The effects of social skill training in a simulated community environment for adolescents with cognitive impairments

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THE EFFECTS OF SOCIAL SKILL TRAINING IN A SIMULATED COMMUNITY ENVIRONMENT FOR ADOLESCENTS WITH COGNITIVE IMPAIRMENTS

by

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A Thesis

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Thesis Chair: Joy F. Xin, Ed.D
Dedications

I would like to dedicate this manuscript to student’s who have touched my life and have made my teaching career extraordinary.
Acknowledgments

I would like to express my appreciation to Professor Joy F. Xin for her guidance and support throughout this research. I look forward to whatever challenges that come my way as well as new professional beginnings.

I would also like to thank my husband for his unconditional love and support through this endeavor. I would not have been able to get through this year without him. I would like to express my appreciation for my family’s support and understanding through this endeavor as well.
The purposes of this investigation were to (a) evaluate the impact of school and classroom-based social skills instruction on student’s social capabilities, and (b) determine if the skills learned in classroom-based instruction can be generated to the school store. Three 9th grade students aged 15-16 participated in the study. They were learning lessons adopted from Talkabout for Teenagers, taught 30 minutes a day, once a week for 12 weeks during social skill training/instruction. An observation chart was used before and after social skill instruction and a total was calculated at the end of each observation session to measure their social behaviors which included making eye contact, verbal responses to questions, initiating a conversation, using manners in conversations and asking for help or assistance while working in the school store. A survey with 6 questions based on a 5 point Likert scale, 0 being very negative to 4 being very positive was used to measure student’s attitudes towards social skill training. A multiple baseline design with AB phases across participants was used in this study and results demonstrated that all students made gains in their eye contact, verbal responses, initiating a conversation and presenting appropriate manners.
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Chapter 1

Introduction

Statement of Problems

Cognitive Impairment (CI) is one of the disability categories listed in the Individual with Disabilities Act (IDEA, 2004) and characterized by significantly below average general cognitive functioning existing concurrently with deficits in adaptive behavior manifested during the developmental period that adversely affects a student's educational performance and is characterized by one of the following: the quality and rate of learning, the use of symbols for the interpretation of information and the solution of problems and the performance of an individually administered test of intelligence that falls within a range of two to three standard deviations below the mean (N.J.A.C. 6A:14.3.5, 2014). Often students with CI display weakness in the areas of communication, social skills, adaptive behaviors, and lack knowledge of proper conversations. According to Gresham & Sugai (2001), social validity perspective, social skills are specific behaviors that an individual exhibits to perform competently on a social task (e.g., active listening skills, reciprocal communication, ignoring conversation, etc.).

Social skills are important for students with CI to learn communication and interaction in school environments. Social skills deficits may occur because a skill has not been learned and, thus, cannot be performed, or because a competing deficit (e.g. anxiety) inhibits the acquisition or performance of a particular skill (Kavale & Mostert, 2004). Initiating and responding to a conversation have been identified as socially valued skills that contribute to acceptance and participation in daily life (Chadsey-Rusch, 1997; Haring & Breen, 1989; Sherman, Sheldon Harchik, Edwards, & Quinn, 1992). Social
interaction can be very important to develop social competence and appropriate behaviors in order to become a functioning member of a society.

High school adolescents with CI require learning social skills to be successful in their lives, leaving school to enter into adulthood at age 21. As these adolescents transition to adulthood, it is imperative to provide social skills training to prepare them with proper communication skills. School-based Social Skills Training (SST) is considered as a vital component of social skills programs to teach specific social skills that improve social behavior development (Gresham, Van, & Cook, 2006). Teachers should find ways to supplement classroom instruction with regular SST in order to prepare students for adulthood. There are many different approaches to support students with disabilities to acquire the social and life skill competence for their successful and meaningful lives (McFall, 1982).

Social and life skills are often intertwined, because both skills are necessary for building interpersonal relationships and getting readiness for employment (Chadsey-Rusch, 1992). Social competence is defined as an evaluative term based on judgments that a person has performed a social task competently. The judgments may be based on opinions of significant others (e.g., teachers, parents, peers), comparisons to explicit criteria (e.g., number of social tasks correctly performed), and/or comparisons to a normative sample (Cook, Gresham, Kern, Barreras, Thornton, & Crews, 2008). Social competence predicts adequate long term psychological and social adjustment (Kupersmidt, Coie & Dodge, 1990, as cited by Gresham, Sugau & Horner, 2001). Being socially competent is important for adolescents, especially for those with CI (Gresham, Sugau & Horner, 2001).
Despite the importance of SST, many teachers of students with disabilities are challenged to deliver consistent and effective SST along with regular instruction. For example, students with CI tend to learn at a slower pace than their general education peers. They may also need practice in a real life situation to understand the application of these skills in society. Therefore, community-based instruction is suggested for these students (Hillier, Fish, & Cloppert, 2007). Teaching social and life skills in a classroom-based environment can create an exposure to the skills that are needed; however such an environment may lack the authenticity of an experience that would take place in its natural community setting. According to Steere and DiPiPi-Hoy (2012), the best and most effective location for social skills instruction is within the natural environment. However, authentic community-based instruction in a natural environment has some concerns related to liability, transportation, and staffing to allow for small group or individual instruction, as well as the cost (Steere & DiPiPi-Hoy, 2012). In addition, social skills training has to be in the context of social situations in order to make the classroom-based social and life skills training effective (Meyer, 2011). Components of community-based instruction are needed to determine if skills are being transferred from the classroom to their real life outside of the classroom. One way to determine this skill generalization while avoiding the difficulties with community-based instruction is to simulate a community environment within the school. Although a SST program is one of the most popular ways to remediate social skills deficits, it has not been shown to be a particularly strong intervention for students with high incidence disabilities (Gresham, Sugau & Horner, 2001). According to Gresham, et.al.,(2001), the most effective SST appears to be a combination of modeling, coaching and reinforcement procedures.
Developing a SST program to best address the needs of the students while also considering the difficulties of authentic community-based instruction can become a challenge to schools.

There have been a significant number of studies that address the effectiveness of different SST programs, but most have limited success (e.g., activities such as gaming, play and cooperative learning, multi-modality approaches with modeling/coaching, and technology such as computer programs). Multi-modal approaches seem to have the most perceived success according to the literature. Results vary based on the different program, as well as the setting in which the training took place. There is a debate as to whether SST is truly effective when the training is only classroom-based without a natural environment for generalization of acquired skills. Some research indicated that the reason for limited success in SST is the absence of proper teacher training and systematic assessment procedures to identify skill deficits in individual students (e.g. Gresham, Sugai & Horner, 2001, as cited in Miller, Lane & Wehby, 2005). Other research highlights the role of Individual Education Programs (IEP) in SST (e.g., specific goals/objectives). According to Pray, Hall and Markley (1992), special education teachers tend to emphasize IEP objectives that concern academic-related social skills and classroom compliance behaviors, rather than goals to help students meet objectives on interpersonal skills in their real lives. Studies also show that SST can be observed as effective; however SST has been plagued with poor maintenance and lack of generalization of treatment gains (Bryan, 1997, as cited in Grumpel & Hagit-Ari-Am, 2001). The theme of skill generalization and maintenance is often discussed with some concerns about the training effects.
One particular SST method for students with CI is using social activities such as gaming, play and cooperative learning to foster social competence. It is believed that learning takes place through play and it is generally accepted that play offers opportunities for children to learn about one another and facilitates friendship development (Zhang, 2011). One strength of using social activities is to provide the opportunity for students to be creative and also practice and generalize acquired skills in a natural setting (Zhang, 2011). Also, cooperative learning and gaming can enhance the likelihood of future cooperation and channel behaviors into pro-social directions (Goldstein, 1999). Video gaming is another social activity that has noted benefits for social skill development. Erikson (1977, as cited in Granic, Lobel & Engels, 2014) indicated that play contexts allow children to experiment with social experiences and simulate alternative emotional consequences, which can then bring feelings of resolution outside the play context. Similarly, Piaget (1962, as cited in Granic, et. al, 2014) theorized that make-believe play provides children opportunities to reproduce real-life conflicts, to work out ideal resolutions for their own pleasure, and to ameliorate negative feelings. Both Piaget (1962, as cited in Granic, et. al, 2014) and Vygotsky (1978, as cited in Granic, et. al, 2014) espoused strong theoretical links between play and a variety of elements that foster the development of social cognition. The nature of video games today contain immersive social contexts that involve a multitude of players to rapidly learn social skills and pro-social behavior that might generalize to their peer and family relations outside the gaming environment (Granic et. al, 2014). The concern with using social activities like play and gaming as a way of teaching social competence is the effectiveness of the program in a school setting and how it would have to be continuously
evaluated and changed so that it does not degenerate into a situation of just fun and play (Zhang, 2011). Despite its noted positive effects on social competence, video gaming also comes with the risk of harm, such as depression, isolation, aggression, and addiction (Granic, et. al, 2014). Video gaming also poses a challenge to be implemented in a school setting, where its educational benefits would be questioned.

Another SST for students with CI is a multi-modality approach involving practicing a particular method along with, modeling, coaching, and other strategies to improve social competence. In this method, students were trained in a specific SST method and then teachers and students discussed, modeled, rehearsed, and role-played in both problematic and social situations (Bain & Farris, 1991). There is some evidence to suggest the superiority of a multi-modal approach to SST as opposed to mono-modal approaches such as modeling, coaching, reinforcement or social problem solving training used in isolation (Beelman, Pfingsten & Loesel, 1994, as cited in Spence, 2003). Studies show that SST, when used on its own, is generally not powerful enough to improve social functioning, however SST is widely accepted as a component of multi method approaches to the treatment of many emotional, behavioral and developmental disorders (Spence, 2003). Some multi-modality approaches involve parents. This approach has shown some success. One such model is social problem solving training along with a parent training, which was shown to be more effective than the training alone (Spence, 2003). Another multi-modal approach that has been studied involves using a SST program along with a classroom management plan (Miller, Lane, Wheby, 2006). Three integral parts of a multi-modality approach are modeling, coaching and reinforcement combined with a SST program. Gresham (1998, as cited in Miller et. al, 2005) noted that
the most effective social skills training consisted of direct teaching using modeling, coaching and effective reinforcement as components, and of these components, modeling is perhaps most critical. This is because students have a chance to observe and practice the desired behavior in a setting free from social rejection.

Technology, such as computer programs have shown success in terms of students’ motivation, participation and positive attitudes toward SST (Zhang, 2001). Fenstermacher, Olympia, & Sheridan (2006) studied the instructional effectiveness of technology to teach social skills, and found it is a promising medium to teach social skills and to improve generalization of skills from training to actual practice. Computer programs and video modeling seem to be two popular ways to provide community resources and model appropriate social interactions. Using virtual reality may be an ideal tool for allowing participants to practice behaviors in role-play situations, while also providing a safe environment for rule learning and repetition of tasks (Mitchell, Parsons & Leonard, 2007). Practice of behaviors, both within and across contexts, could also encourage a more flexible approach to social problem solving. It seemed that virtual environments offer a new and exciting perspective on social skills training because it showed promise for transfer of knowledge between training in both virtual and the real world (Mitchell, Parsons & Leonard, 2002). Computer -based social skills training can more easily optimize resources available and create individualized instruction (Fenstermacher, Olympia & Sheridan, 2006), however a lack of group treatment may in some cases limit social interaction between students during social skills training. The common concern with using technology in SST is that it limits or removes human interaction in many instances.
Significance of the Study

SST is involved in school curriculums for students with CI. Considering the needs of these students, real life situations are vital in developing their social skills. Computer simulated real life situations may be an alternative for teachers in schools, however using virtual reality limits or removes human interaction, which is especially needed for students with CI. Community-based instruction that is simulated within the school is a popular way to develop social skills for students with CI while some issues can arise to make it difficult to implement consistently to positively impact on these students’ skill learning. This study will explore the impact of a classroom based social skills program with a school wide component, involving participating students with CI in the school store as a simulated community environment. It will focus on a scenario in which the community-based instruction component takes place in school to examine if this environment will promote transferring social skills learned in the classroom to the community setting in the school store.

Purpose of Study

Students will be involved in both a social skills class and a work environment in the school store. The purposes of this study are to (a) evaluate the impact of school and classroom-based social skills instruction on student’s social capabilities, and (b) determine if the skills learned in classroom-based instruction can be generated to the school store.
**Research Questions**

1. Do students with CI increase their appropriate social behaviors when classroom based social skills instruction is provided?

2. Do positive social behaviors exhibited in classroom based instruction carry over with similar success to experiences outside of the classroom?

3. Does working within a simulated community-based environment aid in developing social skills of students with a CI?
Chapter 2

Literature Review

Individuals with CI must transition into adulthood after schooling, and become independent in their lives. This transition encompasses a range of skills including social and personal caring, and interpersonal communication. These skills impact everything from being able to care for themselves in the community to making friends and maintaining relationships, while social skills training (SST) provides a wide range of interventions for secondary students to improve their social skills (Most & Greenbank, 2000).

The research reveals different SST for students with CI, for example, technology-based SST to provide social situations in a simulated environment, community-and school-based SST to practice learned skills in the real world. In this chapter, different methods of SST and their effects are reviewed.

Importance of Social Skills Training

The goal of SST is to develop social skills and prepare students with CI for future employment. As Lee and Carter (2012) identified, there are 7 high-quality transition services. These included individualized strength-based training, early work experience, meaningful collaboration, family supports, fostering self-determination and independence, social and employment skill instruction, and job related support. Specific social skills related to future employment need to be part of SST for these students making the transition to daily life after their graduation from school (e.g. Roessler & Johnson, 1987; McGlashing-Johnson, Agran, Sitlington, Cavin & Wehmeyer, 2004; Kamens, Dolynik, Dinardo, Rockoff, Forsythe & Corman, 2004).
Roessler and Johnson’s study (1987) provided role playing situations on the employability of 24, 16-17 years old, high school females with LD. They were randomly assigned to either experimental or control groups. Participants in the experimental group were given vocational coping training over 9 sessions, 2.5 hours each. They were then videotaped and observed in different vocational situations. A pre and post test was used to evaluate their performance. The students in the experimental group showed significant improvement in both social competence and employability, specifically in the areas of communicative speech, self-presentation, and responses to the supervisor’s demands.

Similarly, McGlashing et. al. (2004) indicated that employment specific social skills were beneficial to secondary students with CI. In their study, 4 participants, 2 male, 2 female chose their own job related goals for an 8 week work placement. All participants were classified as cognitively impaired with support needs. Each of them was given a specific job, for example, a janitorial/cleaning position at a gardening center or transportation terminal. A self-determined learning model of instruction was provided, in which the students chose their work related goals with their teacher and job coach. They were trained to get and return cleaning materials and wipe the areas. Observations were conducted while they were on the job. Data sheets were used to indicate responses the students performed. Results showed that three participants mastered their self-selected goals of following directions, completing tasks and using bus transportation. Although one participant did not reach the goal, the participant showed significant gains toward mastery.

Yamamoto, Kagami, Ogura, and Isawa (2013) found that basic social skills training with simulation was effective in acquiring social skills required for employment.
In this study, 4 males aged 19-27 with pervasive developmental disorders, took part in a social skills training and simulation program. The program consisted of 7 social skills related to employment. Participants were observed during the baseline on the 7 tasks, and then the first training session started. These sessions were set up as simulations in which participants acted as employees and the trainers served as their bosses. The participants were engaged in work and the trainers gave them various instructions, or made some accidents to deal with. The second part of the program consisted of basic social skills training which included instruction, modeling, role-play, and feedback along with simulations. Each participant was taught one of the 7 tasks which were immediately acquired and applied in the simulation. The findings indicate that social skills training with simulations is a better way for individuals with developmental disorders to acquire social skills related to employability.

Despite efforts at federal, state and local levels to ensure successful transition outcomes for youth with disabilities, unemployment, financial dependence and limited social relationships remain concerns on individuals with disabilities (Greene & Kochhar-Bryant, 2003 as cited by McGlashing-Johnson et.al., 2004). According to Frank and Sitlington (2000), the competitive employment rate for individuals with CI was only 15% within two years of leaving school and just 17% between 3-5 years of leaving school. Even though individuals with CI are employed, they often possess low-status occupations with low wages and limited benefits (Frank & Sitlinton, 2000).

Reviewing research, it is found that the employment focused SST help individuals with CI develop vocational skills; however, this success is displayed at a very short-term.
The goal is to prepare individuals for the job market, thus the long-term effects of the training should be considered.

**Technology-based Social Skills Training**

The use of technology has been considered as a successful means of SST for individuals with CI, when various technology devices and video modeling were used (e.g., Gumpel & Nativ-Ari-Am, 2000; Parsons & Mitchell, 2007; Buchholz, Muller, & Ferm, 2013). Despite some success, not all research shares the same support for technology as an effective means of SST.

In Gumpel and Nativ-Ari-Am’s study (2000), 4 adolescents, 3 female and 1 male, were evaluated using a multiple baseline design to measure their ability to shop for groceries using video modeling. Participants ranged in ages from 17-21 with different levels of visual and cognitive impairments. They were trained to perform tasks in behavioral steps, for example, entering the supermarket, checking a shopping list, gathering items, paying, receiving change and a receipt. Video modeling was used to train the students to complete tasks, and observations were taken two times a week to record each individual’s performance. Results showed that all 4 participants improved accuracy in selecting items significantly and were able to maintain their performance when they watched the video to learn the skill. It is found that virtual reality could serve as an ideal tool to allow individuals with lower cognitive function to practice tasks in role-play situations, while also providing a safe environment for learning rules and repeating tasks (Parsons & Mitchell, 2002). In Parsons and Mitchell’s study (2007), video modeling was provided to 6 teenagers with lower cognitive functioning to learn judgment
and reasoning. Participants watched videos presenting real situations in cafes and buses. They, then, received training in a virtual environment which provided them feedback about their choices on their appropriate sitting place. Participants were also questioned about where they chose to sit and why they chose to sit in a particular place. Ten independent raters scored each participant’s choice about the sitting place in 5 virtual environments at three different times during training. Results showed that participants made gains through training in the virtual environment. They provided correct decision making, judgment and reasoning when following the video segments that were presenting real situations in cafes and buses.

Buchholz, Muller and Ferm (2013) examined the effects of smart phones to enhance communication skills of 7 individuals with cognitive and communicative impairments. This study used a qualitative method with structured interviews aimed at determining the satisfaction of the participants using the adaptive technology. These individuals were taught to use text messages with picture symbols and speech synthesis on smart phones. A professional was working with each individual, and interviewed. Results showed that texting with picture symbols and speech synthesis increased their independence and social participation. Furthermore, it was noted that the devices gave the individuals a feeling of fitting in because the devices are widely accepted socially, which could be considered as an important factor for the success of such an intervention. Additionally, the devices made users feel safe and comfortable in communicating with others, and being able to manage their schedules and daily activities. Finally, participants gained their confidence to express their views through text messages rather than their oral communication.
Despite positive results, some concerns were raised in the literature as far as the effectiveness of technology in SST. One concern is that certain technology, such as computers, television and games do not always foster social activities. Kang and Munoz (2014) found that individuals who prefer online communication are perceived as less socially skillful than those who prefer face to face communication. In addition, an emphasis on technology can hinder the interpersonal skill development that a SST program intends to develop (Miller, Lane, & Wehby, 2005). Another concern is the transfer of skills learned from SST involving technology to the real world. Gul and Vuran (2010) questioned if technology-based training, such as video modeling is providing a real model for students with CI to learn in the real world, while participants may just imitate their observation in the video. Future studies are needed to determine the effects on successful maintenance of participant’s acquired skills. The question about the cost of certain devices and their licenses may hinder schools to expand the technology usage.

**Community-based Social Skills Training**

Students with CI tend to learn slowly and need repeated, frequent exposure to natural cues for practice (Steere & DiPipi-Hoy, 2012). Community based SST is considered to increase the chance for generalization and maintenance of their acquired skills (Snell & Brown, 2011, as cited in Steere, & DiPipi-Hoy, 2012).

According to Arnold-Reid, Schloss, and Alper (1997), community-based SST shows promise for generalization. This study was conducted using a multiple probe design across individuals to evaluate the efficacy of a meal planning training system. Three male participants between the ages of 16 and 17 took part in a program in which
they made selections to keep within a recommended dietary allowances per day based on caloric intake. The participants were all considered to have low cognitive functioning. Baseline data was taken in the form of a written record of the participant’s meals and snacks for 5 days to establish a range between 30 and 70% accuracy with the recommended dietary allowances. During the treatment, participants were given training on making proper nutritional choices in order to feel good and keep their energy up. They were taught about the 4 food groups, then to plan their meals for 3 straight days using a meal planning chart. After 100% accuracy in meal planning was attained for 5 consecutive days the training period ended and probes were taken once a week for 5 weeks. After the 5 weeks, all participants maintained 100% accuracy in their meal selections and maintained this level after 60 days.

Another study with similar results was found in Tekin-Iftar’s study (2008). In this study, parent delivered community-based instruction for four students with CI whose ages ranged from 7 – 12. Parents were taught how to train their children to be proficient in different community skills such as making purchases at a grocery store as well as at a pastry shop, and ordering dry cleaning at a dry cleaning center. Task analysis was used to evaluate each skill during the baseline and intervention. After the baseline, parents taught their children throughout the treatment using verbal instruction for purchasing skills, securing attention, and delivering verbal praise. Intervention, generalization, and maintenance probes were conducted to evaluate learning outcomes. Results showed that CBI was an effective way to teach purchasing skills at a pastry shop, a grocery store, and a dry cleaning service. Their skills were generalized in the range of 81-100% and
maintained for 4 weeks. Parents expressed their satisfaction with their child’s skill maintenance at phone interviews.

Despite the positives, there are concerns raised in the literature. The first is that studies are conducted with a limited number of participants. Future studies should expand the number of participants to generalize the results, and consider involving those with different ages, types and severity of disabilities (Arnold-Reid et. al, 1997). The level of prompting is also an issue in these studies. More research should be considered with limited or no prompting to evaluate participants’ independence after training. Also, important consumer skills are not addressed, specifically money skills to ensure correct payment and changes involved in the transaction. These real-world concerns should be addressed. Additionally, there are concerns about the challenges in implementing CBI programs, for example, liability issues, transportation, limited staffing to meet the needs of students, and increased program expenses (Steere & DiPipi-Hoy, 2012).

School-based Social Skills Training

School-based social skills’ training is another option for teaching social skills to students with CI. In Branham, Collins, Schuster and Kleinert’s study (1999), three high school students from 14-20 were provided classroom based functional life skills along with peer video modeling to learn how to cash a check, mail a letter and cross the street. Classroom simulations and peer video modeling were used for each situation. During school-based training, participants were taken into novel community settings twice a week to measure their skill generalization in their work place. Task analysis was provided in the novel community settings to evaluate their skills learned. All participants
generalized the skills of check cashing, street crossing and letter mailing with 100% accuracy to novel community settings after the training.

Dagseven Emecen (2011) examined the efficacy of Direct Instruction and modeling using school-based training on teaching children how to think and share properly in social situations. Four students participated in the study. After initial interviews with teachers, two were chosen, one boy and one girl aged 11-13. During the baseline, they were observed using thanking and sharing measurement tools for 3 sessions. During the treatment, Direct Instruction on saying “thanks” and modeling of sharing was conducted in training sessions in the classroom. Two 30 minute sessions were organized for every skill each day. After the instruction, students were placed in social situations in the classroom, dining hall and other places where they interacted with peers during their break. Results showed that modeling and Direct Instruction was effective because students were able to exhibit learned skills with 100% accuracy.

Hughes, Golas, Cosgriff, Brigham, Edwards and Cashin (2011) examined the effects of communication books as a school-based intervention to encourage five students with intellectual disabilities and extensive support needs to communicate with their general education peers. Communication books were filled with ideas for initial verbal communication between a participant and one of their conversation partners. During the baseline, participants either initiated or responded to communication in 0.23% of intervals. During the treatment, students were taught how to use communication books on hand in a situation to interact with a conversation partner in the cafeteria or an inclusive setting. Observations showed that all students initiated or responded to conversation in 96-98% of intervals. Six months later, students were initiating 71-84% of the time, and
responding to conversation 75-90% of the time. It seems that a school-based intervention using communication books along with opportunities to interact with general education peers increased the conversational initiations and responses of students with CI.

The literature demonstrated mixed results for the efficacy of school-based SST. Some concerns were raised because most studies had a very low number of participants. In addition, common school practices such as verbal praise, and a free environment are not always implemented during the studies. In some cases, students did not receive verbal praise they are used to in the classroom, which could affect their performance in the community. In other studies, students stopped once they failed at any point during task analysis. This means that they did not experience a failure in a free environment they are accustomed to in school, therefore the findings may not provide a full picture of the student’s abilities (Branham et. al, 1999). Another concern is that in some studies, social skills acquisition is being judged based on responding to prompts, videos or questions in the classroom, but not by actually physically performing a task. This is a concern since generalization and maintenance from the classroom to the physical community are not addressed (Branham et al., 1999). Future research should compare the immediate results, and generalization and maintenance (Branham et al., 1999) as well as replications to validate the findings.

**Suggestions for Future Research**

Social skills training is viewed as an experimental intervention, while the theoretical structure of social skills is incomplete resulting in problems in definition, measurement and design (Kavale & Mostert, 2004). Further research is necessary to
explore several issues in the area of SST. Among them are duration of training, efficacy of programs and their elements, long-term effectiveness of interventions, and skill maintenance.

The evidence presented a link between SST and the increased social competence of individuals with CI in research, but displayed some concerns that deserve the attention of future studies. As previously discussed, technology has become a popular resource in SST; however, some research shows that technology may not be an effective SST due to the concerns with the transfer of skills learned into a real world setting. Future research should not only replicate the previous, but also seek to determine which forms of technology lend to better outcomes in terms of transference of skills into the real world. In addition, future research should seek to determine if technology is an effective way to maintain skills over a longer period of time.

Both CBI and school-based training was almost universally backed by the research (e.g. Bain & Farris, 2015; Gresham et. al, 2001; Hiller, Fish, Cloppert & Beversdorf, 2007; Laugeson, Frankel, Gantman, Dillon & Mogil, 2012). Much of the research in this area focused on very different programs with several components. Future studies in this area should look for specific combinations of components that work well for a larger population of individuals. Again, a low number of participants limit any projection of outcomes onto a larger population. Future studies should address this shortcoming as well. There also appears to be a gap in the research involving the multi-modal approach to SST. As previously stated, much of the research supports a multi-modal approach involving some sort of community-based intervention. However, the research does not seek to compare the effects of SST using a multi-modal approach that
is based only in the classroom or school with one involving a community-based intervention.

Employment as part of a successful life for an individual with CI is a significant component of SST, specifically in transition years. Research on SST in the area of employment shows positive outcomes of individuals with CI. Future research is needed to determine the most effective ways to transition students with CI, so that they can increase their chances of meaningful employment.

The implications and suggestions are needed to address the limitations of the body of research in the area of SST for individuals with CI. It would be a considerable undertaking for future research to successfully address these areas of concern. Addressing the small sample size and accounting for the individuality of study participants could be a difficult task. Add to that, the need for longitudinal studies to address the areas of skill maintenance and long-term success of participants. In addition, the wide-range of programs and useable interventions adds to the uncertainty of what can actually be considered as the most successful program for individuals with CI.

**Conclusion**

SST can play an important role in the quality of life for individuals with CI. Research on SST for these individuals is important not only for themselves, but also for their families as they all work toward a better quality of life. The more the effective methods of SST are understood, the more schools can implement these programs to positively impact the future of their students and families. This present study intends to
evaluate secondary students with CI and the effects of a school-based SST to determine if the skills learned through SST are generalized to the school store.
Chapter 3
Methodology

Setting

The study was conducted at a high school in southern New Jersey. The state Department of Education (2000) listed the District Factor Group (DFG) for the township as “FG” based on the 2000 Decennial Census Data. The DFG represents an approximate measure of a community’s relative socioeconomic statues (SES) by ranking from “A” (lowest socioeconomic districts) to “J” (highest socioeconomic districts) that are labeled as follows: A, B, CD, DE, FG, GH, I, J. Therefore, the high school is located in a middle class, suburban area.

The high school houses approximately 719 students from 9th to 12th grade. It is a four-year comprehensive school to provide an extensive college preparatory program, in which students are offered four years of English, Mathematics, Social Studies, Science, Physical Education and World Languages. In addition to these six subject areas, the students are encouraged to complete electives in art, music, business, computer technology, marketing, and related cooperative opportunities. Students with disabilities are placed in either modified academic classes, resource rooms or a life skills program according to their Individualized Education Plan (IEP) goals and objectives recommended by the school’s child study team.

School store. The study was conducted in the high school’s store where students with disabilities were assigned to work. The store is a one-stop-shop for all of the school’s accessories. The merchandise includes t-shirts, sweatshirts, sweatpants, gym uniforms and school supplies. It is managed by students enrolled in the life skill program
and the Retail Management course. For over 40 years, the store has been providing students hands-on learning experience in a real-life environment. Students are responsible for the daily operations of the store such as managing the register, assisting customers, making coffee, completing daily deposits, ordering merchandise, and conducting inventory control procedures.

There were 8 students working in the school store, 5 were general education students and 3 with cognitive impairments (CI). There were two teachers in the store, a regular education teacher to manage the store and a special education teacher to teach those with CI enrolled in the life skills program. A classroom aide was also present in the store to assist the students whenever needed. A certified teacher specialized in social skills based curricula, participated in this study by delivering the social skills training. The special education teacher also participated in the study to assist with social skill development of students with CI within the store environment.

**Participants**

Three, 9th grade female students with CI participated in this study. These students are classified by the school’s child study team following eligibility classification standards of the state code. All students had IEP’s with objectives in learning social skills to receive supplemental social skill training in a resource room for 42 minutes per session once a week. Table 1 presents general information about the participating students.
Table 1

*General Information about the Participating Students*

<table>
<thead>
<tr>
<th>Student</th>
<th>Gender</th>
<th>Classification</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>F</td>
<td>CI</td>
<td>15</td>
</tr>
<tr>
<td>B</td>
<td>F</td>
<td>CI</td>
<td>16</td>
</tr>
<tr>
<td>C</td>
<td>F</td>
<td>CI</td>
<td>16</td>
</tr>
</tbody>
</table>

*Note. Intelligence Quotient (IQ) measured by the Wechsler Intelligence Scale for Children-Fourth Edition (2003) with a mean of 100.*

Student A was classified as having CI with an IQ of 70 since 1st grade. She is comparatively high functioning; however, she exhibits significantly below average levels of cognitive functioning along with deficits in adaptive functioning (basic life skills). Academic weaknesses include low mathematic computation skills and reading comprehension. She has a hard time communicating with her peers and engaging in a conversation. She struggles with turn taking in a conversation and often interrupts others.

Student B was classified with mild CI since 1st grade with an IQ of 67. She has significant delays in reading and math that include phonemic awareness and decoding skills as well as mathematic calculation skills. Her weaknesses include turn taking in a conversation, keeping friends, and maintaining eye contact during communication.

Student C was classified with mild CI since sixth grade with an IQ of 69. She struggles with basic reading and comprehension, and displays weaknesses in the area of written expression due to her poor spelling. She struggles with maintaining eye contact during a conversation and sometimes responds inappropriately to questions.
**Teachers.** A certified teacher specialized in social skills based curriculums taught all lessons on social skills and delivered the social skill training during the entire study.

One special education teacher participated in the study to assist with social skill development within the store environment. The teacher had over seven years of experience teaching students with disabilities in a resource room, self-contained and inclusive classrooms. He worked together with the certified teacher in delivering social skill instruction during the entire study.

**Research Design**

A multiple baseline design with AB phases across participants was used in this study. Students A, B and C were all observed in the school store prior to the social skill training for approximately 30 minutes. During the baseline phase, student A was observed twice a week for 2 weeks, Student B for 3 weeks, and Student C for 4 weeks. Their behavior occurrences were recorded during each session of the baseline and intervention using an observation chart. Social behaviors, eye contact, and conversation skills were recorded during the baseline and compared to those in the intervention.

**Materials**

**Instructional materials.** *Talkabout for Teenagers* developed by Speechmark (2012) is a complete group activity for teenagers to learn social and relationship skills. The workbook includes social skill lessons for instructors, and ready-made material for group activities to learn social and relationship skills for children and youths. It is divided into five, hierarchical modules including self awareness and self esteem; body language; conversational skills; friendship building; and assertiveness. The students were taught by
the teacher using this workbook in a group within the classroom (See Appendix A for a
sample of a social skill lesson, Talkabout Talking).

**Observation chart.** An observation chart was developed by the teacher to record
the frequency of social behavior occurrences before social skill instruction was
implemented. The chart was developed based on the special education teacher’s
observations and desired outcomes for the participants working at the school store. These
social behaviors include making eye contact, verbal responses to questions, initiating a
conversation, using manners in conversations and asking for help or assistance when
needed. A “+” mark was tallied when the corresponding social behavior was observed
each time. A total was then calculated at the end of the observation. This chart was used
before and after the social skill training to determine whether social skills instruction
influenced the participants’ social behavior changes in the school store (See Appendix B
for an example of the chart).

**Survey.** A survey with six questions was developed by the researcher to measure
the student’s opinions and attitudes towards the social skills training. It attempted to
record student opinions and their experience with social skills instruction. Each item on
the survey had five possible responses. Each response was scored on a 5 point Likert
Scale, 0 being very negative, 1 being negative, 2 being neutral, 3 being positive, and 4
being very positive. The survey was given to each participant at the end of the 12th week
by the researcher (See Appendix C for a sample of the survey).

**Procedures**
Instructional procedures. Lessons adopted from Talkabout for Teenagers, were taught 30 minutes a day, once a week for 12 weeks. The teacher worked with students in a group setting. Week 1 focused on conversation skills. In the lesson, the teacher introduced conversation skills by having students watch two teachers engage in a conversation, followed by questions about what they saw the two teachers doing. Then, the teacher handed out the lesson pages from Talkabout for Teenagers on conversation skills and directed the students to highlight and review the proper way to initiate a conversation. Students were guided to practice conversation skills in pairs. A topic was assigned to each pair to discuss, for example, Christmas traditions. The teacher assisted the pairs of students with recommendations for developing their own conversation and encouraged them to apply the skills learned in the school store as well as school environment. Table 2 presents the social skill lessons for the students in 12 weeks.
Measurement procedures.

Observations. The researcher observed each student in the school store prior to social skills instruction. When observing one of the five social behaviors, the researcher recorded the behavior using a tally mark under the corresponding column on the observation chart. At the end of the session, the total occurrences were calculated for each student. The same procedure was used during the intervention.

<table>
<thead>
<tr>
<th>Week</th>
<th>Lesson Topic</th>
<th>Instructional Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conversation Skills</td>
<td>Introduce Lesson, Watch Video, Student Practice</td>
</tr>
<tr>
<td>2</td>
<td>Conversation Skills</td>
<td>Introduce Lesson, Teacher Model, Student Practice</td>
</tr>
<tr>
<td>3</td>
<td>Body Language</td>
<td>Introduce Lesson, Teacher Model, Student Practice</td>
</tr>
<tr>
<td>4</td>
<td>Eye Contact</td>
<td>Introduce Lesson, Teacher Model, Student Activity</td>
</tr>
<tr>
<td>5</td>
<td>Self Awareness</td>
<td>Introduce Lesson, Watch Video, Group Discussion</td>
</tr>
<tr>
<td>6</td>
<td>Self Esteem</td>
<td>Introduce Lesson, Watch Video, Group Discussion</td>
</tr>
<tr>
<td>7</td>
<td>Manners</td>
<td>Introduce Lesson, Teacher Model, Student Practice</td>
</tr>
<tr>
<td>8</td>
<td>Building Friendship</td>
<td>Introduce Lesson, Friendship Discussion</td>
</tr>
<tr>
<td>9</td>
<td>Conversation Skills</td>
<td>Student Model, Student Practice</td>
</tr>
<tr>
<td>10</td>
<td>Being a Good Listener</td>
<td>Introduce Lesson, Teacher Model, Student Practice</td>
</tr>
<tr>
<td>11</td>
<td>Interrupting if Needed</td>
<td>Introduce Lesson, Watch Video, Student Practice</td>
</tr>
<tr>
<td>12</td>
<td>Conversation Skills</td>
<td>Teacher Model, Student Practice, Group Discussion</td>
</tr>
</tbody>
</table>
**Survey.** The survey was given to students upon completion of social skills training. Each survey item was read and reworded if necessary for students to understand the questions. Participants circled their responses after the questions were read and explained. When completed, the researcher collected the survey copies.

**Data Analysis**

Means and standard deviations across phases were calculated and presented in a table. A visual graph was demonstrated to compare the behavior occurrences during the baseline and intervention for all three participants. Each participant’s survey responses were scored and presented in a table too.
Chapter 4

Results

In the school store, student social behaviors were observed and frequency occurrences were recorded during the baseline and intervention to compare the difference.

Eye Contact

Table 3 presents means and standard deviations (SDs) of student’s making eye contact with customers in the school store. The table shows the average number of times each student made eye contact with a customer over each observation session during both phases of baseline and intervention.

Table 3

*Making Eye Contact with Customers in the School Store*

<table>
<thead>
<tr>
<th>Student</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>0.5</td>
<td>0.58</td>
</tr>
<tr>
<td>Intervention</td>
<td>2.67</td>
<td>0.98</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>1.5</td>
<td>0.84</td>
</tr>
<tr>
<td>Intervention</td>
<td>3.4</td>
<td>0.70</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>1.5</td>
<td>0.76</td>
</tr>
<tr>
<td>Intervention</td>
<td>4.38</td>
<td>0.92</td>
</tr>
</tbody>
</table>

The mean occurrences of each student making eye contact ranged from 0.5 to 1.5 during the baseline. During the intervention when social skill instruction/training was provided, all students increased their occurrences; for example Student A increased to 2.67 compared to 0.5 prior to the social skill training, while Student B had 3.4 times and Student C increased to 4.38 compared to 1.5 in the baseline.
Figure 1 presents individual student’s frequency of eye contact with customers in the school store. The baseline depicts the number of times each student made eye contact in each observation for 30 minutes before social skills instruction. The intervention depicts the number of times each student made eye contact with a customer in the store while they received simultaneous social skills training in the classroom.
Figure 1. Student eye contact across phases
All students exhibited gains in instances of making eye contact with customers in the school store. Student A exhibited gains in maintaining eye contact with customers on average of 2.67 times. Student B also showed an increase after intervention in making eye contact with customers \( (M = 3.4) \), and Student C showed 4.38 times.

**Verbal Responses**

Table 4 displays means and SDs of student’s verbal responses to questions asked by customers in the school store.

<table>
<thead>
<tr>
<th>Student</th>
<th>Baseline</th>
<th>Intervention</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.25</td>
<td>2.42</td>
<td>1.25</td>
<td>0.5</td>
</tr>
<tr>
<td>B</td>
<td>2.67</td>
<td>4.3</td>
<td>2.67</td>
<td>0.82</td>
</tr>
<tr>
<td>C</td>
<td>2.63</td>
<td>4.3</td>
<td>2.63</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Mean occurrences of each student verbally responding to questions asked by a customer ranged from 1.25 to 2.67 during the baseline. During the intervention, when social skill instruction/training was provided, all students increased their occurrences. For example Student A increased her verbal responses to 2.42 compared to 1.25 in the baseline. Student B had 4.3 times and Student C increased to 4.3 compared to 2.63 in the baseline.
Figure 2 depicts the frequency of student responses to questions asked by customers in the school store. The baseline depicts the number of times each student verbally responded to a question in each observation for 30 minutes before social skills instruction. The intervention depicts the number of times each student verbally responded, while they received simultaneous social skills training in the classroom.
Figure 2. Student verbal responses to customers
Student’s A, B and C all exhibited gains in their responses. Student A demonstrated a slight increase in the amount of verbal responses to questions asked by customers ($M = 2.42$). Student B’s responses were also increased ($M = 4.3$), as well as Student C’s ($M = 4.63$).

**Initiating Conversation**

Table 5 shows the means and SDs of student’s initiating a conversation with customers in the school store. The table presents the average number of times each student verbally responded to a customer in each observation during both baseline and intervention.

<table>
<thead>
<tr>
<th>Student</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Baseline</td>
<td>1</td>
<td>0.82</td>
</tr>
<tr>
<td>A Intervention</td>
<td>1.25</td>
<td>0.75</td>
</tr>
<tr>
<td>B Baseline</td>
<td>0.5</td>
<td>0.55</td>
</tr>
<tr>
<td>B Intervention</td>
<td>1.6</td>
<td>0.70</td>
</tr>
<tr>
<td>C Baseline</td>
<td>0.5</td>
<td>0.53</td>
</tr>
<tr>
<td>C Intervention</td>
<td>1.5</td>
<td>1.07</td>
</tr>
</tbody>
</table>

The mean occurrences of each student initiating a conversation with customers in the school store ranged from 0.5 to 1 during the baseline. During the intervention, when social skill instruction/training was given, all students increased their occurrences. For example Student A increased her initiation of conversation with customers in the school.
store to 1.25 compared to 1 in the baseline. Student B had 1.6 times and Student C increased to 1.5 compared to 0.5 in the baseline.

*Figure 3* shows the number of times student’s initiated conversation with a customer in the school store. The baseline depicts the number of times each student initiated conversation during each observation for 30 minutes before social skills instruction. The intervention depicts the number of times each student initiated a conversation with a customer in the store while they were receiving simultaneous social skills training in the classroom.
Figure 3. Student initiation of conversations with customers

All students exhibited gains in initiating conversations with customers. Student A demonstrated with the lowest during intervention ($M = 1.25$). Student C increased the
amount of times conversation was initiated \((M = 1.5)\) and Student B showed the most improvement \((M = 1.6)\).

**Manners**

Table 6 presents means and SDs of student’s manner presentation in the school store. The table shows the average number of times each student presented appropriate manners in a conversation with a customer in each observation session during both baseline and intervention.

**Table 6**

*Using Manners with Customers in the School Store*

<table>
<thead>
<tr>
<th>Student</th>
<th>(M)</th>
<th>(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>0.25</td>
<td>0.5</td>
</tr>
<tr>
<td>Intervention</td>
<td>1.5</td>
<td>0.90</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>0.67</td>
<td>0.82</td>
</tr>
<tr>
<td>Intervention</td>
<td>1.3</td>
<td>0.67</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>1</td>
<td>0.76</td>
</tr>
<tr>
<td>Intervention</td>
<td>2</td>
<td>0.76</td>
</tr>
</tbody>
</table>

The mean occurrences of each student’s manner presentation ranged from 0.25 to 1 during the baseline. During the intervention, all students increased their occurrences. For example, Student A increased her manners with customers to 1.5 compared to 0.25 during the baseline. Student B had 1.3 times and Student C’s increased to 2 compared to 1 in the baseline.

*Figure 4* illustrates the number of times the students used manners in their interactions with customers in the school store. The baseline depicts the number of times
each student used manners in each observation before receiving social skills instruction. The intervention illustrates the amount of times each student used manners, while receiving simultaneous social skills instruction/training in the classroom.
Figure 4. Student presentation of manners
All students exhibited gains using manners in conversations. Student A rarely used manners in conversation during the baseline. During intervention, Student A increased to 1.5 times. Student B enhanced the number of times manners were used during intervention to 1.3 times and Student C showed the most increase ($M = 2$).

**Asking for Assistance**

Table 7 shows the average number of times each student asked for assistance while working in the store in each observation session during both baseline and intervention. The table represents means and SDs of student’s asking for assistance while in the school store.

<table>
<thead>
<tr>
<th>Student</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>4</td>
<td>0.82</td>
</tr>
<tr>
<td>Intervention</td>
<td>3.33</td>
<td>2.19</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>3.67</td>
<td>0.52</td>
</tr>
<tr>
<td>Intervention</td>
<td>2</td>
<td>1.89</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>3.63</td>
<td>1.06</td>
</tr>
<tr>
<td>Intervention</td>
<td>2.63</td>
<td>1.69</td>
</tr>
</tbody>
</table>

Mean occurrences of each student asking for assistance ranged from 3.63 to 4 during the baseline. During the intervention, all students decreased their occurrences. For example, Student A decreased the amount of times she asked for assistance to 3.33 compared to 4 during baseline. Student B decreased the amount of times to 2 and Student C’s mean decreased to 2.63 during intervention.
Figure 5 illustrates the number of times the students asked a teacher for assistance while working in the school store. The baseline depicts the number of times each student asked for assistance during an observation before receiving social skills instruction. The intervention illustrates the amount of times each student asked for assistance, while they received simultaneous social skills training in the classroom.
Figure 5. Student occurrences of asking for assistance
All students exhibited a decrease in the number of times they asked for assistance. During baseline, Student C asked for assistance the least and Student A asked for assistance the most. During intervention, Student A had the highest average of times asking for assistance ($M = 3.33$). Student A also reduced the amount of times asking for assistance from baseline to intervention. Student C showed a decline ($M = 2.63$). Student B presented with the most decrease in the amount of times asking for assistance during intervention ($M = 2$).

**Student Survey**

A survey with six questions was developed to measure the student’s opinions and attitudes towards social skills training/instruction. Each survey item had five possible responses. Each response was scored on a 5 point Likert Scale, 0 being very negative, 1 being negative, 2 being neutral, 3 being positive, and 4 being very positive. The survey was given to the student’s individually at the end of the 12th week.

Table 8 presents each student’s response to survey questions.

**Table 8**

*Student Opinions and Attitudes Towards Social Skill Training/Instruction*

<table>
<thead>
<tr>
<th>Questions</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likeness Towards Social Skills</td>
<td>2.7</td>
<td>0.58</td>
</tr>
<tr>
<td>Likeness Towards Working in School Store</td>
<td>2.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Comfort Level Towards Interacting with Customers</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Lessons Taught in Social Skills-Easy to Hard</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Working in the School Store-Easy to Hard</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Did Social Skills Help you Feel Comfortable with Customer Interactions</td>
<td>2.3</td>
<td>0.58</td>
</tr>
</tbody>
</table>
Table 8 demonstrates mean scores of participant’s attitudes towards social skill instruction/training. On average, a 2 from the student survey represented “sometimes.” Students sometimes enjoyed working in the school store. Student’s sometimes liked social skill instruction/training. Student’s felt the same about the comfort level of working in the school store with or without social skill instruction. On average, a 3 from the survey represented the easiness. Student’s felt comfortable interacting with customers and thought that lessons from the social skills instruction/training was easy. Furthermore, students felt working in the school store was easy.
Chapter 5

Discussion

The purpose of this study was to assess the effects of classroom-based social skill instruction/training on student’s social capabilities and determine if skills learned could be generalized to the school store. Three 9th graders, ages 15 to 16 were participants in this study. Social skills instruction/training focused on topics such as conversation skills, building friendships, using manners, being a good listener, using eye contact and body language. Each student’s skills were assessed during both baseline and intervention. Skills that were observed included student’s eye contact with customers in the school store, verbal responses to questions asked by customers, initiation of conversation with customers, using manners with customers and asking for assistance while working in the school store.

Eye Contact

The frequency of student’s eye contact was observed and all three students increased their proper eye contact when working in a simulated work environment, like to the school store. It appears that social skills instruction/training was successful in assisting CI students with maintaining eye contact while holding conversations with customers in the school store. Conversation skills as well as proper eye contact was taught and modeled for student’s multiple times during social skills instruction/training and could have contributed to each student’s success in eye contact. Yamamoto, Kagami, Ogura, and Isawa (2013) found similar success with social skill training. They found that basic social skills training with simulation was effective for 4 male students with pervasive development disorder.
Verbal Responses

Student’s verbal responses to questions asked by customers in the school store were observed and all three students demonstrated gains in responding to a yes/no question and WH questions. It appears that social skills/instruction was effective in teaching students with CI how to verbally respond to questions asked by a customer is a simulated community-based environment, such as the school store. It appears that conversation skills as well as self awareness taught during social skills instruction/training could have contributed to their increased responses. It is suggested that employment focused social skill training helped individuals with CI develop vocational skills; however the success was displayed at a very short-term. In this case, it appears that the school store serving as a simulated community work environment ultimately assisted CI students with their social skills and vocational skills.

Initiating Conversation

All students demonstrated gains in their average number of times they initiated a conversation with a customer in the school store. Initiation of conversation with customers included instances such as greeting a customer, asking a customer if he/she needed assistance and/or making a comment about a particular item in the store to initiate conversation. It appeared that after students received social skill training specifically in the area of conversation skills and felt more confident in their abilities, they were able to increase their conversation initiation. Although the average number was not so high, there was a slight increase in the amount of conversation initiation. It appeared that social skills instruction/training assisted students in a simulated work environment as well as their
everyday life, as indicated by Chen’s study (2006) that the acquisition of social skills is essential to becoming a contributing member of society.

Manners

All students increased their manner presentation within the school store. These manners included saying, “please and thank you,” addressing customers as either, “Mr/Mrs/Miss” or by their first name. During the social skill training teacher direct instruction on saying, “thanks” was modeled in training sessions for students were to exhibit learned skills within their community environment. All students had a slight increase in manners in conversation after students learned manners in social skill instruction/training.

Asking for Assistance

Social skills training (SST) provides a range of interventions for secondary students with disabilities to improve their social skills (Most & Greenbank, 2000). Asking for assistance while in the school store displayed students’ self-advocacy and their social competency. Students asked for assistance from other student’s in the school store who worked there and/or from teachers or paraprofessionals. In some cases Student’s A, B or C asked for assistance while using the cash register, taking inventory, pricing items and/or stocking inventory. All students demonstrated a decrease during the intervention; however, this can be interpreted to the more time students spent in the school store, the less questions they asked and the less assistance they needed, because they felt more confident in their abilities, which could have been contributed to social skills instruction/training.
Limitations

According to Kavale & Mostert (2004), social skills training is viewed as an experimental intervention. The sample size, research method of observing students within a simulated community-based workplace environment; the school store setting and time constraints were limitations to this study. The participants consisted of 3 high school females with CI. The withdrawal of male high school students with CI disabled yielding of rich and valuable information. Participants received social skill training/instruction and worked within a simulated community-based environment; the school store. The school store was a place to see if participants presented their skills learned in the training and applied them to the school store. Participants showed gains in their ability to make eye contact with customers, verbally respond to questions asked by customers, initiate conversation with customers and use manners in conversation. The schedule for when the participants worked in the school store often yielded little traffic from customers without enough opportunities for participants to display their skills learned in social skill training. This study also yielded a short period of time with participants receiving social skills instruction/training only one time per week and the amount of total time participants worked in the school store. If the study took place over the entire school year with repeated social skills instruction, the students may present more improved skills learned.

Implications

Despite the limitations of this study, the results demonstrated that students with CI improved their social skills in a simulated work environment, such as the school store while receiving social skills training/instruction. Students displayed gains in the
frequency of eye contact, verbal responses to conversations, initiating a conversation with customers, and using manners. The findings are consistent with previous research to show that social skills training can increase their skills learned in the classroom and/or in a simulated work environment. In Yamamoto, Kagami, Ogura, and Isawa’s study (2013), basic social skills training with simulation was effective in acquiring social skills required for future employment and community-based SST was considered to increase the chance for generalization and maintenance of student’s acquired skills (Snell & Brown, 2011, as cited in Steere, & DiPipi-Hoy, 2012). The results of this present study demonstrated that participating students were comfortable working in the environment with enjoyable experience in the school store when they received social skills training.

Students with CI need specific training in social skills in order to transition to daily life after graduating from school. Schools should implement social skill training/instruction programs to secondary students with CI, as well as students who are not functioning at the same level as their peers. The program should focus on social skill simulation, modeling, direct instruction, role-playing and feedback; along with life skills to provide students with CI the skills needed to obtain employment and function in life. School administrators should recognize the benefits of social skill training/instruction programs with a life skill component to help transition their skills into their daily lives after high school. Teachers should include social skill training into their classrooms for students with CI, as well as provide opportunities for these students to have social interactions with non disabled peers.
Conclusions and Recommendations

Although this study was limited by small number of participants, the limited time spent in the school store and opportunities for interactions with peers; the participants improved their social skills, which was consistent with the literature (e.g. Arnold-Reid, Schloss, & Alper 1997; Branham et. al, 1999; Steere, & DiPipi-Hoy, 2012; Yamamoto, Kagami, Ogura, & Isawa 2013). It appears that social skills training/instruction for students with CI with simulations, is effective for these individuals to acquire appropriate social skills, especially in a workplace. This may indicate that individuals practicing social skills through teacher’s modeling and direct instruction may learn better and be able to present appropriate social skills.

Further research may be needed to expand the sample size. Because of the severity of disabilities, the population of students with CI is small, thus, the increase of such student’s participation may be challenging, especially across different grades and classrooms. To date, much of the research focused on community-based instruction and school based social skill training that focused on a variety of different programs with several components. Future studies in this area should look for specific combinations of components that work well for a larger population of participants. Research is also needed to determine the most effective ways to help students with CI transition from school to adulthood, so that they can increase their chances of employment with appropriate social skills.

Social skills are essential in our day-to-day lives. Social skills training/instruction plays an important role in the quality of life for individuals with CI. The findings of this
demonstrate the benefits to including a simulated work environment along with social skills training in an effort to give individuals with CI an opportunity to develop social skills in a workplace. The more the effective methods of SST are evaluated, the more schools can implement programs to positively support students with CI and their families.
References


New Jersey Administrative Code Title 6A, Chapter 14-3.5(3) (2014).


Appendix A:

Sample Social Skill Lesson: Talkabout Talking
Handout 2:
Listening

Name ___________________ Date ___________________

STEPS TO SUCCESS

1. Look at the person
   - Face the person and focus on them

2. Think about posture
   - Sit or stand quietly. Try not to fidget

3. Think about what they are saying, and show this!
   - Make noises like mm... & oh....

4. Wait your turn to speak
   - Wait until they're finished before you speak

5. Say something relevant!
   - You might ask them a question or comment on what they've just said

My thoughts...
Appendix B:

Observation Chart

Student: ___________________________  Circle One: Baseline/Treatment

Date: __________

*Place tally mark under each corresponding positive social behavior each time it is observed. Fill in total at end of observation.*

<table>
<thead>
<tr>
<th>Makes Eye Contact with Customer</th>
<th>Verbally Responds to Questions Asked by Customer</th>
<th>Initiates Conversation with Customer</th>
<th>Uses Manners in Conversation with Customer – “please,” “thank you,” “your welcome”</th>
<th>Asks for Help/Assistance When Needed</th>
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</thead>
<tbody>
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| Total:                          | Total:                                          | Total:                            | Total:                                                                          | Total:           |
## Appendix C: Talkabout for Teenagers Participant Survey

1) Did you like the social skills group?

- No I Didn’t
- A Little Bit
- Sometimes
- Yes I Did
- I Really Liked It

2) Did you like working in the school store?

- No I Didn’t
- A Little Bit
- Sometimes
- Yes I Did
- I Really Liked It

3) Do you feel comfortable interacting with customers in the school store?

- No I Don’t
- Not Really
- Sometimes
- Yes I Do
- I Feel Very Comfortable

4) Were the lessons in the social skills group easy or hard to learn?

- It Was Very Hard
- It Was a Little Hard
- It Was OK
- It Was Easy
- It Was Very Easy

5) Was working in the school store easy or hard?

- It Was Very Hard
- It Was a Little Hard
- It Was Ok
- It Was Easy
- It Was Very Easy

6) Did the social skills group make you feel more comfortable with interacting in the school store?

- I Feel Very Uncomfortable
- I Feel Less Comfortable
- I Feel The Same
- I Feel More Comfortable
- I Feel Much More Comfortable
Talkabout for Teenagers Participant Survey (Scoring Sample)

1) Did you like the social skills group?
No I Didn’t (0)  A Little Bit (1)  Sometimes (2)  Yes I Did (3)  I Really Liked It (4)

2) Did you like working in the school store?
No I Didn’t (0)  A Little Bit (1)  Sometimes (2)  Yes I Did (3)  I Really Liked It (4)

3) Do you feel comfortable interacting with customers in the school store?
No I Don’t (0)  Not Really (1)  Sometimes (2)  Yes I Do (3)  I Feel Very Comfortable (4)

4) Were the lessons in the social skills group easy or hard to learn?
It Was Very Hard(0)  It Was a Little Hard(1)  It Was OK(2)  It Was Easy(3)
It Was Very Easy(4)

5) Was working in the school store easy or hard?
It Was Very Hard(0)  It Was a Little Hard(1)  It Was OK(2)  It Was Easy(3)
It Was Very Easy(4)

6) Did the social skills group make you feel more comfortable with interacting in the school store?
I Feel Very Uncomfortable (0)  I Feel Less Comfortable (1)  I Feel the Same (2)  I Feel More Comfortable (3)  I Feel Much More Comfortable (4)