



AUTISM NEWS

of Orange County
& the Rest of the World

Fall 2007

Volume 4, Issue 2



Cover illustration by Odin Kleiberg

CONTENTS

Editorial

Computers, Technology and Play 3

Research

The Use of Technology 5

Computer Assisted Learning and ASD 10

The Importance of Play 13

Education/Therapy

Playing with Younger Peers and Siblings 16

ShooboxTasks® Educational CD 20

The Activity Trainer: Video Modeling 21

Technology Adds to Our Outreach 22

Parent/Family

Will Technology Save Third Grade? 23

The Twice-Exceptional Child 24

Helping with Assisted Technology in Home 25

News/Highlights

Local Artist: Odin Kleiberg 25

Book Review 26

Calendar of Events / Sponsorship 27

COVER FEATURE

We are pleased to feature one of our local artists, **Odin Kleiberg**. Read more about Odin on page 25.

Mission Statement

Autism News of Orange County & the Rest of the World is a collaborative publication for parents and professionals dedicated to sharing research-based strategies, innovative educational approaches, best practices and experiences in the area of autism.

Submission Policy

The Autism News of Orange County–RW is available free of charge to parents and professionals of children with autism. The opinions expressed in the newsletter do not necessarily represent the official view of the agencies involved.

Contributions from teachers, therapists, researchers and relatives/children of/with autism are welcome. The editors select articles and make necessary changes.

Please submit articles in Microsoft Word using font size 12, double spaced, and no more than four pages in length (2600 words). Photos are encouraged and when submitted with articles the permission to include is assumed.

Please e-mail all correspondence to:

Dr. Vera Bernard-Opitz

verabernard@cox.net

Please visit our website: www.autismnewsoc.org

Editorial Team

Vera Bernard-Opitz, Ph.D., Editor

Ginny Mumm, Associate Editor

Editorial Board

Teri M. Book, RN, MSN, CPNP

Joe Donnelly, M.D.

Andrea Walker, M.A.

Janis White, Ed.D.

Advisory Board

LOCAL

Pauline A. Filipek, M.D.

University of California, Irvine
For OC Kids

BJ Freeman, Ph.D.

Autism Consultant

Wendy Goldberg, Ph.D.

University of California, Irvine

Belinda Karge, Ph.D.

Cal State University, Fullerton

Connie Kasari, Ph.D.

University of California, Los Angeles

Jennifer McIlwee Myers

Orange County, California

Marian Sigman, Ph.D.

University of California, Los Angeles

Becky Touchette

Saddleback Valley Unified School District

NATIONAL/INTERNATIONAL

Barbara Bloomfield, M.A., CCC-SLP

Icon Talk, Goshen, New York

V. Mark Durand, Ph.D.

University of South Florida, St. Petersburg

Patricia Howlin, Ph.D.

St. Georges's Hospital London, England

David Leach, Ph.D.

Murdoch University, Australia

Gary Mesibov, Ph.D.

University of North Carolina,
Chapel Hill Division TEACCH

Salwanizah Bte Moh.Said

Early Intervention, Autism Association, Singapore

Fritz Poustka, M.D.

University of Frankfurt, Germany

Emily Rubin, M.S., CCC-SLP

Communication Crossroads
Carmel, California

Diane Twachtman-Cullen, Ph.D., CCC-SLP

ADDCON Center, Higganum, Connecticut

Pamela Wolfberg, Ph.D.

San Francisco State University

Editorial

By Vera Bernard-Opitz

Computers, Technology and Play

When the topic “**Computers, Technology and Play**” is mentioned in the context of educating children, heated debates usually ensue regarding the benefits and risks of using innovative forms of teaching and the decline in traditional ways of relating and playing. In the field of regular as well as special education, some stress the wonders of speeding up learning and enhancing motivation through innovative media and latest computer software. Others warn of the drawbacks an early exposure to a high level of animation has on children’s brain wiring, their interest (or lack of interest) in traditional ways of learning, and the development of appropriate social and leisure skills. Some even blame the observed increase in children’s attention problems on the lack of time spent on more traditional ways of playing and learning.

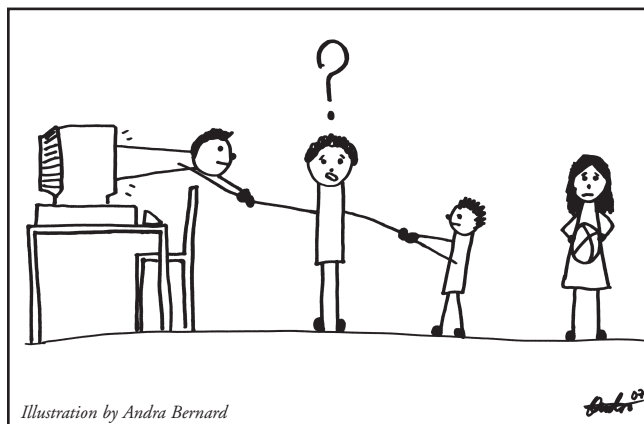
Recent years have seen an **explosion in electronic media** aimed even at children below the tender age of 18 months. A wide range of handheld video games is now available for preschoolers, and educational software has become a multi-billion dollar market. According to a recent study, one-fifth of infants and toddlers under age 3 have a television in their bedrooms and in the six- to 11-year-old age group, the figure jumps to 54% (Vandewater, 2007). Most schools are now teaching children to conduct their research on the Internet, and an increasing number of students carry laptops instead of schoolbooks.

Obviously, technological advances are extremely helpful. But they do have a marked effect on the way families live and relate, communicate, spend their leisure time and educate their children. An open question is how safe these changes are when it comes to normal child development.

Some of the unanswered questions are:

- What are potential risk factors of early, intensive media use?
- How do they affect brain development?
- Can computer play substitute for traditional ways of playing?

The American Academy of Pediatrics (AAP) shares the above concerns, and encourages more interactive “activities that will promote proper brain development, such as talking, playing, singing, and reading together” (Bar-on, et al., 2001).



When it comes to **the use of technology for children with ASD**, we also have to balance benefits and risks. When I introduced Computer Assisted Instruction (CAI) to children with Autism Spectrum Disorders (ASD) about 25 years ago, the staff of a German rehabilitation center was highly concerned that attention to computers would add to autistic withdrawal. Instead, we noticed that even very withdrawn children would congregate and interact with

“When it comes to the use of technology for children with ASD, we have to balance benefits and risks.”

each other in front of computers. We also noticed that certain behaviors, all the way from imitating sounds to solving conflict situations, were mastered faster in CAI than in Personal Instruction. Meanwhile, several studies have confirmed these promising pilot data. Through CAI, individuals with autism have successfully identified written words, increased their vocabulary, and even learned to label and predict emotions. Programs for activity schedules, discrete trial training, or video modeling are now commercially available. Obviously many computer programs meet the needs of children with ASD

“Family playtime as well as other traditional ways of playing may have advantages over extensive exposure to computers, electronic games, TV and other media.”

for visual support, structure, consistency, and reinforcement. On the other hand, the mentioned risks of intensive media and computer use have to be considered for children

with ASD just as for their neuro-typical peers.

Obviously traditional instruction and play with other children should not be discarded. In recent years **play-interactions**, as they occur in Integrated Play Groups, Pivotal Response Training, or Floor Time have received a lot of attention from parents and professionals. **It has been demonstrated that appropriately structured play interactions can enhance key skills in children with ASD, such as joint attention, initiation, social behavior, imitation, communication, and problem solving** (Boucher & Wolfberg, 2003).

Also obviously, **we should be open to the use of technology as well as the developmental opportunities play may provide**. For many children with ASD, facilitated play may be needed, while others may benefit from natural play experiences with peers, siblings, and other family members. Family playtime as well as sending the children out to the playground, park or street to engage in traditional ways of playing may have advantages over extensive exposure to computers, electronic games, TV and other media.

We are only now developing **predictors for who can learn which skill best with which intervention method, be it media, computers or play**, and we still need more data to tailor interventions to individual children and their interest and learning profiles (Bernard-Opitz, 2007, Sherer & Schreibman, 2005). Instead of defending different intervention methods, children’s response to treatment should be the focus of attention. **We all need to be open to learning about established programs, new developments, and promising teaching ideas, be they technologies and or play methods.**

The current issue of the *Autism News* gives an overview of latest developments in the field.

Presented findings and ideas will hopefully add to our repertoire of useful strategies and will make our ongoing support for children with ASD even more successful. We very much appreciate the contributions of all our authors.

Vera Bernard-Opitz, Ph.D.

Clin. Psych., BCBA, Editor

www.verabernard.org

E-mail: verabernard@cox.net ♥

References

- Bernard-Opitz, V. (2007) Children with Autism Spectrum Disorders: A structured teaching and experience-based program for therapists, teachers and parents. Austin (TX), pro-ed.
- Boucher, J. & Wolfberg, P.J. (2003) Editorial: Special issue on play and autism in theory and practice. *Autism: The International Journal of Research and Practice* 7(4): 339-346.
- Sherer, M.R. & Schreibman, L. (2005). Individual behavioral profiles and predictors of treatment effectiveness for children with autism. *J. Consult. Clin. Psychol.* 73(3): 525-38.
- Vandewater E.A., Rideout V.J., Wartella E.A., Huang X., Lee J.H. & Shim M.S. (2007). Digital childhood: electronic media and technology use among infants, toddlers, and preschoolers. *Pediatrics* 119(5): 1006-15.
- Bar-on, M.E., et al., (2001). The American Academy of Pediatrics: Children, Adolescents and Television. Committee on Public Education, *Pediatrics* 107(2): 423-426.

Our website is now up and running!



Please visit us at www.autismnewsoc.org

The Use of Technology in the Education and Treatment of Children With Autism

By Linda K. Haymes

Technology has many uses for people with autism: it can be used for prompting procedures with tactile, auditory or mechanical prompts, as well as for educational and behavioral treatment using computer-assisted instruction and video modeling. For people with autism, computer assisted instruction and video modeling are used not to increase productivity, but to increase independence, daily functioning and participation in a community.

Research on Autism

The first question a family member or teacher might have would be why should we use technology? Most special education teachers and providers are trained to use a variety of behavioral strategies, such as task analysis, chaining or prompt hierarchies. These have been demonstrated as effective teaching tools so why do we need technology? To answer that, we need to look at what we know about autism: Often people with autism are difficult to motivate. In fact, motivation is considered a “pivotal behavior” for people with autism. It is difficult to find items or activities that function as long term **reinforcers**.

A second characteristic of people with autism is stimulus over-selectivity, or a failure to attend to all the components of a stimulus or environment. **Attention to multiple stimuli** is another pivotal behavior similar to motivation. If someone can be taught to attend to the multiple cues in the environment, the effects can be far reaching socially, conversationally and academically. **Over-selectivity** is also seen in people with Aspergers. Klin, Jones, Schultz, Volkmar and Cohen (2002) found that people with Aspergers attended to irrelevant details (for example: whether a light switch was on or off or details of a map on the wall) while watching the movie “*Who’s Afraid of Virginia Woolf*.” The participants missed subtle social cues because they followed only the actor who was speaking and not the reactions of

other actors. Importantly, they missed the emotions because they attended to the mouths of speakers and not their eyes. This study demonstrates that when people with autism and Aspergers attend to visual stimuli they may only attend to a portion of it.



Siegel (1996) also has noted other **characteristics of how people with autism learn**. They are unlikely to spontaneously imitate events they have observed, unable to learn from peers through simple exposure, and they fail to

“read” facial and gestural cues. People with autism may engage in repetitive behaviors to the exclusion of novel event. They may have a sensitivity to background noise and experience difficulty when trying to attend to auditory cues in a noisy environment. These factors may interfere with learning in the standard classroom environment where live modeling or demonstration are typical teaching methods.

Technology can help bridge many deficits these characteristics may cause and provide instruction in a format that fits the individual’s learning profile. Siegel describes language acquisition for people with autism as learning two languages: the content of speech is the first language, and cadence is the second. The act of echoing material seen in videos may make it possible for people with autism to join these two languages, using an instruction technique called “video modeling.”

Video Modeling Research

There have been many published studies documenting the effectiveness of video modeling for people with autism. The now classic study by Charlop and Milstein (1989) taught children with autism to engage in scripted con-



versations using video modeling. Conversation skills were then generalized to non-scripted conversations and abstract topics. Video modeling has been used to further social skills by teaching perception of emotions, perspective taking, making play-related comments to siblings and increasing imaginative play. Video modeling has also been used to teach prepositions and one-step directions (Haymes & Olivieri 2003).

Charlop-Christy, et al., (2000) taught children with autism academic and self care skills using a comparison of video and in vivo (live) modeling. Video modeling led to faster acquisition of tasks and promoted more generalization.

All of the above studies were conducted with students with autism that were verbal or had some verbal skills. It has been hypothesized that video modeling is effective in part due to the participants echoing of the content and intonations of the models. In one study, when videos were created without the auditory components, the participants did not acquire the skills. **This raises the question of**

whether verbal skills are necessary for video modeling to be effective. In a study conducted by Haymes and Olivieri (2003) all of the subjects were non-verbal, none demonstrated attention to auditory stimuli and one even failed to attend to visual stimuli. Video modeling was used to teach verbal one-step instructions and visual patterning. Two of the four children acquired all of the tasks that required both visual and auditory

“Technology can help bridge many deficits learning characteristics may cause.”

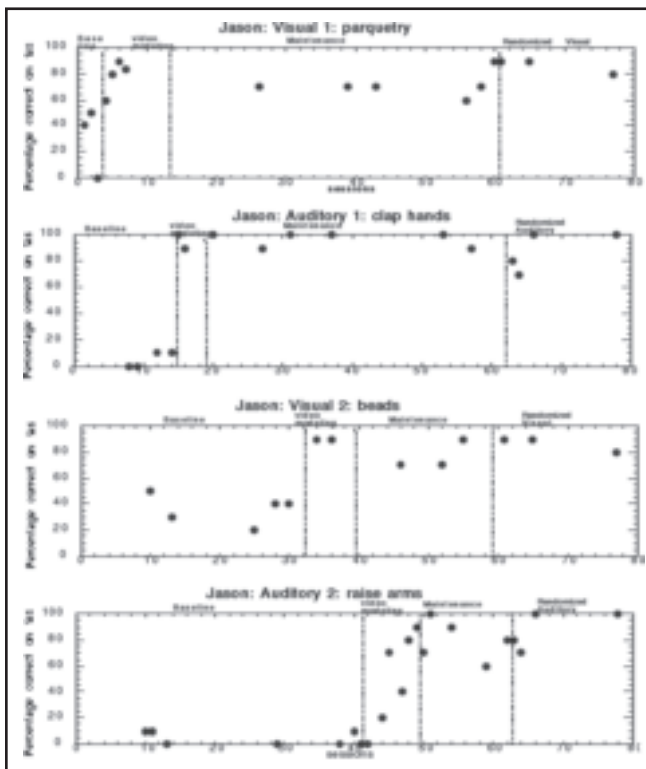
discrimination and randomized the tasks and skills. The skills were acquired in less than six video modeling sessions, after years of failed training on

Why video modeling works

The videos should **focus on the relevant stimuli** necessary for a correct response. Distractions and irrelevant information must be removed from the learning environment to help people with autism overcome stimulus over-selectivity and increase attending to relevant stimuli. Due to the novelty of videos, both children and adults are

“Preliminary data support that video modeling can also be effective for non-verbal children.”

often motivated and pay attention to the videos. The videos must always **display the same information in the same sequence with the same intonation.** There is a predictable, rote aspect to the videos that facilitates acquisition. While being taught, no social interaction is required of the students. Children look only at a video monitor and are not required to have eye contact with an adult. The videos help pair the visual and auditory information with no additional distractions, which may enhance attending to multiple channels simultaneously. **With videos it is possible to use multi-**



Multiple baseline across two auditory and two visual tasks

ple examples and multiple models and settings, which enhances generalization.

How to make a video

- Focus on what is relevant for the skill by removing distractions such as backgrounds. Use close ups for the relevant stimuli, e.g., when washing hands, follow the hands and do not include the mirror or reflections in the video.
- Use multiple examples of the skill being taught, such as three different ways to initiate a conversation at school or three different bathrooms and soap dispensers for washing hands.
- The model's actions should be slow and precise.
- The model's voice should be presented in an arousing format with succinct, staccato speech.
- Videos should be relatively short to hold interest - no more than three minutes in length.

Real life video modeling

Videos can also be useful for teaching daily living skills with many steps, especially when there has been limited or slow progress on a task analysis (e.g., washing the body).

Videos can be used to teach complex social skills with multiple components in social situations where it may be awkward for an adult to provide prompts and feedback. **One boy with autism was taught to approach peers, give eye contact, maintain an appropriate social distance and initiate conversations about topics of interest to him and his peers.**

Computer Assisted Instruction (CAI)

Similar to video modeling, CAI is increasingly being used and researched for people with autism. CAI has been used to enhance problem solving (Bernard-Opitz, Sriram & Nakhoda-Sapuan, 2001), improve vocabulary (Moore & Calvert, 2000), increase reading skills and increase speech and language development (Bosseler & Massaro, 2003).



CAI program character 'Baldi'
©Bosseler & Massaro

Bosseler and Massaro (2003) created a **program to teach vocabulary and language skills** using a character named **Baldi**. Baldi is an animated talking head that integrates visual (tongue movements), speech and text. The program also provides visual feedback through the use of happy and sad face stickers. In the study, 85% of the children with autism retained the new vocabulary words after 30 days and needed only one to two sessions to train new vocabulary words. The students also generalized the vocabulary to live instructors. When computer-based instruction was compared to live teacher-based instruction, Moore and Calvert (2000) determined that the participants were more attentive to the computer



Videos can assist in teaching daily living skills

(97% of the time) than the teacher (62% of the time). Furthermore, 74% of the participants recalled nouns on a delayed recall test on the computer compared to 41% on the test with a teacher. Perhaps more importantly, 57% of the participants chose to continue to work on the computer and none chose to continue to work on discrete trials at the tabletop with an instructor!

Motivation is a key to acquisition and generalization with this population. Chen and Bernard-Opitz (1993) found similar enhanced motivation using computers and determined that there were fewer behavior problems when instruction was provided on the computer for 75% of the participants.

Why CAI works

There are many reasons hypothesized for why CAI works, similar to the ones proposed for video modeling. A key factor already cited is motivation. Students choose to use computers. The animation

on computers can often be a form of sensory reinforcement for students with autism. Also, computer-based reinforcement is delivered immediately, whereas people often have delays or intervening variables. Similar to video modeling, there is rote repetition of the model, statements and trials without signs of fatigue or mood changes. Trials can be repeated in identical formats or systematically varied formats (Goldsmith & LeBlanc, 2004). Stimulus over-selectivity can be overcome by the pairing of multiple sources (text, sounds and images simultaneously) while focusing on what is relevant for a correct response. Generalization can be enhanced by the use of multiple exemplars of skills or stimuli. The need for social contact during instruction is eliminated in that no eye contact is necessary during instruction. The programs can be available 365 days a year.

“The animation on computers can often be a form of sensory reinforcement for students with autism.”

progress in his discrete trial school program. Often he had escape-based behavior during work sessions consisting of traditional methods. He began to use “Nouns and Sounds” from Laureate Learning and quickly progressed through the program without engaging in escape-based behaviors, and he began to imitate the words and sounds in the program.



Vibratory prompts can be used for social initiation

Mechanical, Auditory and Tactile Prompts

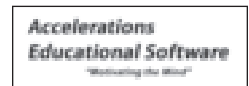
Technology has also been shown to be effective in the use of various prompting methods. Automated prompts can be delivered less obtrusively and more easily in inclusive settings (e.g. a classroom) than having a person provide verbal, gestural or visual prompts. Timers from phones, MP3 players, iPods, Palm Pilots or pagers can deliver automated prompts that are visual or auditory. Vibratory prompts have been used to increase social initiations. Similarly Taylor, Hughes, Richard, Hoch, and Coello (2004) used vibratory prompts to teach autistic teenagers to seek assistance when lost in the community.

Why use technology for people with autism?

The practical argument for using technology is its cost effectiveness. Staff’s working time is maximized since technology is available 365 days of the year. Technology is also effective from a researcher’s perspective since it may bridge over-selective attention and motivate students. Two key reasons to use technology are lack of motivation and attention to multiple cues, which are two pivotal behaviors for people with autism and, if overcome, individual progress and skill acquisition are possibilities.

Sources for Computer Assisted Instruction

The Discrete Trial Trainer (PC only) is a direct instruction software with some research on its use with people with autism. <http://www.dtrainer.com/jos/index.php>



Benefits of CAI

- Improves acquisition compared to traditional methods
- Increases motivation
- Facilitates generalization
- Available anytime there is computer access
- Minimizes staffing when short staffed in a classroom

Real life computer use

In addition to commercially available programs, there are materials that can be created on the computer by families and teachers. **Activity schedules** can be made in Microsoft Power Point, rather than on Velcro strips. Similarly, **social stories** can be created using animation on computers. **Palm Pilots** can also be used at school and in the community for schedules and prompting techniques. Several families have reported that they use **commercially available software** at home with their children with autism. Their children can stay engaged with siblings or peers taking turns. One boy, age seven, was non-verbal, apraxic and making slow but steady

TeachTown Basics (PC and Internet access) is a subscription service designed for children with a developmental age of two to seven years. It is a researched program that teaches the basic curriculum used in most home ABA program. <http://web.teachtown.com/>.



Laureate Learning Systems' (Mac and PC) Nouns and Sounds, First Words (1 and 2), First Verbs, and First Categories are great for people with autism. They have autism packages of software too. <http://www.laureatelearning.net/professionals602/>.

Headsprout (Internet access required) Reading program is a phonics-based reading program that is not meant specifically for people with autism, however, they have recently begun to research its use with this population. <http://www.headsprout.com/>.



Edmark Reading Program is a sight word-based reading program that is very successful for people with autism. Many schools use the hard copy version but the software version may be better for some learners. <http://www.riverdeep.net>.



Fast ForWord (implemented by specialized trainers) is used to teach reading to people with reading difficulties including autism. <http://www.scilearn.com/>.



Animated Speech Corporation produces software-based conversational language learning systems. Products feature animated talking tutors for language-challenged children and customizable tools and curricula for speech-language pathologists, specialists, teachers, and parents. <http://www.animatedspeech.com/Products/products.html>.



Linda K. Haymes, Ph.D.

Behavioral Consultant

Licensed Psychologist

Oakland, CA

E-mail: lhaymes50@mac.com ♥

Selected References

- Bernard-Opitz, V., Sriram, N., & Nakhoda-Sapuan, S. (2001). Enhancing social problem solving in children with autism and normal children through computer-assisted instruction. *Journal of Autism and Developmental Disorders*, 31: 377-384.
- Bosseler, A., & Massaro, D.W. (2003). Development and evaluation of a computer-animated tutor for vocabulary and language learning in children with autism. *Journal of Autism and Developmental Disorders*, 33: 653-672.
- Charlop, M.H., & Milstein, J.P. (1989). Teaching autistic children conversational speech using video modeling. *Journal of Applied Behavior Analysis*, 22: 275-285.
- Charlop-Christy, M.H., Le, L., & Freeman, K.A. (2000). A comparison of video modeling with in vivo modeling for teaching children with autism. *Journal of Autism and Developmental Disorders*, 30: 537-552.
- Chen, S.H.A., & Bernard-Opitz, V. (1993). Comparison of personal and computer-assisted instruction for children with autism. *Mental Retardation*, 31: 368-376.
- Goldsmith, T.R. & Leblanc, L. (2004) Use of technology in intervention for children with autism. *Journal of Early Intensive Behavioral Intervention*, 1: 166-178.
- Haymes, L.K. and Olivieri, D. (2003). Video Modeling: A tool for bridging children's over selective attention? Invited paper presentation at the annual meeting of the California Association for Behavior Analysis, Newport Beach, CA.
- Klin, A., Jones, W., Schultz, R., Volkmar, F., & Cohen, D. (2002). Visual fixation patterns during viewing of naturalistic social situations as predictors of social competence in individuals with autism. *Archives of General Psychiatry*, 59(9): 809-816.
- Moore, M., & Calvert, S. (2000). Brief Report: Vocabulary acquisition for children with autism: Teacher or computer instruction. *Journal of Autism and Developmental Disorders*, 30: 359-362.
- Siegel, B. (1996). *The world of the autistic child*. Oxford University Press. New York.
- Taylor, B.A., & Hughes, C.E., Richard, E., Hoch, H., & Coello, A.R. (2004). Teaching teenagers with autism to seek assistance when lost. *Journal of Applied Behavior Analysis*, 37: 79-82.

Editors Note: A complete list of references for this article is available on our website: www.autismnewsoc.org.

SHARED SPONSORSHIP

To sustain the quality of the Autism News shared sponsorship is now available. For further information please contact Vera Bernard-Opitz at verabernard@cox.net or Andrea Walker at awalker@ocde.us or call (714) 966-4137.

Computer Assisted Learning and Autism Spectrum Disorders

By Rita Jordan

Rationale for computer use in ASD

The organization Autism and Computers is dedicated to exploring, promoting and supporting the use of computers in work and play with children and adults with Autism Spectrum Disorders (ASD: Murray & Lesser, 1997). It started from awareness of the literature on computer use in autism, from a principled and theoretical understanding of how and why computers provide a facilitative environment for those with ASD and, above all, from practical experience (detailed on the website) of the transforming effect that computers can have on the lives of individuals with ASD. They give the case of a young man whose specialist school teacher suggested, "had gone as far as he can." He was clearly unmotivated to learn more in the school environment. Yet introduction to a computer program used to teach professional animators enabled the young man to show high degrees of motivation, sustained attention and skill and to produce an amazing and original animated film over a very short time. What is more, his pleasure in his own achievement was evident (no extrinsic rewards needed here) and he sought out his teacher to share his achievement.

The value of computer assisted learning (CAL) in ASD is now well documented (Jordan, in press). Typical forms of learning in educational settings are both language dominated and rely on social mediation. Neither of these forms of presentation is suited to the learning style of those with ASD and may in fact present barriers for them. Learning through Information technology (IT), however, can use visual, explicit teaching with endless opportunities for repetition and scaffolding of responses towards the desired response. This practice uses CAL as a kind of "super" teacher for those with ASD while continuing to follow a structured didactic approach.

There are multi-media programs that have been shown to be effective for teaching academic skills and didactic attempts to teach about emotions that have had some success in the domains taught (Silver

& Oakes, 2001). Even where academic learning has apparently not been enhanced through CAL, improvements in motivation, engagement in the task, and reduction in "off task" behaviors have been noted (Chen & Bernard-Opitz, 1993).

The real joy of IT in ASD is that it need not be restricted to learning drills, where "correct" responses are pre-determined, but can open the world of problem-solving and exploratory learning to those with

ASD. Educators know that this kind of deep learning has a profound effect on cognitive growth, whereas drilled performance is hard to generalize because it is often tied to the context in which it occurred. Information technology comes into its own when it is used in

an interactive way to release the creativity of the user, and this is now beginning to happen for people with ASD (Murray & Aspinall, 2006).

Keay-Bright (2006) has developed engaging, interactive software for ASD that is specifically designed to encourage and develop interactions in individuals with ASD who also

have additional cognitive impairments. The software mirrors the way in which these individuals often interact with their environment by allowing special effects from simple actions of tapping, stroking, flicking and so on. These interactions are made accessible on whiteboards to allow social

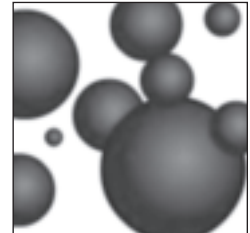


Image ©Cardiff School of Art and Design

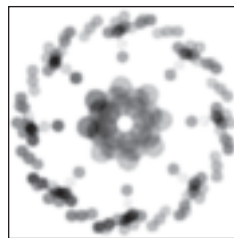


Image ©Cardiff School of Art and Design

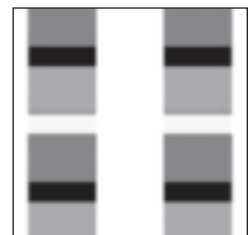


Image ©Cardiff School of Art and Design

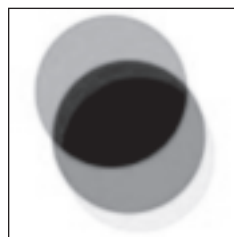


Image ©Cardiff School of Art and Design

interaction, turn-taking and communication. Her **Reactive Colours** website (www.reactivecolours.org) provides free access to software as it develops and she has worked with professionals, parents, other researchers and individuals with ASD to engage with user feedback at each stage in developing the design. **A fully customizable CD-Rom version of the software Reactickles is now being used enthusiastically in schools and centers in the UK and is being evaluated as it develops.** Observers of individuals reacting to the software note their spontaneity and delight, their release of anxiety as they operate in this controllable world and, above all, their ability to engage and problem solve in ways that were not apparent outside this project.

Possible dangers and limitations

Initially there were concerns that since children with ASD found it easier and more enjoyable to learn through computers, this might result in them finding social learning even more difficult and lead to obsessive use of computers. Clearly, most people prefer to learn in ways that are comfortable for them and so the first of these predictions may come true. However, this enables greater clarity in how and what we teach students with ASD. We do need to teach them to benefit from socially mediated learning and to be able to learn in groups, if they can, but that is dependent on teaching them to deal with social information and to tolerate others; it should not interfere with their opportunities to learn academically, aesthetically and artistically through the best medium for them. Whether or not they become obsessive about computers depends to a large extent on what else they are offered. Often the best way to deal with obsessive interests is to concentrate on building other interests, so that eventually there is no time in a full life for any one interest to be all consuming. In truth, the idea that computers become “obsessional” often comes from thinking of “computer use” as a single activity rather than a tool for access to all kinds of learning and involvement in the world, which can include social interaction.

“Often the best way to deal with obsessive interests is to concentrate on building other interests.”

My only caveat about the benefits of using IT is that one needs to monitor the Internet sites viewed and the computer games used by children or young people with ASD, to check that they are not being overexposed to violence, especially as a solution to life’s problems. Individuals with ASD may be more vulnerable to copying violent solutions (or having unrealistic and unhealthy views of sexual behavior from porn sites) since they may be unable to tell the difference between reality and fiction (or exploitation). There is a need, therefore, for more vigilance and control and for additional teaching to help them understand fantasy and to develop other realistic strategies for dealing with life’s problems.

Current usage of IT in ASD

There is some very exciting work now being done with IT for those with ASD, including the interactive software described above. Some of this does not

involve programs written specifically for those with ASD, but rather an extension, an adaptation, or simply a use of software available to and enjoyed by all. For example, the interactive program **Second Life** is being used by many individuals with ASD. A recent article (Biever, 2007) demonstrated the rich and varied “social” life being experienced by individuals with ASD when the environment is largely in their control and they can engage with others (or avatars – animated representatives of others) in the guise of their own invented persona. It demonstrates that people with ASD can and often do enjoy reacting with others, once the timing and complexity of the interactions are within their control.

“People with ASD can and often do enjoy reacting with others, once the timing and complexity of the interactions are within their control.”

individuals with ASD who have speech but cannot easily manage the two-way interactions involved in social discourse. Kidtalk helps make this accessible by making the steps explicit. Virtual Reality is also

Kidtalk (Cheng, et al., 2002) is a program developed from the Microsoft Messenger program in mainstream use which has been specially adapted for use by

being used to pre-teach social and communicative skills in

social environments, Individuals with ASD show that they react to such environments as if they were real (Parsons, et al., 1995) to the extent that it has been suggested that these environments might be used to help them develop a sense of agency. Mobile Internet technology is also being used to deliver information about social situations to individuals with ASD and to help some of them overcome phobias and increase social skills in these environments. Herrera, et al., (in press) have developed a virtual reality tool (“*I am going to act as if*”) which uses a supermarket environment to guide the person with an ASD to understand and distinguish objects functionally, as used in functional play, in “magical” transformations (as in animated films) and finally as used in symbolic “imaginative” play. Preliminary results show this is attractive and effective for at least some individuals with ASD. This team is now working on Augmented Reality projects where technology can be harnessed to make real-life environments more accessible and comprehensible.

The use of technology to enhance the future learning and quality of life of individuals with ASD will undoubtedly grow, and in ways that are currently difficult to predict. **No computer or technological device will take the place of dedicated and knowledgeable staff and care givers, but it can enhance their role and provide a tool for learning and understanding the environment that may be invaluable for individuals with ASD.**

For more information, please contact:

Rita Jordan, Prof.

*Autism Centre for Education & Research,
University of Birmingham, UK*

E-mail: r.r.jordan@bham.ac.uk ♥

Selected References

- Biever, C. (2007) Let's meet tomorrow in *Second Life New Scientist*, 30th June: 26-27.
- Chen, S.H. & Bernard-Opitz, V. (1993) Comparison of personal and computer-assisted instruction for children with autism. *Mental Retardation*, 31: 368-76.
- Cheng, L., Kimberly, G. & Orlich, F. (2007) KidTalk: On-

“The interactive program *Second Life* is being used by many individuals with ASD.”

line therapy for Asperger's Syndrome Report: MSR-TR-2002-08 Microsoft Research, Redmond, WA 98052.

- Herrera, G., Alcantua, F., Jordan, R., Blanquer, A., Labajo, G. & De Pablo, C. (in press) Development of Symbolic play through the use of Virtual Reality tools in children with Autistic Spectrum Disorders: two case studies *Autism: The International Journal of Research & Practice*.
- Jordan, R. (in press) Using computer assisted learning to aid communication in individuals with autism spectrum disorders. *Autism Today* (Italian journal).
- Keay-Bright, W. (2006) Reactive Colours: Computation and playful engagement. AWARES on-line Conference.
- Murray, D. & Aspinall, A. (2006) *Using Information Technology to Empower people with Communication Difficulties* London, David Fulton.
- Murray, D. & Lesser, M. (1997) *Autism & Computing* (www.autismandcomputing.org.uk).
- Parsons, S., Mitchell, P. & Leonard, A. (2005) Do adolescents with autistic spectrum disorders adhere to social conventions in virtual environments? *Autism: the International Journal of Research & Practice*, 9: 95-117.
- Silver, M. & Oakes, P. (2001) Evaluation of a new computer intervention to teach people with autism or Asperger syndrome to recognize and predict emotion in others. *Autism: the International Journal of Research & Practice*, 5: 299-316.

Editor's Note: A complete list of references for this article is available on our website: www.autismnewsoc.org.



Please Save the Date!

Saturday morning, January 12, 2008

**For a Presentation about
Current Autism Research and a
Scientific Round Table Discussion**

by Dr. Simon Baron-Cohen, Professor of Developmental Psychopathology and Director of the Autism Research Centre at the University of Cambridge

More information will be posted soon on the Grandparent Autism Network website:

www.ganinfo.org

The Importance of Play in the Treatment of Children with Autism: A Preliminary Report on Some Longitudinal Treatment Outcomes

By Marjorie H. Charlop-Christy & Sarah Kuriakose

One of the main areas of intervention for children with Autism Spectrum Disorder (ASD) is social skills. In our research at The Claremont Autism Center, we have identified four key social behaviors that seem to be of paramount importance in the treatment of children with autism. These four social behaviors are play, social initiation (both verbal and non-verbal), reciprocal behaviors (turn-taking, joint attention), and communication.

For the purpose of this short article, we will focus only on play. There are many types of play including exploratory, parallel, cooperative, independent play/leisure activities, pretend/symbolic play, and competitive play (games, sports). Play is a key social behavior for many reasons:

- First, all typically developing children play and it is found in their behavioral repertoires.
- Second, we have learned that for typically developing children, play is not only fun, but it serves a purpose as well. For example, Wing (1977) found that higher mental ages were seen in children with ASD who exhibited more play. This is so even if the play is ritualistic (e.g. Tilton, 1964).
- Third, we know that **play is related to an increase in language** (e.g. Ungerer & Sigman, 1981).
- Finally, play has been associated with a decrease in stereotypy not only in the short term (e.g. Favell, 1973) but in the long term as well (e.g. Charlop-Christy, 2007).

We are in the process of evaluating our 20-year follow-up data at The Claremont Autism Center.

“Higher mental ages were seen in children with ASD who exhibited more play.”

Our center is a behaviorally oriented clinic-based program that provides

direct treatment for children as well as parent training services. Many interesting findings are beginning to emerge from the follow-up data about play. Our initial results are showing a fairly pervasive finding that as play increases stereotypy decreases. This is



quite important in that our follow-up study consisted of bringing back clients who are now in their late teens and 20's. Stereotypy is horribly stigmatizing in adults.

We have also found some interesting results about the relationship between play and speech. Children who entered our program at six years of age or younger made most initial gains in play. Speech gains were made later, after initial play increased. The older children, six years and above (typically not older than nine) had most initial gains in speech. It thus appears that play and speech may have a similar developmental relationship in children with ASD as they do in typically developing children, however, children with ASD acquire both play and speech later than typically developing children. Our preliminary findings from following 10 children with ASD across 20 years suggest, that children with ASD may benefit from learning how to play before they develop meaningful speech.

Key social behaviors are:

- Play
- Social Initiation
- Reciprocal Behaviors
- Communication

“As play increases, stereotypy decreases.”

When looking at the behavioral outcomes of the children in our study, we were able to categorize their present level of functioning and compare it to their pre-treatment profile, which proved extremely interesting. We grouped the children (now teens or

adults) into three categories of current functioning levels. We used very stringent criteria to determine the upper categories. The categories were as follows:

Very Good to Excellent outcome:

- 80+% occurrence of appropriate social behavior **and** speech
- 10% or lower occurrence of disruptive behavior, stereotypy, and inappropriate speech

Good to Very Good outcome:

- 60%-80% occurrence of appropriate social behavior **and** speech
- 10% or lower occurrence of all inappropriate behaviors

Fair to Good outcome:

- Less than 60% occurrence of appropriate social behavior **or** speech
- Greater than 10% occurrence of any inappropriate behavior

Of the 10 participants who comprised our preliminary data, five were categorized in the *Very Good to Excellent* outcome, three in the *Good to Very Good* outcome, and two in the *Fair to Good* outcome (we imagine that with further study there may be a



Director Marjorie Charlop-Christy with intern Shea Manning and client

poor outcome category). Thus, **80% of our admittedly very small sample were in the *Good to Excellent* categories.** This shows social and behavioral outcomes that are far more positive than overall outcomes previously reported for adults. Additionally, we present our information based on direct observations of behavior that encompasses relevant aspects of autism, rather than on IQ, which could be explained by improved attention, or school placement. **However, all 50% of the *Very Good to Excellent* category maintained clear characteristics of ASD.**

“No single behavior predicted the child’s development.”

It is important to know what profile of characteristics the children manifested before treatment.

Can we predict behavioral outcomes based on behaviors at intake?

“Excellent improvement does not indicate a cure.”

All participants categorized in the *Very Good to Excellent* and *Good to Very Good* (N=8) had the following profile at intake:

- 50+% appropriate social behavior
- 50+% appropriate play
- 10% or lower inappropriate behaviors

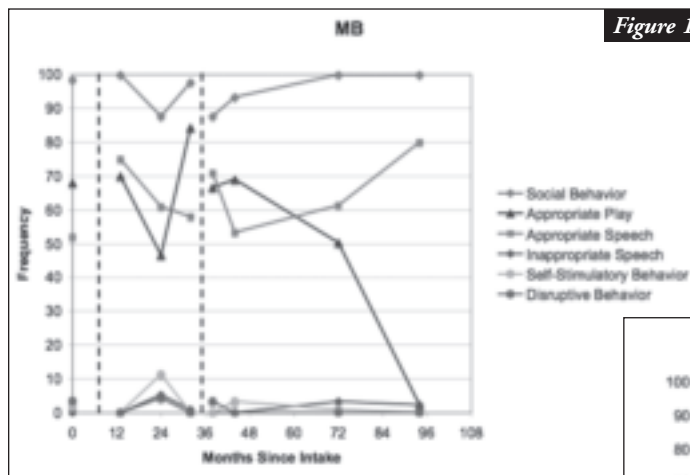
Our research showed that no single behavior at intake predicted outcome, and that the presence of a specific behavior at intake did not necessarily correspond with its presence at follow-up. Instead, there was the cluster of behaviors, or profile, of the strong treatment responders. Interestingly, functional speech at intake was NOT associated with positive

outcome or with functional speech at follow-up. None of the participant spoke appropriately for more than 55% of the intake sessions,

and four spoke appropriately for less than 5% of the intake sessions. Of course, this is not surprising in that lack of speech is a main diagnostic feature for ASD, however, seven of the participants spoke appro-



Here, the client is taught how to lead the outdoor game, “Red light/Green light” for his peers by intern Christian Worlgruber



seen in all participants who eventually learned to speak (See Figures 1 and 2 for examples).

Since play may constitute an important skill for young children with ASD, parents as well as professionals involved in early intervention programs should strongly encourage play.

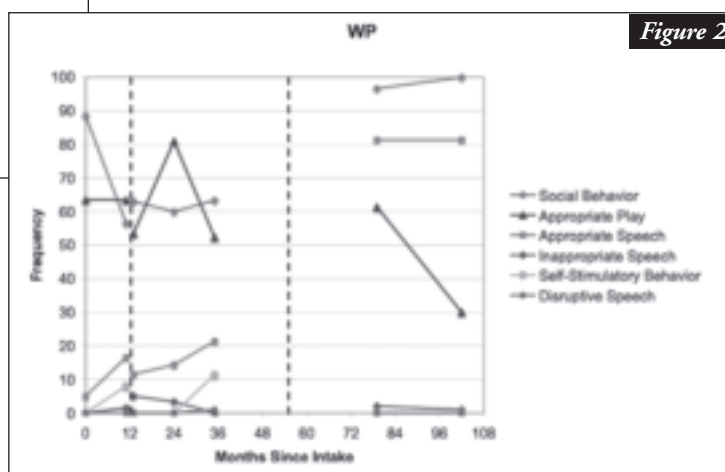
Multiple baselines across behaviors and children

priately for more than 70% of the session at follow-up. So children with ASD who are non-speakers at intake learned to speak. This presents two important questions. First, *why do we then use the presence of speech as a single behavior prognostic sign when most children with autism do not speak initially and when many children with autism can learn to speak (in this case 70%)?* These preliminary findings report data on non-speakers, many of them older than five years at intake, who do learn to speak by follow-up. This is reason for optimism.

“Seventy percent of the non-verbal children were speaking at follow-up.”

The second question is: *What is play’s relationship to positive outcome at follow-up?*

Our preliminary results confirm other researchers’ findings (e.g. Ungerer & Sigman, 1981). These findings suggest that the presence of **social behavior** and **play** may predict social behavior and **speech** at follow-up. The data may also suggest that **play may serve as a precursor for speech**, as it does with typically developing children. The finding that play has decreased at follow-up is self-explanatory, since the participants are generally in their 20’s, and it is no longer appropriate to play. However, at intake, play was higher and speech was low. Play occurred or increased until speech was acquired. When speech increased, the two behaviors crossed over and speech increased in frequency while play decreased in frequency. This crossover effect was



For further information please contact:

Marjorie H. Charlop-Christy, Ph.D.

Claremont McKenna College and
The Claremont Autism Center

E-mail: mcharlop@cmc.edu

Sarah Kuriakose

Pomona College and The Claremont Autism Center

E-mail: skuriakose@ucsb.edu ♥

Selected References

- Charlop-Christy, M.H. (February, 2007). Social and Interpersonal Skills Interventions for Children with Autism. First Annual Association of Behavior Analysis Conference on Autism, Boston.
- Favell, J. (1973). Reduction in stereotypies by reinforcement of toy play. *Mental Retardation*, 11(4): 21-23.
- Tilton, J., & Ottinger, D. (1964). Comparison of the toy play behavior of autistic, retarded, and normal children. *Psychological Reports*, 15: 967-975.
- Ungerer, J.A., & Sigman, M. (1981). Symbolic play and language comprehension in autistic children. *Journal of the American Academy of Child Psychiatry*, 20(2): 318-337.

Editors Note: A complete list of references for this article is available on our website: www.autismnewsoc.org.

Playing with Younger Peers and Siblings

By Adriana Schuler



Introduction

The benefits of play with typically developing peers have become increasingly recognized (Wolfberg & Schuler, 1993, 2006; Schuler & Wolfberg, 2000; Wolfberg, 2003, in press). Nevertheless, when it comes to optimizing the impact of such play, many questions remain. Besides the most obvious questions of best supports and teaching methods, much remains to be learned about the characteristics of those peers who make the best playmates.

As a result of our current follow-up research, we developed the hypothesis that younger siblings and peers may be more suitable playmates than same-aged siblings and peers, particularly during the earlier stages of play where children establish the ideas of turn taking and reciprocity at large. Besides confirming the importance of peer play, our interviews of those parents whose children had done so well that they no longer met the formal criteria for a diagnosis of Autism/PDD suggest that younger children may be remarkably effective playmates. Our own observations suggest that children who are getting ready to plunge into the symbolic domain (those approaching their second birthday) may be particularly powerful play partners. At that point their biological wiring pushes them into interactions, not unlike a young puppy that would play around the clock with whatever breathes - no rejection or attitude. While most children are not identified with Autism Spectrum Disorder (ASD) until after this major milestone, nature may indeed offer new mediated opportunities through interactions with developmentally more competent, but chronologically younger peers.

A drawback of interactions with more competent peers of a similar age is that those interactions are often one-sided. Instead of being playful, such interactions take on a tutorial, highly directive flavor, one that tends to characterize those registers of speech typically adopted by teachers. Interactions

between, for example, a four-, five- or six-year-old with ASD and a typically developing child who is between twenty-two and thirty-six months tend to be more reciprocal, and mutually enjoyable. They may provide an easier

“Are younger siblings and peers more suitable playmates?”



entry point into peer relations and friendships as younger playmates seem most accepting and responsive, while older peers often need specific coaching to become that way.

In an effort to evaluate such claims I will now present **two case reports**.

- 1) The first case profile reports on a parent-mediated intervention carried out by a mom I befriended in my neighborhood. This mom was looking for advice in helping her four-year-old recently diagnosed son in becoming more communicatively and socially competent, particularly in his peer relations.
- 2) The second report deals with a preschool-based play intervention, featuring a now seven-year-old non-verbal boy with minimal communication and social interaction skills.

The story of Axel

When I first met Axel he was four years old and clearly verbal. Closer analysis revealed, however, that his speech featured many memorized constructions connected to particular ceremonies and events and was therefore more associative than communicative. Axel could read and write at the age of two, and favored the written word when pressed to communicate more urgent messages. For instance, to communicate his desire to use his dad’s computer, he would compose a formal written message using wooden alphabet blocks. When he did talk his speech was often not addressed to anyone in particular, and when he used speech more communicatively, his

speech sounded mumbled, lacking vocal expression and void of eye contact. His interactions with peers were mostly nonexistent or aggressive in nature, presenting a serious concern to his parents. While Axel's parents were seeking a more socially competent older peer who would be able to defend himself against their son's unruly play and overly enthusiastic hugging, I suggested



Photo ©Katy Franklin 2004

ed that they instead recruit a younger peer of around 24 months. Despite their initial hesitation, Axel's parents were willing to give it a try, and enlisted the services of Timmy, a 30-month-old son of friends of theirs. It proved to be a mutually beneficial arrangement: Timmy's parents needed babysitting for their son and Axel's parents needed a playmate for Axel.

Axel's mom and I planned the first play group sessions and gathered start-up information. Mom then implemented the play dates and we reviewed the videotaped sessions the same evening they were recorded. Subsequent sessions were then planned



Photo ©Katy Franklin 2004

based on our observations and discussions. Encouraged by the ways in which Axel's mom managed to coach the two boys to engage in joint and alternative action (running around together and chasing each other as well as sharing toys and taking turns doing so) Timmy was encouraged to spend increasing amounts of time at Axel's house. Within one month the two boys got clearly attached to each other, as evidenced by the mutual delight they showed at the start of each new play date and their true sadness when Timmy had to get ready to leave. It was not difficult to convince Timmy to go over to Axel's house - so many toys, so much fun and games.

The play sessions ranged from four to six hours in duration, and occurred between two and four times a week. Concurrent with the progress demonstrated on his home play dates, Axel also started to relate better to his same-aged peers in his inclusive public preschool program. It seemed as if his increasingly competent play interactions at home had made it easier for Axel to relate to

peers of his own age at school. Because the play sessions took place in a natural setting, the social and play skills Axel was learning at home easily generalized to other settings and with other children.

“Does play success generalize to outside settings?”

In fact, many children at school now volunteered to play with Axel, whose repertoire of play behaviors had become increasingly diversified and enriched. Apparently, **his ability to act out a variety of play scenarios in different ways made him ever more popular.** When engaged in play he looked so much more like the other kids. His affect became more appropriate and his eye contact normalized when engaged in play.

When asking Axel's mom for her impressions, she claimed that what made it all work so well was the 18 month difference in their ages. Children Axel's own age would get annoyed at Axel's bossiness and desire to control everything. Although Axel's vocabulary was huge, his ability to use speech was very delayed and at about Timmy's level. Timmy didn't seem to notice the hard time Axel had using words, and Timmy displayed a tolerance for Axel's difficulties that children who were the same age as Axel just would not have.

While no definite conclusions can be drawn, it is noteworthy that now, three years later, **Axel and Timmy have remained close friends, and continue to see each other on a regular basis.**

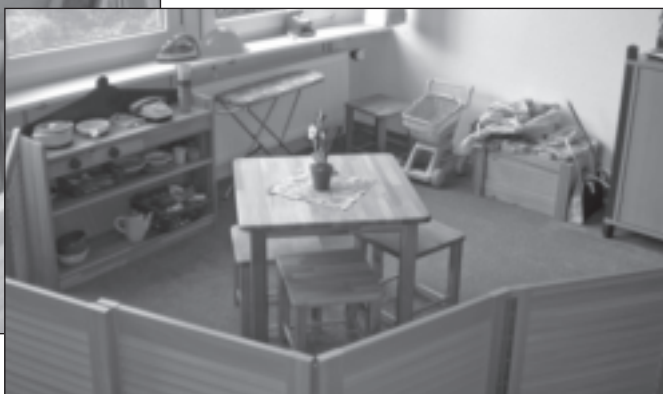
The story of Kwan

Kwan was brought to my attention by an agency that provided additional services to young children with ASD. While he had been placed in an integrated pre-school for the last two years, his progress in the



ventions, we decided to explore the impact of a modified play intervention. **We used a smaller play space supplied with toys such as play pots, pans, utensils and cups, which are more conducive to dramatic as opposed to constructive play.** These toys invite more

proximity, joint action, and joint attention than the solitary completion of, for example, a puzzle. Most importantly, **we paired Kwan with typically developing younger children** between the ages of three and four.



social-communicative domain had been minimal. When I first met him, Kwan’s communication was still pre-intentional. Proximity, passive gaze, hand leading and enactment were his primary means of making requests, while temper tantrums and running served to express his frustration and protest. Except when engaged in such tantrums, his affect was remarkably flat. An effort to engage him in playful interactions with his typical peers had only had a minimal impact. At best Kwan and his peers had tolerated each other within the same play space of about ten square meters, with some evidence of parallel play. While his peers demonstrated functional and imaginary uses of toys they used cooperatively, Kwan continued to engage in highly stereotyped object manipulations, such as holding similar blocks, spoons or other objects in parallel position and tapping them against each other. Adult coaching had only resulted in short, fleeting moments of joint action with no evidence of joint attention or affect. Now, after three months of no integrated play inter-

Below are objects and toys that invite the repetition of everyday routines and promote functional object use and can be used in toy versions.

To promote eating and food preparation routines:

- Cups, saucers, utensils, tea sets, etc.
- Table and chairs, pots, pans, stoves, refrigerators, microwaves, etc.

For shopping routines:

- Shopping carts, wallets, shopping bags, paper bags, credit cards, canned and boxed food items, plastic fruits and veggies, plastic bottles, cans, etc.

For nighttime/go to sleep routines:

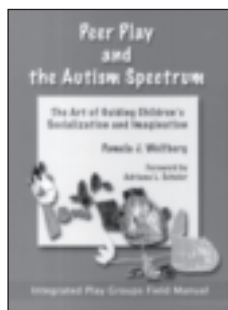
- Pajama’s nightgowns, pillows, blankets, toothbrushes, combs, towels, lullaby books, etc.

For ironing and laundry routines:

- Ironing boards, clothes, iron, spray bottles, pretend washers & dryers, decorated cardboard boxes

“Can non-verbal children benefit from Integrated Play Groups?”

Prior to the implementation of this modified intervention plan, another baseline session was arranged where Kwan and his same-age matched familiar peers were invited to play in this modified smaller play area. However, we found that these modified play environments alone did not prompt any major changes in Kwan's play behaviors. He continued to spend most of his time tapping or banging preferably identical objects against each other. When Kwan was introduced to the three younger peers, selected to play with him initially, once a week, and after the first two sessions, twice a week, gradual changes were observed. First of all, Kwan and his peers played increasingly in close proximity, sharing the same toys, and Kwan began to demonstrate some functional object use, as his peers often interrupted his stereotypical object manipulations, modeling more socially appropriate behaviors such as making a drinking motion when handed a cup. While initially this was heavily prompted, evidence of turn taking was observed, and at the end of the eight sessions Kwan was seen making pouring motions into the cups of peers as well as those of dolls and stuffed animals. While most of these behaviors may be best described as "echoplaylia," (Schuler, 2003) Kwan's echoplaylia became increasingly diversified, but no true pretend play was yet observed. Nevertheless, during the last three sessions functional object use and sharing of objects prevailed with Kwan and his peers playing in close proximity most of the time. Kwan had initially been observed to occasionally remove himself from his peers and run to the other side of the room when socially "overloaded." During the integrated play sessions, such events became rare. But the most striking change had to do with the normalization of his affect. Increasingly, **Kwan was noted to smile and express happiness when rejoined with his peers.** Moreover, he expressed extreme frustration when removed from one of his peers and great joy when reunited. Unfortunately, the play sessions were ended when Kwan was taken abroad to visit his family for a period of two months. We can only hope that more opportunities for adult supported peer inter-



actions will occur, but we are most encouraged by the fast changes we observed over a period of five weeks of play sessions. Hopefully, further research provide a decision matrix to help children like Alex and Kwan develop more satisfying relations with peers and promote the flexibility of mind that comes with the emergence of play, pretense and imagination.

The author wants to thank Gritt Weideman, Ina-Ilka Losch and Matthias Doering for their contributions in documenting the story of Kwan.

For further information please contact:

Adriana L. Schuler, Ph.D.
 Professor of Special Education
 San Francisco State University
 E-mail: alschu@sfsu.edu ♥

References

- Schuler, A.L. (2003) Beyond echoplaylia: Promoting language in children with autism. *Autism: International Journal of Research and Practice*, 7(4): 455-469.
- Wolfberg, P.J. & Schuler, A.L. (1993). Integrated Play Groups: A model for Promoting the Social and Cognitive Dimensions of Play in Children with *Autism*, *Journal of Autism and Developmental Disorders* 23 (3): 467-89.
- Schuler, A.L. & Wolfberg, P.J. (2000). Promoting peer socialization and play: The art of scaffolding. In B. Prizant & A. Wetherby (Eds.) *Language issues in autism and pervasive developmental disorder: A transactional developmental perspective*. (p. 225-227), Baltimore, MD: Paul H. Brookes.
- Wolfberg, P.J. (1999; in press). *Play and imagination in children with autism* (2nd Revised Edition) New York: Teachers College Press, Columbia University.
- Wolfberg, P.J. (2003). *Peer play and the autism spectrum: The art of guiding children's socialization and imagination* (Integrated Play Groups Field Manual) Shawnee Mission, KS: Autism Asperger Publishing Company.
- Wolfberg, P.J. & Schuler, A.L. (2006). Promoting social reciprocity and symbolic representation in children with ASD: Designing quality peer play interventions (p. 180-219). In T. Charman & W. Stone (Eds.). *Early social communication in Autism Spectrum Disorders*. NY: Guilford Publications.

GOOD NEWS FROM THE REACT FOUNDATION

Over \$15,000 has been provided for family scholarships!
 Over 75 mini grants have been provided to educators in
 23 different Orange County school districts,
 who teach children with autism.

For more information please visit www.reactfoundation.org

ShoeboxTasks® Educational CD Now Available!

By Ron Larsen

ShoeboxTasks® provide the opportunity for children or adults who need a high degree of structure to experience success and develop greater skill and independence (see *Autism News*, Summer/Fall 2005). These tasks were designed by Ron Larsen during his work as a therapist with the TEACCH program in North Carolina. Ron and his wife, Linda, developed a small company, Centering on Children, Inc., which designs, manufactures and packages ShoeboxTasks®. Individuals with autism are employed for assembling, packaging and sending the material from Asheville, North Carolina to autism programs around the world.

Recently, Centering on Children, Inc. has translated the North Carolina TEACCH Program's Independent Work Setting onto the computer screen, using ShoeboxTasks® as activities and high interest subjects as motivators. Students choose from among 12 activities and four possible high interest subjects. They interact with the screen using the



mouse to move a variety of shapes that will be matched, stacked, or placed into containers.

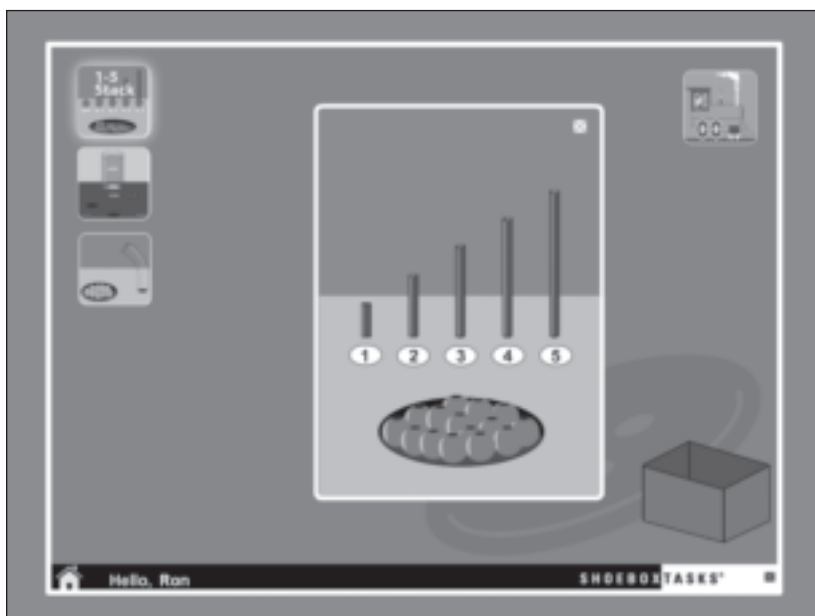
Once the work activities are finished, students can experience the high interest subject for the duration of the work session. Through simplicity of design, students can easily see how many pieces they are to move, when they are finished, and what they will do once finished. The program is designed for the student who needs visually clear, concise, cause and effect connections. By establishing clear beginnings and endings to each movement, independence becomes a more reasonable goal for students who might not otherwise be attracted to the computer.

In addition to the Independent Work Setting, seven memory games are offered that involve matching shapes, colors, letters, numbers; sequencing lights and sounds; and finding the missing parts to two identical pictures.

**For further information,
please contact:**

Ron Larsen

www.shoeboxtasks.com ♥



Introducing the Activity Trainer: A Video Modeling Program

By Karl Smith

Video Modeling is a well-researched and effective method for teaching students with autism and other learning disabilities, however it can be difficult to implement with current options like a VCR, media players, or PowerPoint.

Karl Smith is a father of a child with autism whose original mission was to help his adolescent son learn through software using the most effective methods.

Based on his son's positive response to his first tool, the **Discrete Trial Trainer**, he developed the **Activity Trainer** to teach skills through videos. The Activity Trainer incorporates both video modeling and schedules to facilitate learning tasks and everyday activities. The program allows parents and professionals to use videos to teach new tasks and then transition the student to less supportive prompts like images or text. Within the application, videos, images, text, and audio can be tailored to meet individual learning needs and levels. Data collection features allow the user to track student performance.

Karl's 12-year-old son was the first beneficiary of this new product. For many years, his family and teachers had tried in vain to teach him shoe tying. After on-and-off use of the Activity Trainer, he was able to tie his shoe independently – all within two weeks. The video was a non-threatening and consistent model from his perspective, and there was a clear distinction between the model and any other assistance that Karl Sr. provided to acquire some of the more difficult fine motor skills. The tool gave him the flexibil-

ity to easily replay or switch from various sub-tasks of tying a shoe to a partial sequence and finally to the complete sequence of steps.

The Activity Trainer has two sub-libraries: the Skills Library and the User Library.

- The **Skills Library** organizes skills into categories: **Academic, Communication, Daily Living, Nonverbal Imitations, Recreation, Social, and Vocational**. The Skills Library has mostly lower level activities and is being

expanded to include upper level activities.

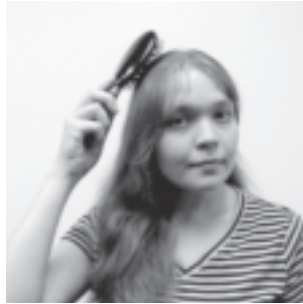
- The **User Library** allows the user to adapt activities to individual needs or to create new activities. Some activities have printable worksheets that can also be modified.

In addition, **Schedules** can be set up for the student to use learned activities. Students can either self-select activities or follow a set or random schedule.

For further information or a free downloadable trial, visit www.dttrainer.com.

Karl Smith

E-mail: ksmith@dttrainer.com ♥



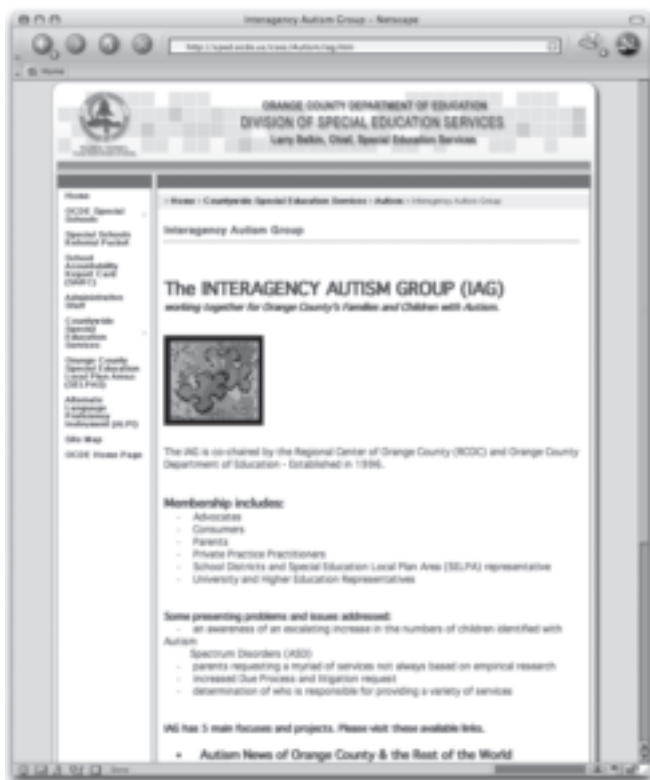
Get a
FREE SUBSCRIPTION
 to Autism News!
 Made possible through
 the following website:
www.autismnewsoc.org

Technology Adds to Our Outreach and Resources

By Andrea Walker

“The road to S.U.C.S.E.S.S. is always under construction” and this summer we were busy!

We are pleased to announce the updated Orange County Department of Education – Division of Special Education Services website at <http://sped.ocde.us>. Within the section **Countywide Special Education Services** you will find a link to **Autism**. Under this heading are links to the *Autism News of Orange County*, *Interagency Autism Group*, *Interagency Assessment Centers* and the *S.U.C.S.E.S.S. Project*.



You can access the Autism section directly at: <http://sped.ocde.us/cses/Autism.htm>.

The landmarks along the “road” of the S.U.C.S.E.S.S. Project include our *Contact Information*, *Quality Indicators* and *Belief Statements*, which give a brief overview of the S.U.C.S.E.S.S. Project and provide the framework for our educational programs for students with Autism Spectrum Disorders.

Also, our newly revised website provides information regarding *Staff Development* and *Parent Education* activities. Registration guidelines are within this section. Please note, however, that these activities have limited space available for those outside of the local school districts within Orange County, California. The direct link to this section is: http://sped.ocde.us/cses/Autism/cc_ap/sd.htm.

The next exciting section is *Resources for Staff and Parents*, at http://sped.ocde.us/cses/Autism/cc_ap/rsp.htm, where we are pleased to be able to share some wonderful local and national websites with you. The first area highlights some of the local agencies and organizations that collaborate within Orange County, such as the sponsors of this publication – The Council for Exceptional Children (CEC), For OC Kids Neurodevelopmental Center, and the Regional Center of Orange County. In addition, you will find information about the Grandparents Autism Network (GAN), the REACT Foundation, and the Southern California Autism Training Collaborative (SCATC). We recommend you check them out, as each website contains important information and provides excellent local resources.

Over the past 12 years, the S.U.C.S.E.S.S. Project has provided a training matrix for staff and parents. Some of the recent speakers have allowed us to link you to their websites.

Have fun “surfing” through these. There is so much information that you may want to “bookmark” this area and visit often.

We will continue to use technology to share practical and helpful information with you.

For further information, please contact:

Andrea Walker

S.U.C.S.E.S.S. Project Coordinator

Orange County Department of Education

E-mail: awalker@ocde.us ♥

Will Technology Save Third Grade?

By Jennifer Hughes

My son came home from school today with a huge smile on his face: He told me that all he did in class today was play! That statement had me a bit concerned, so the next morning I asked his teacher what was going on in his classroom. He let me know that he did, in fact, teach everything in his lesson plan.

I finally figured out why my son thought he had only played at school. You see, we are at a brand new school (Todd Elementary in Corona) that has some amazing technology installed in all the classrooms. Each classroom has interactive white boards and responders for the students. The students use hand-held devices to input responses to the teacher's questions. The devices instantly allow teachers to see what percentage of the class responded correctly, and therefore to know whether their lessons are being understood. It turns out that the students are having such a great time with these responders that they all think they are playing.

My son Tyler was diagnosed with Autism when he was 20 months old. Throughout his whole life there have been a variety of ever changing challenges. My biggest concern for him in third grade is keeping him focused on the lesson being taught. Last year was quite a struggle for him. He was not able to stay on task and would often have to stay in for recess to complete his classroom work. He would get easily frustrated and his self confidence was completely gone. Every day when I picked him up from school, he would be in tears. It was very hard as a parent to watch his confidence and happiness disappear. He hated everything about school. His feelings would come home with him too, making it difficult to get up in the morning and to complete his homework. His personality was just so different from his usual happiness. Getting to bed at night without tears and anxiety was rare.



As we are starting our third week of school, I have such a sense of relief. Tyler is excited to go to school every morning. The students in his class are

all cheering each other on during lessons to see what percentage of kids get the right answers. This little remote has given Tyler motivation to pay attention in class, not only when he's pushing the buttons, but also to check that he is getting correct answers. He still has to bring class work home to finish up, but his attitude about school work has completely changed. I feel very fortunate

to be at this wonderful, cutting edge school and am amazed that this piece of technology has had such an impact on my son and our whole family.

For further information, please contact:

Jennifer Hughes

E-mail: 2HPlus4@ca.rr.com ♥

Editor's Note: Thanks to recent technology funding, there is increasing use of Smart Boards in many school districts throughout Orange County.

The Twice-Exceptional Child

By Kathleen McClemmey

One evening, my five-year-old son Patrick looked across the table at me and said, "Mom, is Sean always going to be like this?" Shocked and with tears in my eyes I said, "Yes he is." Patrick replied, "Wow, this is going to be hard."

I began to reflect on having a twice-exceptional child and realized that while he would always have Down syndrome and Autism, he does not have to "always be like this." One of the things that sets Sean (age seven) apart from a "typical" Down syndrome child is his inability to naturally play and have interactions with children his age. Most children with Down syndrome have play skills and social skills that are assets to their disability. Add a diagnosis of Autism to this picture and you have a child with a profound inability to communicate and socialize.

We have worked hard as a family to improve our son's social and play skills.

As part of this effort, we have never isolated him from society. While we all know how difficult it is to have our child out in public places, the ability of our children to handle their environment is worth the stares and under-the-breath comments. We started with simple, short trips to places where we knew there was an easy way out and we kept our expectations of success low. From there, we built up to noisier and more crowded places with more stimuli for short periods of time in order for him to have success. Sean now is able to sit through a baseball game, go to Disneyland for a day, fly across the country and be in strange environments, all with minimal difficulty. Of course there are some activities that go more smoothly than others, but this can be true of typical children as well.

Sean also has been able to increase his play skills over the last year. We started by creating an IEP goal of social play with his classmates. The teachers worked with him to be able to be in the same area as the other children during recess. With this kind of assistance, Sean has been able to play ball with his classmates.



At home, using his vocal box, Sean learned to participate in songs by pressing the button to play a preprogrammed part of the song when it is his turn to sing. This participation always brings a smile to his face. We then worked on imitating motions to "If You're Happy and You Know It." After a few months, he was able to perform all the hand motions without assistance and fully participate in this song at school. He was part of his class!

Games are one of our favorite family activities, but how could we help Sean to participate with us? We found simple games that he and his brother could play together, we programmed the vocal box to say "my turn" and we worked hand over hand for many months on having him press the vocal box and then do the activity. Sean now can play simple games with the whole family with minimal assistance. He is so proud and smiles and laughs.

I have compiled a small list of thoughts that can assist you with your child's play and social skills:

- Take small steps and take joy in them
- Use continual positive reinforcement
- Have realistic expectations
- Never give up!
- Do not isolate your child
- Play simple games that have quick success
- Try to limit computer games so that your child can develop an interactive relationship with people rather than a computer
- Stress turn taking and imitating
- Work for short periods of time
- Create a play goal

We know that we have a long way to go to reach Sean's full social potential, but we celebrate the progress that he has made and we won't give up because he doesn't have to "always be like this."

For further information, please contact:

Kathleen McClemmey

E-mail: kmacc68@msn.com ♥

Helping with Assisted Technology in Home

By Robert F. McArdle II

As an educator, I have taken on a quest to help students progress, understand, and function throughout their day. In many cases of children with Autism Spectrum Disorders SD or other disabilities the integration of technology has been shown to facilitate understanding, learning, clarification, and mastery. Unfortunately, resources often are sparse, for funding AT for students with disabilities, especially in the home.



My involvement with assisted technology among children with disabilities goes back along ways. I was influenced by a technology teacher who made computers available to EL students in their homes for proficiency through learn-

ing games and curriculum practice. I wanted to provide this opportunity to all children, independent of their abilities.

Over the past several years, I have taken donations of old computers, refurbished them, and supplied them to children for free home use. Most of my donations have been from school districts that have upgraded their tech labs, and I am very grateful for this. These donations have immensely helped especially low income students with disabilities succeed in many ways.

For further information on how to donate a computer or how to get help for a child with ASD please contact:

Robert McArdle II, Lead Teacher

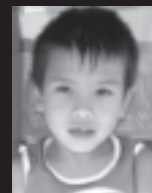
Beacon Day School, Orange

E-mail: rmcardle@beacondayschool.com

Phone: (714) 288-4200 ♥

Artist: Odin Kleiberg

By Vickie Xia & Joy Barnett



Odin is a seven-year-old, 2nd grader at Oak Creek Elementary School in Irvine. He loves his teacher, Ms. Joy Barnett, very much.

Odin has been drawing since age two, both on paper and on the computer. Cars, buses, bridges and trees are commonly featured in his artwork. He engages in imaginative drawing and he loves to copy pictures from a book or illustrate what he sees. For his drawing on our cover, Odin copied a picture from the book, "Spot Goes to School." He's always been proud of his drawing and asks to display it on the wall or take it home.

At home, Odin's favorite hobby is building battery-driven cars with K'nex and Legos. He also spends a lot of time coloring as well as practicing writing letters and words. Legoland and picnic expeditions as well as swimming, bike and scooter rides are Odin's preferred weekend activities. He always enjoys building forts and tents with his four-year-old sister, Nora.

Odin likes to watch movies – in particular *Fantasia 2000*, *Curious George* and *Flushed Away*. His favorite song is *Puff the Magic Dragon*, which he listens to almost every day.

Odin loves to learn and experience new things, and faces each new day with great energy and enthusiasm.

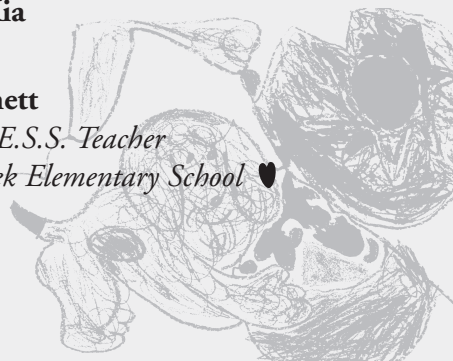
Vickie Xia

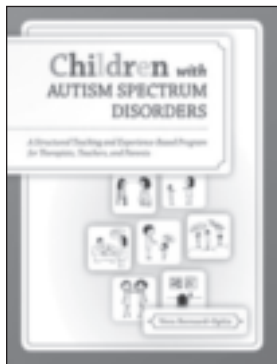
Mom

Joy Barnett

S.U.C.S.E.S.S. Teacher

Oak Creek Elementary School ♥





New Publication!

We are happy to report the recent publication of the following training manual by our Editor, Vera Bernard-Opitz. The book has been very successful in German and is now available in English through pro ed publication. (It will soon be available in Korean).

Children with Autism Spectrum Disorders: A Structured Teaching and Experience-Based Program for Therapists, Teachers, and Parents

By Vera Bernard-Opitz

Our knowledge about Autism Spectrum Disorders (ASD) and effective treatment methods has significantly increased over the last 35 years. For the broad spectrum of impairments there is now a spectrum of acknowledged intervention methods.

This manual gives an overview of best practice interventions including applied behavior analysis, precision teaching, and experience-based and visual approaches. These methods are integrated into the curriculum component of this manual, called **STEP (Structured Therapy and Experience-based Programs)**. Guidelines are presented for parents and professionals to match the child's skill profile, learning style and interest to the best possible intervention method. Numerous case studies, examples, sketches and pictures make this book very reader-friendly. Reproducible forms are provided for skills assessment, data collection and teaching in the following areas:

- Attention, Eye Contact, and Joint Attention
- Matching and Sorting
- Imitation
- Language Comprehension
- Active Communication and First Utterances
- Expanded Communication
- Play and Social Behavior
- Self-Help Skills and Independence

BOOK REVIEWS

"This groundbreaking book is a must read for anyone interested in providing a comprehensive and appropriate education to young children with ASD. It is a book that recognizes that all children with ASD are unique and may require specific teaching methods that are compatible with their learning style. Vera Bernard-Opitz offers the STEP approach: Structured Therapy and Experience-based Programs program that attempts to ameliorate 'therapy camps' and place focus on where it should be – the child's needs." – Brenda Smith Myles (University of Kansas)

"This is a highly practical, and generally well presented manual for those involved in work with children with autism spectrum disorders." – Pat Howlin (St. George's Hospital, London)

For additional information on how you can get your own copy of this training manual, visit www.proedinc.com/customer/productView.aspx?Id=4144. ♥

We are grateful for the ongoing sponsorship of this newsletter by the following organizations:



WILLIAM M. HABERMEHL
County Superintendent of Schools



For OC Kids
Neurodevelopmental Center

Upcoming Staff Development, Conferences and Parent Trainings

There are several opportunities for continuing education and support, that are offered by various organizations. For **OC Kids**, the **Regional Center of Orange County (RCOC)** and the **S.U.C.S.E.S.S. Project of Orange County** strive to provide affordable fees to both families and staff. Each session has a specific focus, some pertaining to early interventions, some with more of an emphasis on the older-aged student. Registration may be very limited, therefore call early! Other sessions will be provided throughout the year.

Date/Time/Place	Topic/Speaker	Dev. Level	Approx. Fee	Contact
November 7, 2007 4:00 to 8:00 PM RCOC	Social Skills: Assessment and Intervention Planning for Children with Autism <i>William D. Frea, Ph.D.</i>	All Ages	\$30	RCOC Karen Schaeffer (714) 796-5330
January 16, 2008 4:00 to 8:00 PM RCOC	Adolescence and Autism: Sexuality and Life Issues <i>Dr. Peter Gerhardt</i>	All Ages	\$30	RCOC Karen Schaeffer (714) 796-5330

Locations: *RCOC = Regional Center of Orange County –
801 Civic Center Drive West, Santa Ana, CA 92702*

Autism News of Orange County & the Rest of the World (ANOC-RW) Shared Sponsorship Now Available!

Autism News of Orange County & the Rest of the World (ANOC-RW) is a newsletter which shares research-based strategies, innovative educational opportunities, developments in education and therapy, and resources with colleagues and families of children with Autism Spectrum Disorders (ASD). It is published three times a year and is distributed as hardcopies and on the web on a local, national, and international basis. *Autism News* has successfully informed the public and brought relevant information to its readers over the last four years.

ANOC-RW is currently published and distributed in hardcopy form by four non-profit organizations, namely Council for Exceptional Children (CEC), Orange County Department of Education (OCDE), For OC Kids Neurodevelopmental Center, and Regional Center of Orange County (RCOC). Per year about 8000 hardcopies are sent out locally as well as internationally to parents and specialists in twenty countries. The newsletter is also available as a web-based free subscription.

ANOC-RW has a Local as well as a National/International Advisory Board with experts from the U.S., Australia, Europe and Asia as well as dedicated parents, teachers and therapists. For further information please see our website at www.autismnewsoc.org or www.verabernard.org.

SPONSORS – Sponsorship of the newsletter is offered to organizations or individuals who contribute \$5,000 or more annually. In return for their contribution, sponsors

will be listed by name in the newsletter. Sponsors are also given space on the inside back page of the newsletter to list their upcoming events, and will receive a specified number of hard copies to distribute to their constituencies. Sponsors will be listed prominently on our website.

SUPPORTERS – Supporters of the newsletter include all contributing organizations or individuals whose donations are less than the amount required for Sponsorship. Supporters are recognized in the newsletter and on our website and may be allowed to list their upcoming events on a space-available basis and, depending on quantities printed, to distribute hard copies of the newsletter. Supporters are further categorized as Sustaining Members, Supporters, or Friends of the newsletter. The range of contributions for each may change depending on the level of support required for Sponsorship. Currently the levels are as follows:

Sustaining Member: \$3000–\$4999

Supporter: \$1000–\$2999

Friend: \$25–\$999

Please send your contribution to the following address: Autism News of Orange County-RW, Orange County Department of Education, 200 Kalmus, Costa Mesa, CA 92628. *Note: Tax-exempt receipts will be mailed along with our thanks!*

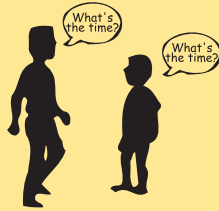
For additional information please contact Vera Bernard-Opitz at verabernard@cox.net or Andrea Walker at awalker@ocde.us or call (714) 966-4137. ♥

SOME EXAMPLES OF AUTISTIC BEHAVIOR

ALGUNOS EJEMPLOS DEL COMPORTAMIENTO DE PERSONAS CON AUTISMO



Avoids eye contact
Evita el contacto visual



Copies words like a parrot ("echolalic")
Repite las palabras como un loro
("en forma de echo")



Shows preoccupation with only one topic
Demuestra preocupación/interés en solo un tema/asunto



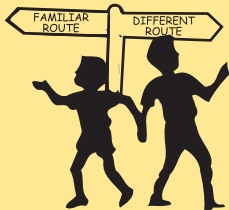
Lacks creative "pretend" play
Carece el juego creativo



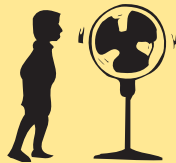
Shows indifference
Demuestra indiferencia



Displays special abilities in music, art, memory, or manual dexterity
Demuestra capacidades especiales en musica, arte, memoria or destreza manual



Does not like variety: it's not the spice of life
No demuestra interés en variedad



Shows fascination with spinning objects
Demuestra fascinación con objetos que giran



Shows fear of, or fascination with certain sounds
Demuestra miedo de/ó fascinación con ciertos sonidos



Laughs or giggles inappropriately
Risa/reír inadecuadamente



Shows one-sided interaction
Demuestra interacción que es unilateral



Does not play with other children
No juega con otros niños

Some Examples of Autistic Behavior

Algunos ejemplos del comportamiento de personas con autismo

- Difficulty with social interactions.
Tienen dificultad para socializar con otras personas.
- Problems with speech.
Tienen problemas con su lenguaje.
- Disturbed perception.
Tienen una percepción anormal de los sucesos que acontecen a su alrededor.
- Abnormal play.
Su forma de jugar es anormal.
- Resistance to change in routine or environment.
Se resisten a cambios en sus actividad rutinarias ó a su medio ambiente.