

**Implementing Technology to Teach Social Skills
to Students with Multiple High-Incidence Disabilities**

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Methods

Participants

Participants included ten students (eight males, two females) in special education with multiple high-incidence disabilities who were receiving services in an expanded resource (self-contained) setting in two suburban middle schools in a mid-southern state. The participants were chosen because of their tremendous need for social skills instruction based on teacher and parental assessments, observations, and checklists. The students ranged in age twelve to fourteen. The students came from a variety of socio-economic backgrounds. The psychological reports in the participants' special education files noted that the participants were diagnosed with multiple high-incidence disabilities including: Attention Deficit Hyperactivity Disorder (ADHD), specific learning disability (LD), mental retardation (MR), Asperger's Syndrome (AS), autism, emotional disturbance, and speech and language impairments.

Measures

Students diagnosed with high-incident disabilities have been found to have deficits in the area of social skills (Lane, Carter, Pierson, & Glaeser, 2006; Mercer & Pullen, 2005; Miller, Lane, & Wehby, 2005; Taylor et al, 2005; Evans, Axelrod, & Sapia, 2000; Kavale & Forness, 1996; Gresham, 1982; Gresham, 1981). The participants have exhibited deficits in social skills as noted by their parents and teachers in prior triennial evaluations as well as through teacher observations and teacher/parent rating scales. It is for this reason that these students were chosen to participate in this study. Students were assessed using the *BASC-2*. Teacher and parents completed a Teacher Rating Form and Parent Rating Form for each student. The *BASC-2* is a standardized rating scale that is used to evaluate the behavior and self-perceptions of children and young adults from age 2 to age 25 (Reynolds and Kamphaus, 2004). According to Reynolds and Kamphaus (2004), the *BASC-2* "was designed to facilitate the differential diagnosis and educational classification of a variety of emotional and behavioral disorders of children and to aid in the design of treatment plans." The *BASC-2* composite reliability scores range from the high .80s to the low .90s making this assessment tool both highly reliable and valid (Reynolds and Kamphaus, 2004).

From the results of these assessments, a five-week training session was designed to instruct the participants in their social skills deficits. Lesson plans for the social skills lessons were based on the deficits identified by the *BASC-2*. Also, students were directly observed on a

weekly basis to monitor their social skills deficiencies noted by the assessment and teacher checklists. In the first study, the social skills classes were to involve two groups due to the makeup of the groups. The students were to be separated in two groups because one student liked to set off the others by triggering emotional outbursts by bullying and teasing. Considerations were made in how the students related to one another. However, due to time considerations and absences of one student, it was not possible to have two groups.

Procedure

The purpose of this study was to see if computer assisted instruction used along with direction instruction and role-playing would help decrease the social skills deficits in students. After five weeks, participants would be assessed to measure their improvement in their social skills by teacher observations and checklists. These results would be compared the increase or decrease of social behaviors from baseline data at the beginning of the study to data collected at the end of the study.

Participants took part in thirty minute direct instruction classes focusing on five social skills which were highlighted from the results of the *Behavior Assessment System for Children 2 (BASC-2)*. The instructor modeled the appropriate social skills objective for the participants. Participants also participated in role-playing activities to help supplement the direct instruction. Games were also played to help the students generalize the objectives taught.

In addition, these participants engaged in the software, “*School Rules-Volume I*” and “*School Rules – Volume II*” after the social skills training classes. This CD software was created by Laurie Jacobs and Jennifer Jacobs who are Speech and Language therapists with extensive training with students with autism spectrum disorders. *School Rules Volumes I & II* provides students an opportunity to view students in social situations and allows them to choose the correct response to a situation. *School Rules* uses a multi-level system to question students which challenges them on different cognitive levels:

- Level One – familiarizes the user with specific elements of social interaction with no requirement to answer questions
- Level Two – presents multiple choice questions to the user and allows them to choose the correct answers to social interaction demonstrated
- Level Three – presents still images and asks the user to find the right answer out of the choices provided

- Level Four – presents still images and asks the user to click on specific relevant context clues to understand the social situation
- Level Five – presents still images for which the user is asked to match the most appropriate thoughts, feelings, or sayings to each person within the scene
- Level Six – presents two similar social video clips per question and asks the user to choose the best social response or action
- Level Seven – challenges the user to predict the social action or response through their own typed responses (Jacobs and Jacobs, 2005)

School Rules-Volume 1 teaches acceptable behaviors during structured activities related to the classroom, group work, and physical education along with unstructured times on hallway interaction and lockers. This volume also targets the sensitive issues of PE locker room and personal hygiene (Jacobs and Jacobs, 2005). *School Rules-Volume 2* teaches social interpretation skills during unstructured times where social rules are most challenging. This volume uses scenarios such as getting lunch, waiting in line, eating, talking to friends, or just "hanging out" to demonstrate social awareness. In addition, this volume also addresses time management, organizational skills, and use of schedules at school. This software allows the teacher to customize lesson plans to meet the social skill needs of students (Jacobs and Jacobs, 2005).

Summary of Results

The purpose of this study was to determine if the use of computer assisted instruction used along with direct instruction and role-playing would help improve the student's social skills. First, the *BASC-2* assessment was administered to determine the deficient social skills in the participants. Next, the results of this assessment were used to develop a series of lesson plans geared towards improving those social skills deficits. The next step included collecting baseline data on social behaviors that impacted the participants' learning. These behaviors were chosen based upon results of teacher observations. Then, participants completed a 5 week series of social skills classes and engaged in the computer software program *School Rules, Volumes I & II* to help in learning and improving social skills.

The results from the first study from the participation in the social skills instruction classes and the engagement in the social skills software *School Rules* showed improvement in the observed behaviors of three of the five students. One student, due to his numerous absences, did

not decrease the amount of teasing towards other students. Another student, due to his lack of ability to retain information, did not increase or decrease in his observed behaviors. The results from the second study showed improvement in observed behaviors of all students who participated.

Discussion

Conclusions

Gresham et al (2001) referred to a lack of technology when it comes to social skills instruction. However, due to the increasing number of technological advances, there are many possibilities to provide learning tools for teaching social skills. The results from this study suggest that using technology may be used to improve the social skills of students with multiple high-incidence disabilities. Software packages, such as *School Rules*, may provide many opportunities for the development of social skills. Bower (2006) and Simpson et al (2004) have found that social skills software have helped students, especially in the autism spectrum. Students who were learning disabled and had Asperger's Syndrome seemed to fare better than those students with mental retardation or emotional disturbances. In this study, the students who were diagnosed with Asperger's Syndrome scored over 70% on the *School Rules* modules.

However, there were several variables that may have affected the results of this study. First, the differences in the learning styles due to the various disabilities of the participants may have had an impact on the results of the study. For example, four students were diagnosed as mentally retarded. According to Taylor et al (2006), students with mental retardation have difficulties with generalizing skills learned as well as having problems with retention of skills. These students completed the modules, but had trouble with retention of the skills taught in the module. They also had trouble with the *School Rules* modules due to their attention span and limited reading vocabulary. They also had the most trouble with role-playing because they could not remember the skills in order to perform the role-play. Another example of this would be another student who is mentally retarded whose desire to finish the module as quickly as possible affected his scores on the *School Rules* software. He had to be reminded to slow down, stay focused, and to remain on task with the *School Rules* modules throughout the study. Although the students who were diagnosed with emotional disturbance seemed to do well with the software and their behaviors decreased during the study their behaviors resumed after the study was completed.

Another variable that may have affected the results of this study is the short amount of time spent on the study. I believe more time was needed to conduct a more thorough study. By engaging in a single subject ABAB design to determine the effectiveness of the *School Rules* software, I would have had more time to verify the impact of this software on the participants. This would have given me the opportunity to collect more data, observe the students in their natural settings, and give the students a more formal post-assessment of their social skills.

Finally, the multiple occurrences of “teachable moments” may have affected the results of the study. These teachable moments may have accounted for a decrease in scores. Bentley (1995) believes teachable moments occur when the teacher takes advantage of naturally occurring situations in a natural setting to teach the student the skills previously taught or to teach new skills. Many times over the course of the study, teachable moments were used in various situations in attempts to help the participants deal with negative social behaviors. Social cues such as “School Rules” helped the students remember the objectives taught in the social skills classes. Teachable moments could help with the generalization of skills in the natural setting. Smith and Gilles (2003) explain that students could make the transition from a controlled social skills training setting to generalizing the same skill in a natural setting by the teacher implementing the skills within an activity or event so that the students can relate the skill to the activity. Smith and Gilles (2003) suggest that teachers may coordinate instructional activities and social skills objectives by using cues and consequences found in natural settings in an attempt to generalize social skill objectives.

New Research Questions

Over a six week period some questions were answered about implementing technology to teach social skills to students with multiple high-incidence disabilities. The results from this study showed that the participants, except for one, were able to successfully complete the *School Rules* module activities and in most cases score above 50% on these modules. Although the participants seemed to learn the social skills objectives taught in the controlled social skills classroom setting, they did not appear to have generalized these skills in a natural setting. Teacher observations also reflected that the participants were not as apt to generalize these skills in a natural setting. However, some new research questions became evident about the participants being able to generalize social skills in a natural setting:

- By using teachable moments, would students be able to better generalize the social skills taught?
- Would students be able to generalize their social skills by involving the student in community events in the natural setting?
- How would involving general education peers contribute to the generalization of social skills?
- What could have been done differently to generalize the skills taught in the natural settings of the students?

Gresham (1998) offers several reasons for the lack of generalization in a natural setting. First, Gresham (1998, p. 22) believes that most social skills practitioners have a “one size fits all” mentality because they disregard the types of social skills deficits the students may have. This may lead to students not being able to generalize and maintain the social skills taught. Second, according to Gresham (1998), social skills practitioners may plan their curriculum without properly assessing the students to find which skills are already in their repertoire. Third, Gresham (1998) discusses the fact that students may have competing social behaviors that are easier to perform rather than using the newly acquired behaviors. For example, it might be easier for the student to yell and scream to get attention rather than trying to get someone’s attention in an appropriate manner.

Teaching social skills can be a very comprehensive process. There are many variables that present many opportunities for further research. This study found, in order to effectively implement technology into social skills training, one must use reliable and valid assessments, develop lesson plans based on the deficits based on the assessments, find proven and effective methods of teaching social skills, and provide opportunities in a natural setting for generalization of the skills taught.

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