Education update:

"Special friends" help autistic students fit in

While more and more disabled children attend public schools, they often remain isolated socially from non-disabled students. The problem is especially acute for autistic students; naive, obviously different, and lacking in basic social skills, they are likely to be shunned or teased by their peers.

Researchers are studying ways of bridging this gap between autistic and non-disabled students. One approach is the "special friends" program, designed both to improve non-disabled students' attitudes toward their autistic peers, and to provide opportunities for autistic students to learn social skills.

"Special friends" programs encourage selected non-disabled students to become friendly with autistic students, and provide settings (pizza parties, video games, etc.) which the students can enjoy together. Generally, special friends prepare for their roles by watching videos about the importance of friends for the disabled, and by participating in discussion groups and other activities designed to make them more empathetic toward disabled people.

Early evidence that "special friends" programs may positively influence even non-participants came from a study done in the early 80's by L. M. Voeltz. Voeltz found that students at a campus with a "special friends" program had more positive attitudes toward disabled students than students on other campuses where there was little or no contact with disabled students—even though the students surveyed had not been part of the "special friends" program themselves.

Recently, Stuart Schleien and colleagues enlisted "special friends" for integrated art and physical education classes. In both cases, the non-disabled students watched a "special friends" slide show, participated in role-playing games, and discussed the symptoms of autism before starting classes with autistic students. Students in the art class also practiced sign language and learned how autistic students used non-verbal communication systems such as wallet cards.

In the P.E. classes, autistic students and their non-disabled "special friends" participated twice a week in activities—team sports, hopscotch, tug-of-war, frisbee, jump rope, games such as Twister, etc.—selected to promote social interaction as well as to develop motor skills. Art class activities included training in basic art concepts (shape, texture, and color), trips to a children's museum, and cooperative student-created art projects.

Schleien and his colleagues found that autistic students participating in the integrated P.E. classes with "special friends" reduced their inappropriate play behavior (for instance, stereotyped behavior such as spinning) significantly. In the art classes, non-disabled students increased their interactions with their autistic peers, and younger autistic children's appropriate behaviors increased (although older students actually had lower levels of appropriate behavior during the program).

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"Art and integration: what can we create?", Stuart J. Schleien, John E. Rynders, and Theresa Mustonen; *Therapeutic Recreation Journal*, 22:4, 1988, pp. 18-29; and "Integrating physical education to teach appropriate play skills to learners with autism: a pilot study," Stuart J. Schleien, Linda A. Heyne, and Susan Breihan Berken; *Adapted Physical Activity Quarterly*, 5, 1988, pp. 182-192; and "The effect of integrating children with autism into a physical activity and recreation setting," Stuart J. Schleien, March L. Krotee, Theresa Mustonen, Bonnie Kelterborn, and Anita D. Schermer; *Therapeutic Recreation Journal*, 21:4, 1987, pp. 52-62. Address for all: Stuart J. Schleien, School of Physical Education and Recreation, University of Minnesota, 1900 University Ave. S.E., Minneapolis, MN 55455.

—and—

"Social interaction research for adolescents with severe handicaps," Robert Gaylord-Ross and Thomas Haring; *Behavioral Disorders*, Vol. 12, No. 4, August 1987, pp. 264-275. Address: Robert Gaylord-Ross, Professor of Special Ed., San Francisco State University, San Francisco, CA 94132.

Games to teach math

Games are an excellent means of teaching math to children with Fragile X syndrome, according to English educator John McEvoy.

McEvoy notes that games are less intimidating than regular schoolwork, teach concepts through repetition, are concrete rather than abstract, provide a "model" (the teacher or other player), are interactive, and are highly motivating to many children.

Some math games McEvoy suggests:

—"Number bus," in which players place "passengers" (wooden pegs or magazine-picture faces) into a wooden or cardboard "bus," according to the number they throw on dice. The first student with all of his or her passengers on the bus is the winner.

—"Shove penny," in which players throw coins on a card with shaded areas each worth a certain number of pennies, and take that number of pennies from a pile. The player with the most pennies when the penny pile is exhausted wins.

—"Lollipop castle," in which players draw lollipop sticks from a pile according to the number on the dice they throw. They use these to build castles in square or triangular shapes. The winner is the person with the highest castle when the game ends.

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"Optimal educational techniques: using number games in math instruction," John McEvoy, *The National Fragile X Foundation Newsletter*, Winter-Spring 1990. Address: John McEvoy, School of Psychology, University of Birmingham, P.O. Box 363, Birmingham B15 2TT, England.

Videos teach autistic children to converse

Videotapes are a practical and effective means of helping autistic children learn conversational skills, according to a study by Marjorie Charlop and Janice Milstein (see related article in ARRI 1/1).

Charlop and Milstein worked with three autistic boys who rarely asked questions, spoke spontaneously, or carried on conversations. The researchers filmed 45-second videos of adults conversing about toys they were holding; in each case, toys of particular interest to the children were selected. (Two abstract conversations without props also were filmed.) A typical conversation:

"What do you have?"

"A box. Are you holding something?"

"Yes, a box. What's in your box?"

"A ball. Is there something in your box?"

"Yes, a puppet. Do you want to play with the toys?"

"Yes. Can I play with the puppet?"

"Yes."

After a child watched a video three times, the therapist would say, "Let's do the same," hand the child the toy used in the video, and offer the first line of the conversation. Children received praise and food rewards if they responded correctly; if not, they watched the video again.

The therapist continued this procedure until the children were able to repeat their parts of the conversation correctly. Several different conversations, covering different topics, were trained this way.

Charlop and Milstein found that following the video training, the children asked more questions, conversed more spontaneously, and were able to use their new conversation skills to discuss different topics with people outside the treatment setting. In addition, a 15-month follow-up showed that the children had maintained their skills.

"Learning conversational skills was a significant accomplishment for these children, especially in light of the extreme speech and language deficits autistic children display," Charlop and Milstein note. They believe the technique worked quickly because it takes advantage of two characteristics of autistic children: excellent rote memory, which enables autistic children to quickly learn the conversations; and echolalia, autistic children's tendency to repeat verbatim what they hear. The use of different adults and different topics in the videos, they say, helped promote generalization of the skills to new settings.

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"Teaching autistic children conversational speech using video modeling," Marjorie Charlop and Janice Milstein; *Journal of Applied Behavior Analysis*, 1989, No. 3, pp. 275-285. Address: Marjorie Charlop, Dept. of Psychology, Claremont McKenna College, Claremont, CA 91711.