TITLE OF STUDY:** Social Skills of Secondary Students with Emotional Disabilities: A Technology-based Intervention

**INVESTIGATOR(S):** Therese Smedley and Kyle Higgins

**CONTACT PHONE NUMBER:** 895-3205

**Purpose of the Study**

You have been invited to participate in a research study. The purpose of this study is to research the effectiveness of technology use to strengthen the maintenance of social skills of secondary students with emotional disabilities.

**Participants**

You are being asked to participate in the study because you are the parent of a student currently enrolled in a self-contained special education classroom for students with emotional disabilities.

**Procedures**

If you agree to volunteer to participate in this study, you will be asked to complete six four-question social skills questionnaires. These questionnaires measure your child's social skills abilities. It is anticipated that the study will last twelve weeks.

**Benefits of Participation**

There may not be direct benefits to you as a participant in this study. However, we hope to validate the practice of using technology as a supplement to traditional social skills instruction to increase the maintenance of the social skills taught to students with emotional disabilities.

**Risks of Participation**

There are risks involved in all research studies. This study involves the completion of questionnaires to track student progress. Because of this, there is minimal risk to you from participation (physical, psychological, social, or legal).

**Cost /Compensation**

There will be no financial cost to you to participate in this study, because all questionnaires will be delivered to you by your child and returned in a postage paid envelope. The study will last for twelve weeks. You will not be compensated for your time. *The University of Nevada, Las Vegas may not provide compensation or free medical care for an unanticipated injury sustained as a result of participating in this research study.*

**Contact Information**

If you have any questions or concerns about the study, you may contact Dr. Kyle Higgins or Therese Smedley at 895-3205. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office for the Protection of Research Subjects at 702-895-2794.**

**Voluntary Participation**

Your child's participation in this study is voluntary. You may refuse to allow your child to participate in this study or in any part of this study. You may withdraw your child at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

**Confidentiality**

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link your child to this study. All records will be stored in a locked facility at UNLV for at least 3 years after completion of the study. After the storage time the information gathered will be destroyed.

**Participant Parental Consent:**

I have read the above information and agree to allow my child to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

\_\_\_\_\_  
Signature of Participant's Parent

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant Name (Please Print)

***Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.***



**APPENDIX J**

**TEACHER**

**ACCURACY CHECKLISTS**

**TEACHER ACCURACY CHECKLIST  
TRADITIONAL INTERVENTION**

**Teacher** \_\_\_\_\_ **Date** \_\_\_\_\_

**Check off each component that the teacher included in the lesson:**

**Monday**

- \_\_\_\_\_ Teacher defined the skill of the week.
- \_\_\_\_\_ Teacher modeled the skill of the week.
- \_\_\_\_\_ Teacher established why the skill is needed (asked students when they would use the skill, and asked why knowing the skill is necessary).
- \_\_\_\_\_ Teacher assisted students in conducting the role-plays (prompted students when necessary).
- \_\_\_\_\_ Teacher assisted class in providing performance feedback (prompted students to be polite and positive).
- \_\_\_\_\_ Teacher assigned homework.

**Tuesday**

- \_\_\_\_\_ Teacher reviewed skill with students by writing it on the board and reading the steps orally with students.
- \_\_\_\_\_ Teacher instructed students to copy down steps.
- \_\_\_\_\_ Teacher led discussion about homework.
- \_\_\_\_\_ Teacher read problem situation aloud with students.
- \_\_\_\_\_ Teacher assigned problem situation worksheet and gave directions.
- \_\_\_\_\_ Teacher led discussion on worksheet.

### **Wednesday**

\_\_\_\_\_ Teacher instructed students to write in their journals.

\_\_\_\_\_ Students discussed journals.

\_\_\_\_\_ Teacher acted as a facilitator as students prepared role-playing scripts and conducted rehearsals (roamed the room, answered questions, and prompted students to behave appropriately and stay on task).

### **Thursday**

\_\_\_\_\_ Teacher instructed students to write in journals.

\_\_\_\_\_ Students discussed journals.

\_\_\_\_\_ Students performed role-plays.

\_\_\_\_\_ Teacher assisted class in providing performance feedback (prompted students to be polite and positive).

### **Friday**

\_\_\_\_\_ Teacher defined the skill of the week.

\_\_\_\_\_ Teacher modeled the skill of the week.

\_\_\_\_\_ Teacher established the skill need (asked students when they would use the skill, and asked why knowing the skill is necessary).

\_\_\_\_\_ Teacher assisted students in conducting the role-plays (prompted students when necessary).

\_\_\_\_\_ Teacher assisted class in providing performance feedback (prompted students to be polite and positive).

\_\_\_\_\_ Teacher instructed to students to take quiz (write skills and steps from memory).

**TEACHER ACCURACY CHECKLIST  
COMBINED INTERVENTION**

**Teacher** \_\_\_\_\_ **Date** \_\_\_\_\_

**Check off each component that the teacher included in the lesson:**

**Monday**

\_\_\_\_\_ Teacher defined the skill of the week.

\_\_\_\_\_ Teacher modeled the skill of the week.

\_\_\_\_\_ Teacher established why the skill is needed (asked students when they would use the skill, and asked why knowing the skill is necessary).

\_\_\_\_\_ Teacher assisted students in conducting the role-plays (prompted students when necessary).

\_\_\_\_\_ Teacher assisted class in providing performance feedback (prompted students to be polite and positive).

\_\_\_\_\_ Teacher assigned homework.

**Tuesday**

\_\_\_\_\_ Teacher reviewed skill with students by writing it on the board and reading the steps orally with students.

\_\_\_\_\_ Teacher instructed students to copy down steps.

\_\_\_\_\_ Teacher led discussion about homework.

\_\_\_\_\_ Teacher instructed triads to begin script writing.

\_\_\_\_\_ Teacher acted as facilitator during writing process.

**Wednesday**

\_\_\_\_\_ Teacher instructed students to write in their journals.

\_\_\_\_\_ Students discussed journals.

\_\_\_\_\_ Teacher acted as a facilitator as students prepared role-playing scripts and conducted rehearsals (roamed the room, answered questions, and prompted students to behave appropriately and stay on task).

**Thursday**

\_\_\_\_\_ Students worked in triads role-playing and video taping.

\_\_\_\_\_ Teacher acted as facilitator (roamed the room, answered questions, and prompted students to behave appropriately and stay on task).

**Friday**

\_\_\_\_\_ Students screened role-plays for class by showing the DVDs they made.

\_\_\_\_\_ Teacher facilitated while class gave performance feedback to each triad (prompted students to be polite and positive).

\_\_\_\_\_ Teacher instructed to students to take quiz (write skills and steps from memory).

**APPENDIX K**

**PERMISSION LETTER FOR SCHOOL PARTICIPATION**

## Letter of Acknowledgement of a Research Project at a CCSD Facility

Brenda Durosinmi, MPA, CIP, CIM –Director  
Office for the Protection of Research Subjects  
University of Nevada Las Vegas  
4505 Maryland Parkway Box 451037  
Las Vegas, NV 89154-1037

**Subject:** Letter of Acknowledgement of a Research Project at a CCSD Facility

Dear Ms. Durosinmi:

This letter will acknowledge that I have reviewed a request by Therese M. Smedley to conduct a research project entitled, *Social Skills of Secondary Students with Emotional Disabilities: A Technology-based Intervention*, in three Clark County School District middle schools.

When the research project has received approval from the UNLV Institutional Review Board and the Department of Research and Accountability of the Clark County School District, and upon presentation of the approval letter to me by the approved researcher, as the Director of Special Education Programs and Projects, I agree to provide access to the schools for the approved research project.

If we have any concerns or need additional information, the project researcher will be contacted or we will contact the UNLV Office for the Protection of Research Subjects at 895 – 2794.

Sincerely,

\_\_\_\_\_  
Authorized Facility Representative Signature

\_\_\_\_\_  
Date

Jack L. Gordan, Director of Special Education Programs and Projects  
Print Representative Name and Title

**APPENDIX L**

**PERMISSION TO USE COPYRIGHTED  
MATERIAL**



**Permission to Use Copyrighted Material**

**University of Nevada Las Vegas**

I, \_\_\_\_\_  
holder of copyrighted material entitled Teacher/Staff, Parent, and Student Skillstreaming Checklist, 1997, authored by Arnold P. Goldstein, Ph.D. and Ellen McGinnis, Ph.D. and originally published in Skillstreaming the Adolescent, Revised Edition. New Strategies and Perspectives for Teaching Prosocial Skills, 1997

hereby give permission for Therese M. Smedley to use the above described material in total or in part for inclusion in a doctoral dissertation at the University of Nevada Las Vegas. I also agree that Therese M. Smedley may execute the standard contract with University Microfilms, Inc. for microfilm reproduction of the completed dissertation including the materials to which I hold copyright.

\_\_\_\_\_  
Signature                      Date

\_\_\_\_\_  
Name (typed)                      Title

\_\_\_\_\_  
Representing

**APPENDIX M**

**LESSON FORMAT FOR STUDENT  
TECHNOLOGY TRAINING**

## LESSON FORMAT FOR USE OF CAMERA AND *Imagemixer*

### I. Teach students how to use camera.

- a. Demonstrate important buttons and what they do (on, off, pause, play, wide-angle, telephoto, light, etc.).
- b. Show students how to hold camera steady or use tripod.
- c. Demonstrate how to use transitions from scene to scene.
- d. Give students practice time with camera, walk around and assist.

### II. Teach students to move the video from the camcorder to *Imagemixer*.

- a. Connect the camera to the computer with the USB cable.
- b. Open the *Imagemixer* software.
- c. Select the CD icon.
- d. Select the movie camera icon.
- e. Click the round red button to begin the transfer.
- f. Click the black square when you want the transfer to stop.

### III. Teach students how to use *Imagemixer*.

- a. Click on the movie clapboard icon.
- b. Select your clip and drag it to the timeline on the bottom.
- c. Click the green button with the eye icon.
- d. Hit the play arrow to watch your clip.
- e. Click on the film button on the top far right.
- f. Give your file a name and save to the desktop.
- g. Close *Imagemixer*.

**IV. Teach students how to save to CD/DVD.**

- a. Put a blank CD in the drive.
- b. Right Click on your desktop icon.
- c. Select “Send to CD drive.”
- d. Click on balloon at bottom.
- e. Click on “Write these files to drive.”

**APPENDIX N**

**PROBLEM SITUATION WORKSHEETS  
FOR TRADITIONAL AND COMBINED INTERVENTION LESSONS**

### PROBLEM SITUATION: Listening

Tell the students that you are going to read three announcements to them and that they are to remember the information as accurately as possible. Read the announcements slowly and clearly, but do not repeat them. Students may take notes. Wait 30 seconds, then ask the questions following each announcement.

1. Fox Studios needs extras of all ages for the movie, "Golden Fields" which is being filmed here throughout the month of October. If you are interested, be among the first one hundred people to arrive at the parking lot behind Smith's grocery store at the corner of Juniper Street and 10<sup>th</sup> Avenue tomorrow at 7:00 a.m. Shooting will last throughout the day, and every extra chosen will be paid a flat fee of \$150. Children between twelve and eighteen must bring signed parental permission addressed to the studio, and children under twelve must be accompanied by an adult.

What is the name of the movie?

What studio is making the movie?

How will the extras be chosen?

What is the pay?

What special instructions were given for children?

2. A free session will explain the benefits of the Acme computer camp, a summer day camp for children in grades four through eight who want to learn about computers and five of the most popular software programs currently being used in homes and schools. Camp classes meet from 8:00 a.m. to 1:30 p.m., and all materials and equipment are provided. Anyone can attend the introductory session at 8:00 p.m. Wednesday, April 22 in the Sunset Room of the Dobbs Hotel, 3030 Circle Drive. For more information, call 689-7000.

What is the price of the introductory session?

What is the price of the camp?

What is the purpose of the introductory session?

Who is the camp for?

How many software programs are taught at the camp?

Where is the introductory session being held?

3. My house is at 3946 Taylor Ridge Road. To get there, walk west four blocks on Center Drive until you get to the high school. Turn left and go up the hill on High Street. At the top of the hill, after the stop sign, High Street turns into Taylor Ridge Road. Keep going south until you come to the first side street to the right. My house is the fifth on the right.

How many blocks do you walk on Center Drive?

Where do you turn off on Center Drive?

What is at the corner of Center Drive and High Street?

What is the address on Taylor Ridge Road?

**PROBLEM SITUATION: Following Directions**

**Directions: Read all of the questions before completing this worksheet.**

1. Write your name in the upper left hand corner of this worksheet.
2. Put a circle around the first word on this worksheet.
3. Underline the word "on" every time you see it on this worksheet.
4. Write your favorite color on the bottom of this sheet.
5. Write the number of stars on the American flag on this line \_\_\_\_\_.
6. How tall are you? \_\_\_\_\_
7. What grade are you in? \_\_\_\_\_
8. Draw a square in the middle of the back side of this worksheet.
9. Make an X in the square.
10. Draw a rectangle around your name.
11. Cross out direction #1.
12. Write your favorite animal next to your favorite color.
13. Put a dot in the bottom right hand corner of this worksheet.
14. Put two lines under the only proper noun on this worksheet.
15. Ignore all directions and questions except for number one.



**PROBLEM SITUATION: Handling Others' Anger**

**Tell about a time that someone was really angry with you:**

**Tell what you did:**

**Tell how you would change what you did to make the end result better:**

**PROBLEM SITUATION: Asking for Permission**

1. You want to go to the school dance. Your mother has grounded you for a week. She is on the phone talking to a friend. Your Grandmother, who lives with you, is in the other room watching television. Using the steps you have learned for asking permission, tell how you would go about getting permission to go to the dance.
2. You are in the middle of taking a test. You are thirsty and need a drink. The class is all working on the test quietly. Using the steps you have learned for asking permission, tell how you would go about getting permission to go to the water fountain.
3. You have just completed all of your assignments for the day. You would like to use the classroom computer. Using the steps you have learned for asking permission, tell how you would go about getting permission to use the computer.

**PROBLEM SITUATION: Using Self-Control**

I. Complete the ignoring rating scale below. Mark each with a 1, 2, or 3 if it would be easy, hard, or very hard for you to ignore.

1 = Easy for me to ignore   2 = Hard for me to ignore   3 = Very hard for me to ignore

- \_\_\_ 1. My friend whispers a joke to me.
- \_\_\_ 2. Someone drops his books.
- \_\_\_ 3. I hear a fire engine outside.
- \_\_\_ 4. Someone says a mean comment to me.
- \_\_\_ 5. My friend makes a face at me.
- \_\_\_ 6. The principal comes to the door to talk to the teacher.
- \_\_\_ 7. My friend is calling my name.
- \_\_\_ 8. The person behind me burps.
- \_\_\_ 9. The class clown shouts out a silly answer.
- \_\_\_ 10. Someone throws a spitball at me.

Scoring:

12 and below: You are really in control!

13-20: You need work ignoring others. You can do it if you try.

21 and above: You need assistance! You are not in control of yourself!!

II. Write five (5) things you can do to help control yourself:

## **PROBLEM SITUATION: Dealing With Group Pressure**

**Directions:** Read each situation and decide what you would do in each case.

1. You and a friend go to a movie and sit in the back row. Just before the movie starts, a ninth grader comes up and asks you if you want to leave and go drink some beer. You don't really want to go, but your friend says yes right away. What do you do? Stay at the movie or go with them to drink?
2. You have invited a few friends to spend the night. After our parents are in bed, two of the kids open a pack of cigarettes and start to smoke. You feel uncomfortable and don't know whether to let them go ahead, tell them to stop, or call your parents. What do you do?
3. One of your friends has just gotten into the shower after physical education class. A few friends come up with a pair of scissors and want you to find your friend's jeans so they can cut a slit in them. You don't think it's a nice thing to do, but the kids are bullies and you are a little afraid. What do you do?
4. One of your friends invites you to stay overnight, and your parents ask you to check to see if the person's mother or father will be home. Your friend asks you to say yes, even though no one but you and your friend will be there. Your friend tells you that several other kids are also invited over for a party. What do you do? Tell your parents the truth, or tell them what your friend wants you to?
5. One of your friends has been acting strangely, especially at lunchtime. She hasn't been eating much lately, and you have seen her hide some of her food in her napkin so no one gets on her for not eating anything. You have also been around when she has eaten quite a bit of food and then spent a lot of time in the bathroom. You are afraid that she has an eating disorder, but once when you hinted at it she begged you not to say anything and told you that there was nothing to worry about. You think the problem is getting worse. What do you do?

**PROBLEM SITUATION: Concentrating on a Task**

Do you usually begin a task and stay with it until it's finished without taking any breaks or becoming distracted? \_\_\_\_\_

Have the teacher time you as you are copying the skill and let you know each time 2 min. has passed. Put a check in a box if you were on task when she said, "Two minutes"

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How many checks did you earn in a 10 minute period?

What do you think you could do to help yourself improve the time that you are concentrating on a task?

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Set a concentration goal for yourself-

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**PROBLEM SITUATION: Keeping Out of Fights**

What could you do in the following situations to **AVOID** getting into a fight?

1. You are walking through the cafeteria with your lunch tray. Bobby walks past you and bumps your arm by mistake. This makes you lose your grip on your tray, and your lunch goes all over the floor. You are very angry, and believe that he may have done it on purpose, since he didn't even bother to stop and apologize.

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2. Armand, another student in your class keeps calling you names under his breath when the teacher isn't paying attention. Sometimes he even throws things (erasers, balled up paper, parts of a pencil) at you. You just want to go over and hit him.

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3. You are walking home and notice a group of people fighting on the sidewalk. You realize that some of them are your friends. Part of you really wants to jump in the middle of it and help them out.

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**APPENDIX O**

**HOMEWORK WORKSHEET**

**(To Be Used With Each Skill During the Traditional Intervention  
and the Combined Intervention)**

## HOMEWORK

Name \_\_\_\_\_ Date \_\_\_\_\_

**Skill:**

**Skill Steps:**

**Where did you use the skill?**

**When did you use the skill?**

**Who did you use the skill with?**

**What happened when you used the skill?**

**Which steps did you really follow?**

**How good of a job do you think you did in using the skill?**



**APPENDIX P**

**TRADITIONAL SOCIAL SKILLS  
INTERVENTION TEACHER TRAINING**

## **TRADITIONAL SOCIAL SKILLS INTERVENTION TEACHER TRAINING**

### **I. History and Development of Skillstreaming.**

### **II. Introduction/Explanation of Skillstreaming Steps.**

1. Define the skill.
2. Model the skill.
3. Establish student skill need.
4. Select role-player.
5. Set up the role play.
6. Conduct the role play.
7. Provide performance feedback.
8. Assign skill homework.

### **III. Show *Skillstreaming Curriculum and Training Procedures* video**

### **IV. Teachers Practice.**

### **V. Distribution of Weekly Lesson Plans.**

- A. Explain use.
- B. Practice.

### **VI. Explain Teacher Facilitation**

- A. Teachers monitor behavior and manage classroom.
- B. Teachers are not direct teaching during these times.

### **VII. Question and Answer Period.**

**APPENDIX Q**

**OUTLINE OF COMBINED SOCIAL SKILL  
INTERVENTION TEACHER TRAINING**

# COMBINED SOCIAL SKILL INTERVENTION TEACHER TRAINING

## I. Introduction

- A. Teachers introduce themselves.
- B. Teachers discuss their experiences with technology

## II. Familiarization with cameras

- A. Since each teacher may have a different brand of camera, this will be somewhat individualized depending on experience.
- B. Teachers practice by shooting 5 minutes of scenery.

## III. Familiarization with Software (*Imagemixer*)

- A. Teachers are taken through the lessons they will use to teach the students.
  - 1. Teach students how to use the cameras.
  - 2. Teach students how to move the video from the camcorder to *Imagemixer*.
  - 3. Teach students how to use *Imagemixer* to edit and add sounds and special effects.
- B. Questions and answers on the software.

## IV. Practice

- A. Teachers will be grouped into threes and be instructed to create a five-minute movie.
- B. Teachers will use *Imagemixer* to edit movie and record on CD.

## V. Screening of Movies and Feedback

## VI. Questions and Answers

**APPENDIX R**  
**SOCIAL SKILLS STEPS**

## LISTENING

1. Look at the person who is talking.
2. Think about what is being said.
3. Wait your turn to talk.
4. Say what you want to say.

## FOLLOWING INSTRUCTIONS

1. Listen carefully while you are being told what to do.
2. Ask questions about anything you don't understand.
3. Decide if you want to follow the instructions and let the other person know your decision.
4. Repeat the instructions to yourself.
5. Do what you have been asked to do.

## DEALING WITH SOMEONE ELSE'S ANGER

1. Listen to the angry person.
2. Try to understand what the person is saying.
3. Decide if you can say or do something to deal with the situation.
4. If you can, deal with the other person's anger.

### ASKING PERMISSION

1. Decide what you would like to do for which you need permission.
2. Decide whom you need to ask for permission.
3. Decide how to ask for permission.
4. Pick the right time and place.
5. Ask for permission.

### USING SELF-CONTROL

1. Tune in to what is going on in your body that helps you know you are about to lose control of yourself.
2. Decide what happened to make you feel this way.
3. Think about ways in which you might control yourself.
4. Choose the best way to control yourself and do it.

### KEEPING OUT OF FIGHTS

1. Stop and think about why you want to fight.
2. Decide what you want to happen in the long run.
3. Think about other ways to handle the situation besides fighting.
4. Decide on the best way to handle the situation and do it.

## DEALING WITH GROUP PRESSURE

1. Think about what the group wants you to do and why.
2. Decide what you want to do.
3. Decide how to tell the group what you want to do.
4. Tell the group what you've decided.

## CONCENTRATING ON A TASK

1. Decide what your task is.
2. Decide on a time to work on this task.
3. Gather the materials you need.
4. Decide on a place to work.
5. Decide if you are ready to concentrate.



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