

Teach me in a way that is meaningful to me.

by Ellen Notbohm

My raised-on-ROM children don't know whether to be amused or aghast at how their parents grew up in an era without CDs, DVDs, cell phones or computers. My first computer predated Windows and used a revolutionary spreadsheet program called VisiCalc. Back in those frontier days, you either had an Apple Macintosh or an IBM personal computer. The Macs and the PCs were Hatfields and McCoys. They not only didn't talk to each other, they *couldn't* talk to each other. They didn't "think" alike.

Your student with autism is like a Mac in a PC-dominated environment. He is hard-wired differently. Not incorrectly – just differently.

Macs and PCs couldn't communicate with each other because, bottom line, their operating systems were not compatible. Everything about Mac's architecture and command structure was different from the PC's. If you have been a lifelong PC-only or Mac-only user, you may consider yourself fairly computer-competent, and chances are you are not aware just how foreign it feels trying to navigate around the other system. I found out. During Bryce's third grade year with Jackie, I volunteered for a year-long project that involved transferring some of the kids' writings to computer files. Snap! I thought, I can do this at home in my abundant (*winking here*) free time. Then I was told it could not be done on my PC at home; it had to be done on Macs, in the classroom.

I'll spare you the details of the learning curve I never truly conquered. Week after week, I thought I had learned enough about the Mac operating system to do the project, only to run into new language or command obstacles. The project that was supposed to be enjoyable became a jaw-clenching exercise in anxiety. Why? Because 15 years of day-in and day-out banging away on a PC had entrenched the Windows operating system so deeply in my gray matter that I was completely blindsided by how hard it was to put it aside, even temporarily, and learn to interact with a system that "thought" differently. My own "processing speed" slowed to a crawl.

Welcome to life as a student with autism, whose basic operating system is different from just about everyone else who is not on the autism spectrum. Macs and PCs made their debuts in the early to mid 1980s. Only recently have their incompatibility issues been resolved. Your student doesn't have 20 years. We need to adapt our teaching to his operating system, now.

At the beginning of this endeavor is one critical distinction. This different architectural thought process has nothing to do with your student's 'abilities.' We will never know the true extent of those abilities unless we establish communication via the architecture he has in place. The Apple Mac in Bryce's third grade classroom wasn't in and of itself incompetent or "challenged." The computer didn't fail, *I* failed to comprehend its operating system and input data in a format it could process.

This difference in architecture impacts the skills embodied in what we call critical thinking (classification, comparison, application), executive management (attention, planning and

memory functions) and social pragmatics (perspective-taking). These skills are missing from your ASD students' hard-wiring. But it is emphatically not true that they cannot be developed. Under patient and consistent instruction and coaching, children with ASDs can and do expand their social competence, improve executive functioning and achieve a functional degree of flexibility in thinking and conversing. Living proof of that is stomping around our upstairs bathroom right now, marinating himself in "man spray" and practicing lunchtime banter.

HOW THINKING IS DIFFERENT IN AUTISM

The One – and Only? – Learning Channel

Your student with autism has one-channel wiring in a polyphonic world. He likely processes most information via the one learning intelligence that works best for him; in most students with autism, this will be visual or tactile. He struggles to process multiple sensory modalities. It can be especially difficult to listen and write at the same time. The seamless integration among the senses that happens within the neuro-typical brain is missing in his brain.

Equally difficult is shifting back and forth between modalities (such as from visual to auditory and back again), and filtering out irrelevant sensory distractions: being able to distinguish the teacher's voice over the buzz of the flies on the windowsill, the garbage truck rolling by the window outside and the band practice down the hall. One-channel processing coupled with the inability to filter contributes to the ASD student's hyper-focused and repetitive behaviors. Constantly under a barrage of sensory chaos, he becomes physically as well as emotionally exhausted. Those single-focus or repetitive behaviors are calming to him.

A Zillion Parts in Search of a Whole

The neuro-typical brain thinks general-to-specific. Your student with autism thinks specific-to-general. Consider how acute that difference is. For him, each bit of information taken in exists in separate, discrete "boxes" in his brain. For us, bits of data naturally, effortlessly sift into categories and subcategories. You didn't have to consciously learn that banana, apple, grapes and watermelon make up the category "fruit," category "fruit" just made sense.

Our brain organizes the information we take in and even cross references it for us. Not so for your student with autism. Categorical thinking is difficult for him and must be taught. His brain is like a cavernous warehouse filled with bits of unrelated information. As his teacher, you need to help him learn to organize, label and associate all that information. It all begins with teaching the child to think in categories.

As you let this characteristic of the autism architecture sink in, you may – and should -- find it overwhelming to conceive of every piece of information in your head existing independently of any other thought. What would it be like to have no ability to sort, to organize, to create associations? It's no wonder your student has difficulty learning. Wouldn't you?

Your student's inability to form categories has an equally formidable cousin: the inability to generalize information. As we've discussed, for the child with autism, every new experience

exists in a vacuum. There's no 'whole', no umbrella under which different-but-related ideas or experiences can gather. He does not generalize a new experience to prior experiences or knowledge, *until he is taught to do so.*

Teach him: to *categorize*. Start with simple, concrete categories like colors, clothes or vehicles and build to categories that are less concrete, like function, proximity or social categories like feelings. Explain why an object fits into one category or several, but not in others. Have him *compare and contrast* similarities and differences.

Teach him: to *apply concepts*. Help him understand that categories can represent concepts, and that information can be inter-related, that you can take what you know about particular situations and people and objects, and use it in other settings and situations.

I Need to See It to Learn It

Many of your students with autism will be visual/spatial learners – they think in pictures rather than words. Your student with autism might tell you:

I need to see something to learn it, not just hear it. Words are frequently like steam to me; I know they are there but they evaporate before I have a chance to make sense of them. I need more time to process information than typical children. Information delivered in words comes and goes in an instant, and I don't have instant-processing skills. When information is presented to me visually, it can stay in front of me for as long as it takes to decode. Otherwise I live the constant frustration of knowing that I'm missing big blocks of information and expectation, and am helpless to do anything about it.

Over and Over and Over Again

The behaviors of children with autism are frequently characterized by excessive selectivity and hyper-focus (rigidity and repetition). Their extreme dependence on routine and sameness is a result of a thinking architecture that has difficulty processing change. Even small variations from expectation – having a substitute teacher, changing the student's desks around, create cognitive chaos.

Our student with autism might explain it this way.

You may view my behavior and thinking as "rigid," but it's that way because sameness and routine are my life-lines to being able to handle the details of daily life that you take for granted. Knowing that parts of my day and my life will be the same every time helps me cope with the constant anxiety of living in a baffling world that seems to be in constant and unpredictable motion. I DO want to learn to interact with you and my surroundings. So please respect my fears and ease me out of my inflexibility gently, until I learn the skills that will make me more functional, and you learn the ways to adapt my environment so that I can learn...

Teach him: to think *flexibly and cohesively*. Where he is excessively selective and hyper-focused, teach him – through your words and actions - that

- there is more than one way to view a situation

- there is more than one "right" way to do most things
- there is meaning in communication beyond what we see and hear.

Everyone Thinks Like Me – Don't They?

Perspective-taking abilities, or what professionals refer to as Theory of Mind skills, are notoriously impaired in your student with autism. Until they are taught differently, children with impaired perspective-taking assume that everyone in the world shares their same way of thinking, has their same thoughts about a person, event or situation, and shares their same points of view. That inability to generalize applies here, too. So, explaining a different point of view in one instance doesn't mean he 'gets' that all people can have different ways of thinking in every different instance.

He can't anticipate what others might say or do in different situations, nor understand that what one person does in a given situation, another person may never do! Your student may not even understand that other people have thoughts and emotions, and thus he may behave in ways that come across as uncaring or self-centered.

Teach your ASD student: that people have different ways of thinking, feeling and responding. That we not only respond to others but we initiate contact with others. That we share and reciprocate actions with others, not merely attempt to control our own situation. That we take social cues from others without imitating their exact behaviors and words. That we engage in cooperative and reciprocal give-and-take, not just parallel activity with others.

Remember that perspective-taking ability is unrelated to intelligence: having a high IQ or advanced language capabilities is not an indicator of perspective-taking abilities. In fact, Temple Grandin has observed that the children on the lower functioning end of the autism spectrum often seem to have a greater sense of perspective-taking.

And never, never forget: *he does not understand* the reactions his behavior produces in others...



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This is an excerpt from Ellen Notbohm's book *Ten Things Your Student With Autism Wishes You Knew* (condensed from chapter three), published by [Future Horizons, Inc](#)

Two-time ForeWord Book of the Year finalist Ellen Notbohm is author of *Ten Things Every Child with Autism Wishes You Knew* and *Ten Things Your Student with Autism Wishes You Knew*. She is also co-author of the award-winning *1001 Great Ideas for Teaching and Raising Children with Autism Spectrum Disorders*, a columnist for *Autism Asperger's Digest* and *Children's Voice*, and a contributor to numerous publications and websites around

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