The Learning Experience

by Bill Geluso

Intellectual abilities enable us to learn, retain and use information. While maximizing these abilities is important to everyone, it is especially important to those who use AAC technologies. This issue of *Alternatively Speaking* focuses on how individuals who rely on AAC can develop their intellectual abilities and increase their knowledge of the world. It examines the benefits and joys of lifelong learning and discusses strategies for learning throughout life. Cultivating the mind can be fun and creates a most unique and valuable asset.

Expectations

Some individuals with complex communication needs (CCN) may not be exposed to a rigorous learning regimen while in school because their teachers and therapists have low expectations of them. Low expectations can lead to low self-esteem, which prevents students from even trying to achieve obtainable goals. Diane Bryen and her colleagues did some research on expectations. They asked six adults who rely on AAC to recall the first time someone asked them, "What do you want to be when you grow up?" All responded that no one had ever asked them.[1]

When teachers and therapists have limited expectations, they create psychological barriers that interfere with the learning process. According to Allen Mendler, an authority on the American education system, teachers know

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that when they expect success, they are more likely to get it.[2] As Gus Estrella, who relies on AAC, relates in a 1997 lecture, he was fortunate to escape the devastating barriers of assumed incompetence and low expectations because of one very special therapist.[3]

Innovative Learning

Some teachers give up on students with CCN because they lack the know-how or creativity to modify a standard curriculum or because they don't know how to tap the specific abilities of individual students. As Mendler says, all students are capable of learning.[2] This includes students with sensory, motor, communication and cognitive issues. Teachers, especially those who work with students with disabilities, need to use teaching techniques that make it possible for each student to learn. Psychologist and educator Thomas Armstrong states that "each child should have the opportunity to learn in ways harmonious with their unique minds."[4]

The need for teachers to adapt standard academic curricula and

Message from the editor

The worst day of my life was when I graduated from college. Academics had been part of my daily activities for the better part of my existence. School provided me with the intellectual environment I thrived in. It also provided me with limited opportunities to cultivate friendships. Suddenly, all this disappeared and I was at a loss about what to do with the desert of time facing me.

I knew I had to find stimulating ways to occupy my time, otherwise I would run the risk of driving my mother nuts with my constant moping because I was bored.

Fortunately, I soon discovered something that fired me up. John F. Kennedy was making his run for president. I was so enthused by the possibility of his election, that I joined the local chapter of the Young Democrats. This gave me opportunities to participate in many interesting activities, including attending a state political convention.

What does this have to do with anything? This issue of *Alternatively Speaking* focuses on exactly this kind of intellectual dilemma: How can an individual who relies on AAC find intellectual diversions and develop social capital beyond the schoolhouse. I want to thank Bill Geluso for accepting my offer to be the guest author of this issue. Mr. Geluso, a past participant in the AAC-RERC Writers Brigade, wrote this issue of *AS* from his home in New York. With the aid of his suggestions, all of us should be able to come up with some new lifelong learning strategies.

I don't know about you, but this old dog is always ready to learn a new trick!

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Bill Geluso

Michael B. Williams

utilize a range of teaching methods is not a new concept. In 1983, Dr. Howard Gardner introduced the theory of multiple intelligences in his book, *Frames of Mind: The Theory of Multiple Intelligences*.[5] The theory, which Gardner and others have continued to expand upon, broadens the established concept of intelligence beyond I.Q. tests. These educators define different types of intelligences across a wide spectrum of intellectual abilities and currently identify the following intelligences:

1. Linguistic intelligence (word smart)

2. Logical-mathematical intelligence (number/reasoning smart)

3. Spatial intelligence (picture smart)

4. Bodily-kinesthetic intelligence (body smart)

5. Musical intelligence (music smart)

6. Interpersonal intelligence (people smart)

7. Intrapersonal intelligence (self smart)

8. Naturalist intelligence (nature smart)

9. Other intelligences (such as existentialism).[6]

Dr. Gardner believes that people possess each type of intelligence to varying degrees. He also theorizes that to accomplish most tasks, several intelligences are employed simultaneously.[7] Additionally, Gardner and his colleagues have criticized our schools and culture for emphasizing the linguistic and logical-

mathematical intelligences, while ignoring the development and use of other intelligences.[6]

Broader Knowledge

Individuals who rely on AAC can, and should, actively engage in expanding their world knowledge. Aside from the fun and excitement of exploring the world intellectually, there are specific reasons to learn as much as possible:

• Having a broad knowledge of subjects of interest enables us to participate in conversations better.

• Demonstrating a rich array of knowledge when conversing or composing written text helps put us in the mainstream.

• Knowing and understanding what is happening in the world makes life more interesting.

• Being knowledgeable in many areas increases the likelihood of having something in common with others.

All of this boosts our chances of developing a broad network of friends and expands our career and social opportunities.

Confidence in Learning

Some people who use AAC technologies may be timid about pursuing a course of self-learning. An individual may tote the false notion that he or she doesn't have the ability to learn or that a desired subject is too complicated. Such feelings of inadequacy are unfortunate because they thwart the learning process. Having a positive attitude about learning and a belief in one's ability to learn are essential. A respected authority on leadership, Erwin Schell, says "When our attitude is right, our abilities reach a maxi-

mum of effectiveness, and good results inevitably follow."[8]

People are more likely to succeed at any task, including learning, if they believe they can. David Schwartz, an expert on motivation, states, "Belief–strong belief– triggers the mind to figuring ways and means and how-to."[9]

Making an Effort

Effort is another key ingredient for successful learning. Persons with disabilities accomplish tasks that seem impossible through practice and hard work. Mendler states that success depends more on effort than ability.[2] People who rely on AAC technologies know this to be true because, despite the effort it takes to communicate a simple thought, if we try hard enough, we can generally succeed. The same principle applies to learning: If we try hard enough, we can succeed.

Strategies for Learning

Devising ways to learn is essential, especially since some people who rely on AAC may have difficulty learning through traditional methods. With some thought, individuals can usually discover effective modes of learning. For example, a person who relies on AAC and has a reading disability or finds turning pages difficult may decide that television news, documentaries and related programming are the best sources of information. (A discriminating viewer can gain a lot of useful and interesting information from television.) This individual may also discover the joy of intellectual exploration by

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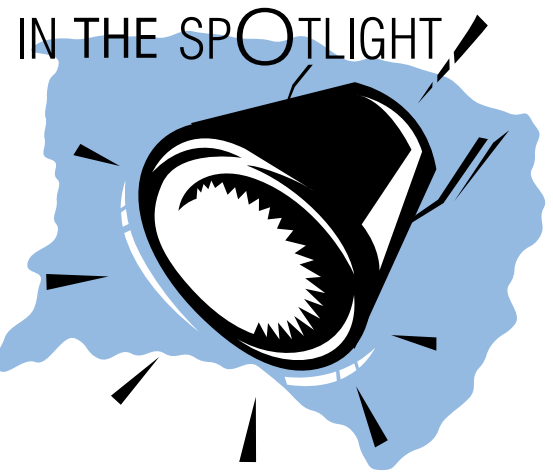
listening to talking books, which are now readily available to everyone. Watching video documentaries and surfing the World Wide Web may also serve as viable ways to access and absorb information.

In addition to finding the best avenues for learning, a self-motivated learner needs to consider his or her personal learning styles and preferences. For example, I have a "mechanical mind." Therefore, when I was teaching myself computer programming, I pretended there were little men running around inside my computer pulling levers, stuffing data into pigeon holes and flipping switches. This mental analogy helped me master new skills.

Summary

Learning on one's own is fun, challenging and rewarding. For those of us with communication disabilities, a life-long habit of learning will increase our knowledge, and this knowledge will enable us to cultivate more interests, be more worldly and, ultimately, exert more control over our lives. AS

Learning from Role Mod

One of the ways we learn is by observing other people. Through such observations, we acquire skills, knowledge and even philosophies. This article focuses on how individuals learn by observing and following the examples of role models.

Role Models

A role model is someone in a specific social or professional position who serves as an example. There may be, for instance, an author whose writing style we particularly notice. Since we admire her style, we may try to imitate it when we write. Through this imitation, we are making this author a role model for writing.

A variety of role models serve through different life stages and for different situations. In school, a student may notice that a classmate has an especially efficient way of preparing for tests. After observing his study methods more closely, the student may adopt his system for exam preparation, thereby adopting him as a role model for exam preparation.

Or, someone may observe and admire how a friend programs his AAC device to grasp the attention of his listeners. Again, that person may begin to emulate this friend as a role model by duplicating his communication techniques.

My Assistive Technology Role Model

As an individual with complex communication needs and physical disabilities who enjoys exploiting technology, I have designed equipment and devised ways to help me perform certain tasks. In my capacity as an inventor and problem solver, my primary role model is Gregg

Friends and Relations

Vanderheiden, who directs the Trace Research and Development Center at the University of Wisconsin.

I met Dr. Vanderheiden in 1975 when he gave a seminar at my local Cerebral Palsy Center. Dr. Vanderheiden was demonstrating the AutoCom, a high-tech AAC device that he developed. Being the only person with complex communication needs, I was allowed to use the AutoCom throughout the entire seminar.

This afforded me a means of communication and illustrated the AutoCom's effectiveness as a communication aid to everyone.

The AutoCom's performance impressed me. For the first time ever, I was able to type whole words with just one or two keystrokes. The way this word retrieval capability increased my communication rate fascinated me.
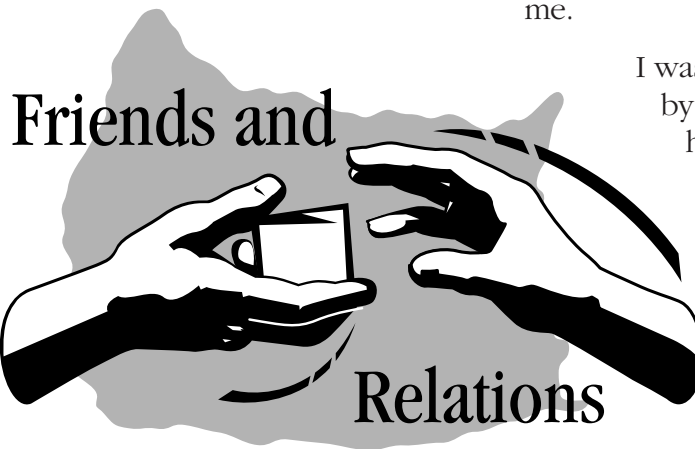
I was equally captivated by Dr. Vanderheiden himself. His enthusiastic explanations of how current and future technologies could be employed to assist people with disabilities kindled my imagination.

After the seminar, I began following Dr. Vanderheiden's work by reading his newsletters and published articles. The more I read, the more intrigued I became by the way he created effective assistive technologies. First, he would recognize specific problems that people with disabilities were facing, and then he would develop solutions using technologies. I also admired Dr. Vanderheiden's philosophy that ergonomic considerations are

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essential when designing and developing assistive devices.

Following the Model

As soon as I bought my first Apple II computer and learned computer programming, I began to mimic Dr. Vanderheiden's approach to solving problems. First I analyzed the problems I had. Then I used my programming skills to solve or mitigate these problems. Following this strategy, I have developed numerous computer programs that have made my life significantly easier and more productive.

Former newscaster Ted Koppel is also one of my role models because I appreciate his ability to examine all aspects of an issue before drawing a conclusion or forming an opinion.

Choosing a Role Model

While parents, teachers and peers traditionally serve as role models, people we may not know personally can be role models too. Thus, when we see a person on TV who has admirable qualities that capture our attention or read about someone who is making a difference in the world, we might consider making him or her a role model for a particular component of life. Such a person could be a sports figure, movie star, broadcaster, author, businessperson or politician.

These persons may (or may not) have other characteristics to admire.

We can try to familiarize ourselves with the person as much as possible by looking for scheduled TV appearances, searching the World Wide Web for their names or visiting an online bookstore such as www.amazon.com to see if they have written any books or had books written about them.

The Benefits

What I have learned from my role models has made me grow intellectually. I am a better problem solver because of what I learned from Dr. Vanderheiden. Influenced by Ted Koppel's objectivity, I have also developed the wise practice of considering all sides of important issues before forming opinions. Role models can expand our knowledge and enhance our lives. AS

Who Could Be a Role Model?

- Family member
- Relative
- Ancestor
- Teacher
- Professor
- Coach
- Athlete
- Sports figure
- Newscaster
- Television personality
- Character in a story
- Writer
- Artist
- Actor
- Musician
- Inventor
- Entrepreneur
- Employer
- Employee
- Coworker
- Peer
- Friend
- ACOLUGer
- Neighbor
- Philosopher
- Religious figure
- Character from history
- Politician

Learning in Cyberspace

by Bill Geluso

Some 15 years ago, my parents and I drove to Omaha, Nebraska to visit my brother Ken and his family. One of the highlights of the trip was when Ken brought me to his office at the University of Nebraska, turned on his computer and showed me a rather new phenomenon called the Internet. I was amazed. Ken asked me to randomly choose a subject that I would like to know more about. Then he typed a few keywords into the search engine and pressed "Go." Within seconds, a substantial list of Web pages containing information on the subject I chose appeared on the screen.

After that brief demonstration, I began to speculate about the Internet's potential for becoming a magnificent gateway to knowledge, especially for individuals with physical disabilities. My past speculations are today's reality. Using the Internet is by far the most efficient and effective way I have of procuring information.

The World Wide Web
The most widely used public resource on the Internet is the World Wide Web (the Web). I think of the Web as a tremendous library containing endless numbers of documents, images and sounds. Using this "library" with a modern Web browser, such as Safari, Firefox or Internet Ex-plorer, makes learning about things easy and fun. For example, if I want to read the online bulletin for assistive technology called ConnSENSE, I type www.connsensebulletin.com into my browser and the bulletin instantly appears on my screen.

Search Engines
What makes the Web an extremely productive research tool, however, are search engines, such as Google and Yahoo. Search engines can examine millions of Web sites for keywords. For instance, if I am looking for information on communication devices that feature word prediction, I type "AAC device" and "word prediction" into the search box and the search engine presents a list of Web pages that may pertain to communication devices with word prediction capabilities.

Many search engines have a "Search Tips" tab that, when clicked, displays instructions on how to conduct searches by including plus signs, minus signs and quotation marks with keywords and phrases. Using punctuation in searches enables me to enjoy a high success rate in locating the information I want.

Discussion Groups
In addition to looking up information on the Web, it is possible to obtain and share knowledge with other Internet users by participating in a discussion group on a particular topic. Discussion groups fall under several categories, depending upon where they exist on the Internet. For example, Yahoo groups are called forums. In contrast, discussion groups called newsgroups can be accessed through another type of Internet resource called Usenet.

I enjoy belonging to several newsgroups because it is a great way to obtain and share specific information. For instance, before buying my first compact disc player, I wanted to be sure that digital music would satisfy my discriminating ear. Rather than enduring the hassle of getting to a store and trying to communicate my questions to a not-so-knowledgeable salesperson, I posted questions in a newsgroup for high-end audio equipment.

Williams Thrives on Evolution of AAC

By Rebecca Barbush, AAC-RERC Writers Brigade

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Michael B. Williams, an informative speaker for AAC, uses his passion to mentor, and advocate for the Disability Rights Movement. His impact in the field of AAC still resonates from a pivotal speaking engagement at the 2005 American Speech-Language Hearing Association Convention in San Diego where he was invited to deliver the Edwin & Esther Prentke AAC Distinguished Lecture. In San Francisco on April 1, 2006, Mr. Williams delivered a similar lecture, *How Far We've Come, How Far We've Got to Go: Tales from the AAC Trenches* at the California State Speech and Hearing Association conference in San Francisco. A video of the presentation now appears as one of the Rehabilitation Engineering Research Center on Communication Enhancement Web cast series, available online at www.aac-rerc.com. A DVD version was released by Augmentative Communication, Inc. With wide distribution of the media, Williams' *Tales* continue to reach speech pathologists, speech therapy students, professionals in AAC research and development, and individuals who rely on AAC and their families.

In the Web cast, Michael B. Williams turns an autobiographical lecture into an entertaining one-man act. The format on the speech proves his personal examples that show the evolution of AAC. He grew up alongside the development of voice output communication aids. He reminisces on the advantages of speech generating devices over the air writing and letterboards of his youth. Speech synthesizers give him the power to broadcast his messages, whether over the telephone or to large audiences. He notes that, as technology became more accessible, he grew increasingly more active in the community. Technology has enabled him to find freedoms by supporting his dynamic oration.

As Williams tells his tale on the Web cast and DVD, his satirical sense of humor shines. He embellishes the lecture with jokes and parodies. Williams communicates with the audience eloquently, revealing his appreciation for self-expression and his ear for music. He shows how far the technology has come by cleverly switching from one voice to another using his current communication device. He uses these features to imitate characters in his life and reproduce their tone of voice.

While tracing advancements in technology, Williams effectively captures the coming of age of synthetic speech. He plays samples of messages spoken on previous AAC technologies in comparison with current offerings.

Michael B. Williams compares the growth of technology to his personal accomplishments in the field of communication. The multimedia presentation includes a slideshow which tracks his story: He was the first severely disabled person to attend Pasadena's John Muir High School in the 1950s; he earned an AB degree in English from Pasadena City College and Occidental College in 1961; and a Masters of Library and Information Studies from the University of California in the mid 1980s. Williams started a career writing for advocacy publications and broadcasting news for KPFK radio. Having established himself as a professional in disability movements, in 1998 Mr. Williams joined the AAC-RERC to further improve communication technology.

For more information about Michael B. Williams' Web cast, *How Far We've Come, How Far We've Got to Go: Tales from the AAC Trenches,* go to http://www.aac-rerc.com/aac-rerc.htm. The lecture is also available on DVD from Augmentative Communication, Inc. **A
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10. ACOLUG is managed by the Institute on Disabilities at Temple University and funded in part by the AAC-RERC. To learn more about the ACOLUG LISTSERV, including how to subscribe, visit www.disabilities.temple.edu/programs/assistive/acolug/

Within 24 hours, several members of the newsgroup, who seemed like experts on the subject, had written answers and opinions that helped me make an intelligent decision. (I have met some knowledgeable people in these newsgroups who share my various interests. Some have become my pen pals.)

A LISTSERV discussion group is much like a newsgroup, only messages are sent and received via e-mail. Probably the most pertinent LISTSERV for people who rely on AAC is ACOLUG.[10]

A Word of Caution

Since the Internet is not a regulated medium, the information obtained through it may not always be accurate. Therefore, I always try to verify information by searching several different Web sites.

A Phenomenal Resource

Today's Internet is an extremely valuable learning resource for people who rely on AAC technologies. Search engines can sift through huge amounts of information on the Web in a flash, and discussion groups make it possible to correspond with knowledgeable individuals on practically any subject. Twenty years ago, I had

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to ask someone to go to the library and rummage through reference material for information I needed. Today, using the Internet and the Web, I am able to retrieve most information independently within seconds. ᴀS