Multimedia Instruction of Social Skills

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Most people learn the skills needed for social interaction during normal development and do not require intensive social skills instruction. However, for students with disabilities, direct social skills instruction may be necessary. Those who might require additional instructional support include students at risk for school failure, students with fetal alcohol spectrum disorders (FASD), students with Attention-Deficit Hyperactivity Disorder (ADHD), students with pervasive developmental disorders/autism spectrum disorder (PDD/ASD), and students with learning disabilities (LD), particularly those with nonverbal learning disability (see the Research section for more information). For example, it is estimated that 75% of students with LD exhibit some difficulties with social skills (Elksnin & Elksnin, 2000; Fussell et al., 2005) and almost one third may require additional social skills training beyond high school (Elksnin & Elksnin, 2000).

Because many students with disabilities spend part, if not all of their day in the general education classroom, social skills are of critical importance. Students who are unable to interact appropriately with their peers are not fully included (Denham et al., 2006; Waltz, 1999). Because for most children the majority of social experiences occur at school, it makes sense to include social skills instruction in the curriculum. However, many schools are unsure how best to integrate these lessons (Waltz, 1999).

This Research in Brief includes five sections: principles of effective instruction, strategies for using multimedia tools in social skills instruction, tips for developing and/or selecting such tools, a description of relevant research findings, and a listing of some available multimedia tools and resources.

**Principles of effective social skills instruction**

While some students with disabilities will spend most of their day in the general education setting, social skills instruction will most likely take part in the special education classroom. Research and practice have highlighted several principles of effective social skills instruction. First, effective teaching of social skills to students with disabilities requires a direct, structured approach to instruction
(DeGeorge, 1998; Elksnin & Elksnin, 2000; Peterson, Young, Salzburg, West, & Hill, 2006), "identifying critical social skills and then teaching them through modeling, role-playing and performance feedback" (Peterson et al., 2006, p. 2). Second, an important focus of instruction is helping students to generalize skills to different situations, often a difficult task for students with disabilities (Elksnin & Elksnin, 2000). This can be accomplished by focusing on valued skills and using authentic contexts, role playing, and teaching skills in a variety of media. Third, social skills should be taught throughout the school day.

Strategies for integrating social skills instruction with regular classroom activities include:

- Incidental teaching, whereby natural interactions between student and teacher form the basis for practicing skills (Elksnin & Elksnin, 2000).
- Reading children's literature, particularly stories that focus on topics such as making friends, dealing with bullies, and encountering new situations (DeGeorge, 1998).
- Social skill autopsies, wherein the particulars of a social interaction are discussed—what the child did, what happened, whether the outcome was positive or negative, and what the child will do in the same situation in the future (Elksnin & Elksnin, 2000).
- Use of social stories, which can provide students with a narrative or script for appropriate behavior in a variety of situations, particularly effective with students with PDD/ASD (Waltz, 1999).

Multimedia strategies for social skills instruction

There are a number of reasons to consider using multimedia as part of social skills instruction. Many types of multimedia (virtual environments, simulations, videos, etc.) are an excellent match for students with disabilities and their specific learning styles and preferences, and new technologies are emerging rapidly. Many students with disabilities – particularly those with ASD – are visual learners. As Dr. Temple Grandin, a professor, author, and researcher with autism, explains, “I think in pictures. I do not think in language. All my thoughts are like videotapes running in my imagination. Pictures are my first language, and words are my second language (Grandin, 2002). For such individuals, videos, simulations, virtual environments (VEs), pictures, and other multimedia can be effective teaching tools (Grandin, 2002; Loftus, 2005; Parsons, 2006; Parsons et al., 2006; Dana, 2005).
Another reason to consider multimedia for social skills instruction is that multimedia tools are consistent with the principles of effective social skills instruction (see Research Support). For example, students learn and generalize social skills best when they are taught in authentic situations using a variety of formats. Multimedia also complements activities such as role playing, listening to social stories, observing peer behavior, and conducting social skills autopsies.

There are a number of ways to apply multimedia to social skills instruction, particularly for instruction of affective and interactive skills (Canney & Byrne, 2006). Multimedia technology is a natural fit for social stories and children’s literature, two excellent ways to teach social skills and help students learn about new situations. The following sections address application of the three major types of commercial or web-based multimedia for supporting social skills.

**VEs and simulations**

VEs and simulations are another excellent tool for engaging students in social skills instruction. These programs provide students with a safe virtual space for practicing common social interactions (Parsons et al., 2006). VEs can be finite, closed activities (practice riding a bus) or open in nature, allowing infinite exploration of social interactions.

One particularly interesting example of an open VE is Brigadoon, an island for adults with ASD and their caregivers in the online game Second Life. Second Life is an entirely virtual world created, built, and designed by players, or “residents” as they are termed in SL. Residents of Second Life create a virtual self (avatar) who can engage in a variety of activities such as owning land, opening a business, going to a movie, and making friends with other residents. Second Life is not a game in the usual sense; residents have used virtual islands in Second Life to host college courses, to give students practice running businesses, or in the case of Brigadoon, to provide adults with ASD a virtual space to meet people and socialize. According to the founder of Brigadoon, “A lot of what is happening in Second Life is social. And I thought that this could be a fantastic place for people with Asperger Syndrome. Give them a simulated environment and let them practice social skills in a three-dimensional space” (Loftus, 2005).
Adult facilitators (whether teacher or parent) are important as students navigate through virtual worlds like Second Life. When students interact with other people within a virtual world, teachers can use guiding questions and reminders about appropriate behavior to help students engage in more productive interactions. For example, a facilitator might ask a student interested in approaching another character, “What could you say to someone you would like to meet? What type of introduction would you use?” Facilitators can ensure that student interactions are both enjoyable and educational.

**Interactive computer programs**

Another category of multimedia social skills training tools are computer programs that help students to recognize emotions and facial expressions and develop conversational skills and socialization. Some of these programs may be particularly helpful for building foundation skills such as recognition of facial expressions. An example of such a program is *Mind Reading: The Interactive Guide to Emotions*. Other programs may be suited to development of cognitive skills, allowing students to explore decision making and social interactions in a variety of situations or to develop interactive skills needed for daily interactions in school or the workplace (e.g., *My School Day*).

**Tips for creating your own multimedia materials**

It is also possible for teachers to create their own social skills tools using some basic technologies. These tools can then be tailored to the needs of specific students. It may make sense to use a combination of purchased and self-constructed tools.

Using authoring tools in fairly simple presentation software (PowerPoint; Keynote) or more complex multimedia authoring software (Director; HyperStudio), teachers can create their own interactive stories featuring video clips, sound, animations and linked text.

Multimedia can also be used to create social stories. Video, likely one of the most flexible tools for integrating multimedia social skills instruction into the classroom, is particularly useful in this regard. For example, student actors could present a social story, which can be digitally recorded and played for students. This same approach could be used to model specific social interactions. Video modeling “helps children acquire new skills by viewing...behavior that was performed by
another individual and then imitating that behavior” and can be used to teach specific skills such as taking turns, playing appropriately, and meeting new people (Dana, 2005).

Students can gain awareness of their behavior by viewing themselves engaged in daily activities. Seeing their own behavior can lead to beneficial discussions about what types of interactions are inappropriate (Parsons, 2006). Video offers a straightforward means to record and replay student behavior. During these viewings, the teacher should serve as facilitator, prompting discussions about specific behaviors and their results. These viewing sessions can also be a great way to conduct social skills autopsies with students.

**Selecting multimedia materials and implementing them effectively**

It may be wise to have a variety of tools available for a variety of situations. Commercially available software addressing peer interaction and social skills in school or the workplace are available for students of all ages and levels. What is the best tool is determined by the needs of the students. Some students with disabilities may have stronger foundation skills but lack appropriate interaction skills, while others may require assistance in developing more basic skills. Students who struggle with social interactions need to have social skills modeled for them and require practice and feedback; it is therefore important to select tools that give opportunity for reflection and discussion. However, this challenge can also be viewed as a strength in that it allows students to experiment with social interactions in a safe environment. Additionally, students with autism are prone to repetitive behaviors. This can be troublesome when working with simulations of social interactions, as students may engage in the same interactions over and over despite slight changes in the situation. In these instances, the presence of a facilitator or teacher can help redirect student behavior and ensure that they understand the rationale behind appropriate social decisions.

**Research Support**

**The importance of social skills to inclusion**

Students who are not socially competent are unable to take full advantage of the peer learning situations presented in a general education classroom. Exclusion from the peer group has negative academic and social effects. Research shows that social competence is associated with acceptance by peers, positive self-
concept, academic achievement, and successful employment (DeGeorge, 1998; Elksnin & Elksnin, 2000; Fussell et al., 2005).

Social interactions range from fairly simple (engaging in a conversation) to extremely complex (determining whether someone who seems friendly is actually harming you) (de Bildt et al., 2005). Both can present significant difficulties for students with intellectual disabilities. Although different students encounter different problems (for example, students with LD may frequently interact with peers informally, but infrequently engage in formal interactions; Schumaker & Deshler, 1995), generally the problematic situations are the same.

Often social skill impairments are most critical for high functioning students with disabilities; for other students acquisition of basic skills may take precedence over remedying social deficits (O’Connor et al., 2006; Parsons et al., 2006). For example, research has shown that among children with FASD, psychosocial, behavioral, and emotional difficulties are more likely for those with milder cognitive impairment (O’Connor et al., 2006). Because students with mild intellectual impairments may have a clearer understanding of their difficulties, they can experience significant anxiety and feelings of social isolation (Parsons et al., 2006). This can impact their “potential to live and be educated in the least restrictive environment” (Fussell et al., 2005, p. 227). Furthermore, once students leave school, “situations requiring social competence tend to far outnumber those requiring academic skill” (Canney & Byrne, 2006, p. 19).

**Multimedia instruction**
Research on teaching social skills with multimedia is still in the early stages; however, certain informative conclusions can be drawn. Students with cognitive disabilities and/or LD can master social skills when they are engaged in social skills instruction that includes “a description of the social behaviors, modeling of the behaviors, verbal practice in naming the behaviors, practice in the social behaviors and individual feedback” (Schumaker & Deshler, 1995). Many multimedia programs for social skills include most (if not all) of these characteristics and could be a valuable addition to a social skills program. Also, studies suggest that there is a connection between experience with a virtual activity and performance in real life. It appears that performing a task in a VE may aid performance in everyday life (Parsons et al., 2006).
Multimedia can also strongly motivate teach (Parsons et al., 2006). Research has shown that students with disabilities seem to learn better with interactive technologies than when engaged in more passive, linear activities like watching videos (Helms-Breazeale & Blanton, 2000). However, video can be an effective learning tool when paired with interactions with teachers or facilitators.

Research on video has shown that these tools can be used successfully with younger children with autism (Parsons, 2006). In addition, initial research using video with older students has demonstrated some success. In one study, teachers working with middle school and high school students with ASD used digital video to record students engaged in daily activities, enabling students to observe themselves and each other (Parsons, 2006). Teachers recorded students going about their daily activities, practicing job interviews, and role playing social situations. Each of the students participating in the video activities demonstrated significant improvement in socialization and interactions with peers. Additionally, teachers, staff, and guardians noticed that students began to address peers by name, rather than calling out “hey!” when trying to get someone’s attention. Students also pointed out inappropriate behavior in their peers and thanked each other for kindness and considerate behavior.

Similar benefits have been observed when using VEs for teaching social conventions. In a case study, two teenage boys with ASD used visual environments (VEs) with the common scenario of needing to find an appropriate place to sit (on a bus or in a café) (Parsons et al., 2006). The VEs were leveled: at initial levels, there were plenty of empty seats, whereas at later levels students needed to ask a stranger if they could sit down. The virtual characters provided feedback (e.g., Excuse me, this seat is taken; I was here first, you need to go to the end of the line, etc.). Both boys tried to sit down at a crowded table in the café without first asking if the seat was taken. After discussion with the facilitator, they were able to understand their error and articulate why they need to ask before sitting down next to someone. While students were not successful in every virtual interaction, they were able to find a seat appropriately. There was evidence of generalization and retention of the learning for one of the students. Before using the VE, John was shown a video of a busy café and asked what he would do. He first commented that he would just wait for a table. When the facilitator asked him what he would
do if no one left for quite awhile, he said that he would just sit down next to somebody. After practicing with the VE, he was asked the same questions. He replied that he would “look for somewhere to sit and ask the person if I could sit with them”. When he was re-interviewed 3 months later, he told the facilitator that he had ridden the train frequently and on several occasions had asked someone if he could sit down in an empty seat next to them.

In each of the studies mentioned above, the presence of a facilitator or teacher was a key ingredient to student success. A teacher working with students as they use multimedia tools can point out appropriate and inappropriate behaviors, explain why certain behaviors are inappropriate, and help redirect student behavior.

**Summary**

Despite the relative newness of research on multimedia for the teaching of social skills, there appears to be promise for using these tools as part of a social skills training program. As with any social skills instruction, these tools work best when part of an ongoing discussion with teachers or caregivers about social interactions and appropriate behavior.