Implementing Technology to Teach Social Skills

to Students with Multiple High-Incidence Disabilities

Authors: Clinton Smith, Robert Williamson, and Janna Siegel-Robertson, University of Memphis

TABLE OF CONTENTS

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.

References

Alberto, P., & Troutman, A. C. (2006). *Applied behavior analysis for teachers* (7th ed.). Upper Saddle River, New Jersey: Pearson, Merrill, Prentice Hall.

Bandura, Albert. (1977). *Social Learning Theory*. (1st ed.). Englewood Cliffs, New Jersey: Prentice-Hall.

Bentley, M. (1995). [Electronic version]. Carpe diem: Making the most of teachable moments. *Science Activities*, 32(3), 23-27. Retrieved November 17, 2006, from Wilson Web database.

Bernard-Opitz, V., Sriran, N., & Nakhoda-Sapuan, S. (2001). [Electronic version]. Enhancing social problem solving in children with autism and normal children through computer-assisted instruction. *Journal of Autism and Developmental Disorders, 31(2)*, 377-384. Retrieved September 23, 2006, from Wilson Web database.

Bowers, C. E. (2006). *The effects of a computer based learning program on behavior during instruction, line up, and play for elementary age children with autism.* Unpublished Doctor of Education, Shenandoah University.

Cartledge, G. (1996). *Cultural diversity and social skills instruction* (1st ed.). Champaign, Illinois: Research Press.

Cartledge, G., & Milburn, J. F. (1978). The case for teaching social skills in the classroom: A review. [Electronic version]. *Review of Educational Research, 1*(1), 133-156. Retrieved September 21, 2006, from JSTOR database.

Council for Exceptional Children, 2002. NCATE/CEC Program Standards.

Retrieved September 11, 2006, from http://www.ncate.org/ProgramStandards/CEC/CECStandards.doc.

Court, D., & Givon, S. (2003). Group intervention: Improving social skills of adolescents with learning disabilities. [Electronic version]. *Teaching Exceptional Children, 36*(2), 50-55. Retrieved September 10, 2006, from Wilson Web database.

Dowd, T. & Tierney, J. (1992). *Teaching Social Skills to Youth*. Boys Town, Nebraska: Boys Town Press.

Elksnin, L. K. & Eksnin, N. (1998). Teaching social skills to students with learning and behavior problems. [Electronic version]. *Intervention in School and Clinic, 33*,131-141. Retrieved September 11, 2006, from Wilson Web database.

Elliott, S. N., Malecki, C. K., & Demaray, M. K., (2001). New directions in social skills assessment and intervention for elementary and middle school students. [Electronic version]. *Exceptionality, 9(1 & 2)*, 19-32. Retrieved September 23, 2006, from Wilson Web database.

Elliott, S. N. & Gresham, F. M., (1993). Social skills interventions for children. *Behavior Modification, 17(1)*, 54-64.

Elliott, S. N. & Gresham, F. M. (1991). *Social skills intervention guide.* Circle Pines, MN: American Guidance.

Evans, S. W., Axelrod, J. L., & Sapia, J. L. (2000). Effective school-based mental health interventions: Advancing the social skills training paradigm. [Electronic version]. *Journal of School Health, 70*(5), 191-194. Retrieved September 20, 2006, from Wilson Web database.

Fields, D. (1995). *Would You Rather…? 465 Provocative Questions to Get Teenagers Talking* (1st ed.). El Cajon, CA: Youth Specialties.

Fleisig, N. N. (2002). *Professional Crisis Management: A Cognitive-Behavioral Approach - A Practitioner's Manual.* Professional Crisis Management Association, Inc.

Fuller, M., Lewis, T. J., & Sugai, G., (1995). Social skills instruction in schools: A survey of teachers in Oregon public schools. (Behavior Disorders Research Report No. 4). Eugene: University of Oregon.

Goldstein, A. P., Sprafkin, R. P., Gershaw, N. J., & Klein, P. (1997). *Skillstreaming the adolescent: A structured learning approach to teaching prosocial skills* (2nd ed.). Champaign, Illinois: Research Press.

Gresham, F. M. (2002). Social skills assessment and instruction for students with emotional and behavioral disorders. In K. L. Lane, F. M. Gresham & T. E. O'Shaughnessy (Eds.), *Interventions for children for children with or at risk for emotional and behavioral disorders*. (pp.242-258). Boston: Allyn & Bacon.

Gresham, F. M., Sugai, G., & Horner, R. H. (2001). Interpreting outcomes of social skills training for students with high-incidence disabilities. [Electronic version]. *Exceptional Children, 67(3)*, 331-344. Retrieved September 30, 2006, from Wilson Web database.

Gresham, F. M. (1998). Social skills training: should we raze, remodel, or rebuild? *Behavioral Disorders*, 24(1), 9-25.

Gresham, F. M. and Elliot, S. N. (1989). Social skills assessment technology for LD students. [Electronic version]. *Learning Disability Quarterly, 12(2),* 141-152. Retrieved September 21, 2006, from JSTOR database.

Gresham, F. M. & Reschley, D. J. (1986). Social skills deficits and low peer acceptance of mainstreamed learning disabled children. [Electronic version]. *Learning Disability Quarterly, 9(2), 23-32*. Retrieved September 22, 2006, from JSTOR database.

Gresham, F. M. (1982). Social skills instruction for exceptional children. [Electronic version]. *Theory into Practice, 21*(2), 129-133. Retrieved September 22, 2006, from JSTOR database.

Gresham, F. M. (1981). Social skills training with handicapped children: A review. [Electronic version]. *Review of Educational Research, 51*(1), 139-176. Retrieved September 22. 2006, from JSTOR database.

Holsbrink-Engels, G. (2001). Using a computer-learning environment for initial training in dealing with socio-communicative problems. [Electronic version]. *British Journal of Educational Technology 32(1)*, 53-67. Retrieved September 10, 2006, from Wilson Web database.

Jacobs, L. & Jacobs, J. (2005). *School Rules, Volumes I and II*. [Computer software]. Leesburg, VA: Social Skill Builder, Inc.

Kavale, K. A., & Mostert, M. P. (2004). Social skills interventions for individuals with learning disabilities. [Electronic version]. *Learning Disabilities, 27*(1), 31-43. Retrieved September 12, 2006, from Wilson Web database.

Kavale, K. A., & Forness, S. R. (1996). Social skills deficits and learning disabilities: A meta-analysis. [Electronic version]. *Journal of Learning Disabilities, 26(2),* 349-354. Retrieved September 20, 2006, from Wilson Web Database.

Kerr, M. M., & Nelson, C. M. (1989). *Strategies for managing behavior problems in the classroom* (2nd ed.). Columbus, OH: Merrill Publishing.

Kolb, S. M., & Hanley-Maxwell, C. (2003). Critical social skills for adolescents with high incidence disabilities: Parental perspectives. [Electronic version]. *Exceptional Children, 69*(2), 163-179. Retrieved September 10, 2006, from Wilson Web database.

Lane, K. L., Carter, E. W., Pierson, M. R., & Glaeser, B. C. (2006). Academic, social, and behavioral characteristics of high school students with emotional disturbances or learning disabilities. [Electronic version]. *Journal of Emotional and Behavioral Disorders, 14(2)*, 108-117. Retrieved September 20, 2006, from Wilson Web database.

Lane, K. L., Menzies, H. M., Barton-Arwood, S. M., Doukas, G. L., & Munton, S. M. (2005). Designing, implementing, and evaluating social skills interventions for elementary students: Step by step procedures based on actual school-based investigations. [Electronic version]. *Preventing School Failure, 49(2)*, 18-26. Retrieved September 12, 2006, from Wilson Web database.

Langone, J., Clees, T. J., Rieber, L., Matzko, M. (2003). The future of computer-based interactive technology for teaching individuals with moderate to severe disabilities: Issues relating to research and practice. [Electronic version]. *Journal of Special Education Technology, 18(1), 5-16*. Retrieved September 12, 2006, from Wilson Web database.

Maione, Liana, & Mirenda, Pat. Effects of video modeling and video feedback on peer-directed social language skills of a child with autism. [Electronic version]. *Journal of Positive Behavior Interventions, 8(2)*, 106-118. Retrieved September 10, 2006, from Wilson Web database.

Mathur, S. R., Kavale, K. A., Quinn, M. M., Forness, S. R., & Rutherford, Jr. R. B. (1998). Social skills interventions with students with emotional and behavioral problems: A quantitative synthesis of single-subject research. *Behavior Disorders 23(3)*, 193-201.

Matson, J. L., & Ollendick, T. H. (1988). *Enhancing children's social skills: assessment and training*. (1st ed.). Elmsford, NY: Pergamon Press.

Mercer, C. D., & Pullen, P. C. (2005). *Students with learning disabilities*. (6th ed.). Upper Saddle River, New Jersey: Pearson- Merrill, Prentice, Hall, Inc.

Merrell, K. W. (2001). Assessment of children's social skills: Recent developments, best practices, and new directions. [Electronic version]. *Exceptionality, 9(1&2),* 3-18. Retrieved September 30, 2006, from JSTOR database.

Merrell, K. W., & Gimpel, G. A. (1998). *Social skills of children and adolescents: Conceptualization, assessment, and treatment*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Merrell, K. W. (1993). Using behavior rating scales to assess social skills and antisocial behavior in school settings: Development of the School Social Behavior Scales. [Electronic version]. *School Psychology Review, 22(1),* 115-133. Retrieved September 30, 2006, from JSTOR database.

Miller, M. J., Lane, K. L., & Wehby, J. (2005). Social skills instruction for students with high-incidence disabilities: A school-based intervention to address acquisition deficits. [Electronic version]. *Preventing Social Failure, 49*(2), 27-39. Retrieved September 8, 2006, from Wilson Web database.

Morgan, A. (2003). *Assessing and instructing social skills: Preferred practices and integration with academics.* Unpublished Masters Degree, College of William and Mary.

Reynolds, C. R. & Kamphaus, R. W. (2004). *Behavior Assessment System for Children*. (2nd Ed.). Circle Pines, MN: AGS Publishing.

Ryder, R. J., Burton, J. L., & Silberg, A. (2006). Longitudinal study of direct instruction effects from first through third grades. [Electronic version]. *Journal of Educational Research, 99(3),* 179-191. Retrieved September 30, 2006, from Wilson Web database.

Simpson, A., Langone, J., & Ayres, K. M. (2004). Embedded video and computer based instruction to improve social skills for students with autism. [Electronic version]. *Education and Training in Developmental Disabilities, 39(3),* 240-252. Retrieved September 10, 2006, from Wilson Web database.

Slee, P. T., & Shute, R. H. (2003). *Child development: Thinking about theories*. [Electronic version]. New York, NY: Edward Arnold, LTD. Retrieved September 22, 2006.

Smith, S. W., & Gilles, D. L. (2003). Using key instructional elements to systematically promote social skill generalization for students with challenging behavior. [Electronic version]. *Intervention in School and Clinic, 39*(1), 30-37. Retrieved September 12, 2006, from Wilson Web database.

Spence, S. H. (2003). Social skills training with children and young people: Theory, evidence, and practice. {Electronic version]. Child and Adolescent Mental Health, 8(2), 84-96. Retrieved September 22, 2006, from Wilson Web database.

Sugai, G., & Lewis, T. J. (1996). Preferred and promising practices for social skills instruction. [Electronic version]. Focus on Exceptional Children, 29 (), 1-16. Retrieved September 20, 2006 from Wilson Web database.

Taylor, R. L., Richards, S. B., Brady, M. P. (2005). *Mental retardation: Historical perspectives, current practices, and future directions*. Boston: Pearson-Allyn & Bacon.

Zaragoza, S., Vaughn, S., & McIntosh, R. (1991). Social skills interventions and children with behavior problems: A review. *Behavioral Disorders, 16(3)*, 260-275.