## Teaching Tips for Children and Adults with Autism

Temple Grandin, Ph.D.
Assistant Professor
Colorado State University
Fort Collins, CO 80523, USA
(Revised: June 2000)

Good teachers helped me to achieve success. I was able to overcome autism because I had good teachers. At age 2.1/2 I was placed in a structured nursery school with experienced teachers. From an early age I was taught to have good manners and to behave at the dinner table. Children with autism need to have a structured day, and teachers who know how to be firm but gentle.

Between the ages of 2 1:4 and 5 my day was structured, and I was not allowed to tune out. I had 45 minutes of one-to-one speech therapy five days a week, and my mother hired a nanny who spent three to tour hours a day playing games with me and my sister. She taught 'turn taking' during play activities. When we made a snowman, she had me roll the bottom ball; and then my sister had to make the next part. At mealtimes, every-body ate together; and I was not allowed to do any "stims." The only time I was allowed to revert back to autistic behavior was during a one-hour rest period after lunch. The combination of the nursery school, speech therapy, play activities, and "miss manners" meals added up to 40 hours a week, where my brain was kept connected to the world.

- 1.) Many people with autism are visual thinkers. I think in pictures. I do not think in language. All my thoughts are like videotapes running in my imagination. Pictures are my first language, and words are my second language. Nouns were the easiest words to learn because I could make a picture in my mind of the word. To learn words like "up" or "down," the teacher should demonstrate them to the child. For example, take a toy airplane and say "up" as you make the airplane takeoff from a dosk. Some children will learn better if cards with the words "up" and "down" are attached to the toy airplane. The "up" card is attached when the plane takes off. The "down" card is attached when it lands.
- 2.) Avoid long strings of verbal instructions. People with autism have problems with remembering the sequence. If the child can read, write the instructions down on a piece of paper. I am unable to remember sequences. If I ask for directions at a gas station, I can only remember three steps. Directions with more than three steps have to be written down. I also have difficulty remembering phone numbers because I cannot make a picture in my mind.
- 3.) Many children with autism are good at drawing, art and computer programming. These talent areas should be encouraged. I think there needs to be much more emphasis on developing the child's talents.
- 4.) Many autistic children get fixated on one subject such as trains or maps. The best way to deal with fixations is to use them to motivate school work. If the child likes trains, then use trains to teach reading and math. Read a book about a train and do math problems with trains. For example, calculate how long it takes for a train to go between New York and Washington.
- (5.) Use concrete visual methods to teach number concepts. My parents gave me a math toy which helped me to learn numbers. It consisted of a set of blocks which had a different length and a different color for the numbers one through ten. With this I learned how to add and subtract. To learn fractions my teacher had a wooden apple that was cut up into four pieces and a wooden pear that was cut in half. From this I learned the concept of quarters and halves.
- 6.) I had the worst handwriting in my class. Many autistic children have problems with motor control in their hands. Neat handwriting is sometimes very hard. This can totally frustrate the child. To reduce easier.
- 7.) Some autistic children will learn reading more easily with phonics, and others will learn best by

- memorizing whole words. I learned with phonics. My mother taught me the phonics rules and then had me sound out my words. Children with lots of echolalia will often learn best if flash cards and picture books are used so that the whole words are associated with pictures. It is important to have the picture and the printed word on the same side of the card. When teaching nouns the child must hear you speak the word and view the picture and printed word simultaneously. An example of teaching a verb would be to hold a card that says "jump," and you would jump up and down while saying "jump."
- 8.) When I was a child, loud sounds like the school bell hurt my ears like a dentist drill hitting a nerve. Children with autism need to be protected from sounds that hurt their ears. The sounds that will cause the most problems are school bells, PA systems, buzzers on the score board in the gym, and the sound of chairs scraping on the floor. In many cases the child will be able to tolerate the bell or buzzer if it is muffled slightly by stuffing it with tissues or duct tape. Scraping chairs can be silenced by placing slit tennis balls on the ends of the legs or installing carpet. A child may fear a certain room because he is afraid he may be suddenly subjected to squealing microphone feedback from the PA system. The fear of a dreaded sound can cause bad behavior. If a child covers his ears, it is an indicator that a certain sound hurts his ears.
- 9.) Some autistic people are bothered by visual distractions and fluorescent lights. They can see the flicker of the 60-cycle electricity. To avoid this problem, place the child's desk near the window or try to avoid using fluorescent lights. If the lights cannot be avoided, use the newest bulbs you can get. New bulbs flicker less. The flickering of flourescent lights can also be reduced by putting a lamp with an old-fashioned incandescent light bulb next to the child's desk.
- 10.) Some hyperactive autistic children who fidget all the time will often be calmer if they are given a padded weighted vest to wear. Pressure from the garment helps to calm the nervous system. I was greatly calmed by pressure. For best results, the vest should be worn for twenty minutes and then taken off for a few minutes. This prevents the nervous system from adapting to it.
- 11.) Some individuals with autism will respond better and have improved eye contact and speech if the teacher interacts with them while they are swinging on a swing or rolled up in a mat. Sensory input from swinging or pressure from the mat sometimes helps to improve speech. Swinging should always be done as a fun game. It must NEVER be forced.
- 12.) Some children and adults can sing better than they can speak. They may respond better if words and sentences are sung to them. Some children with extreme sound sensitivity will respond better if the teacher talks to them in a low whisper.
- 13.) Some nonverbal children and adults cannot process visual and auditory input at the same time. They are mono-channel. They cannot see and hear at the same time. They should not be asked to look and listen at the same time. They should be given either a visual task or an auditory task. Their immature nervous system is not able to process simultaneous visual and auditory input.
- 14.) In older nonverbal children and adults touch is often their most reliable sense. It is often easier for them to feel. Letters can be taught by letting them feel plastic letters. They can learn their daily schedule by feeling objects a few minutes before a scheduled activity. For example, fifteen minutes before lunch give the person a spoon to hold. Let them hold a toy car a few minutes before going in the car.
- 15.) Some children and adults with autism will learn more easily if the computer key-board is placed close to the screen. This enables the individual to simultaneously see the keyboard and screen. Some individuals have difficulty remembering if they have to look up after they have hit a key on the keyboard.
- 16.) Nonverbal children and adults will find it easier to associate words with pictures if they see the printed word and a picture on a flashcard. Some individuals do not under-stand line drawings, so it is recommended to work with real objects and photos first.
- 17.) Some autistic individuals do not know that speech is used for communication. Language learning

can be facilitated if language exercises promote communication. If the child asks for a cup, then give him a cup. If the child asks for a plate, when he wants a cup, give him a plate. The individual needs to learn that when he says words, concrete things happen. It is easier for an individual with autism to learn that their words are wrong if the incorrect word resulted in the incorrect object.

- 18.) Many individuals with autism have difficulty using a computer mouse. Try a roller ball (or tracking ball) pointing device that has a separate button for clicking. Autistics with motor control problems in their hands find it very difficult to hold the mouse still during clicking.
- 19.) Children who have difficulty understanding speech have a hard time differentiating between hard consonant sounds such as 'D' in dog and 'L' in log. My speech teacher helped me to learn to hear these sounds by stretching out and enunciating hard consonant sounds.
- 20.) Several parents have informed me that using the closed captions on the television helped their child to learn to read. The child was able to read the captions and match the printed works with spoken speech. Recording a favorite program with captions on a tape would be helpful because the tape can be played over and over again and stopped.
- 21.) Some autistic individuals do not understand that a computer mouse moves the arrow on the screen. They may learn more easily if a paper arrow that looks EXACTLY like the arrow on the screen is taped to the mouse.
- 22.) Children and adults with visual processing problems can see flicker on TV type computer monitors. They can sometimes see better on laptops and flat panel displays which have less flicker.
- 23.) Children and adults who fear escalators often have visual processing problems. They fear the escalator because they cannot determine when to get on or off. These individuals may also not be able to tolerate fluorescent lights. The Irlen colored glasses may be helpful for them.
- 24.) Individuals with visual processing problems often find it easier to read if black print is printed on colored paper to reduce contrast. Try light tan, light blue, gray, or light green paper. Experiment with different colors. Avoid bright yellow--it may hurt the individual's eyes. Irlen colored glasses may also make reading easier. (Click here to visit the Irlen Institute's web site.)

June, 2000