Inclusion Tools: Rosetta Stone—a Visual Way to Teach Language

By Merry Fore and Pamela Corley

In too many classrooms, there is no expectation that learners with special needs will be able to learn and develop functional reading and writing skills. This is especially true for children with complex communication needs (CCN). Teachers in public schools trying to teach children with disabilities who require assistive technologies to read and write in an inclusive setting may find the task overwhelming. One of the biggest problems for teachers and therapists working with these students is the lack of ready-made instructional and assessment materials that can be used by learners with a range of physical and cognitive disabilities. Let's face it: adapting materials so that learners with CCN can be actively involved is a tremendous amount of work. Even with the best intentions, there is just not enough time in the day for teachers to keep up with the general education curriculum and adapt the materials for students with more significant disabilities, like those who cannot use pen and paper or who cannot speak. While teachers of general education students have pre-made activities (such as exercises, worksheets or other assessment materials) that can easily be downloaded or photocopied for their students to use, teachers of children with disabilities often have to make their own, which is prohibitively time-consuming. Teachers of general education students can find out how learners are progressing by asking questions and receiving oral responses. Teachers of children with CCN cannot rely on oral responses, since a great number of these students cannot speak. In many cases, teachers of individuals with significant disabilities don't even follow a specific reading or writing curriculum. This scenario provides inconsistent outcomes for learners who are most at risk for learning failure.

So, do we just give up on teaching literacy skills for these learners? Of course not! We have to get creative and figure out how we can use ready-made programs and resources in innovative new ways. This is the first in a two-part series written to share ideas that work in the inclusive classroom and spark your creativity to think differently about resources you may already have available or may easily acquire. This article will focus on the use of the language learning software Rosetta Stone, not to learn a foreign language, but to teach and assess language in students with CCN. These learners often have gaps in their language and literacy development, but it is very difficult to find the gaps or "splinter skills." Many times teachers end up teaching the same things over and over again because they don't know when to move on to the next level due to lack of proper assessment materials. A ready-made systematic language instruction program can help us find the gaps and provide a way for learners who cannot be assessed in traditional ways to demonstrate their literacy skills.

We are not affiliated in any way with Rosetta Stone, but we just ordered a demo, wondering if perhaps the program could be used in a different way than the designers originally intended, desperate for a tool that we didn't have to design and create ourselves. Once we started using the demo and then the full program, we realized its potential. The more we have used it, the more impressed we have been. Here are some unique features that we feel make Rosetta Stone a great fit as a language-teaching tool for learners with disabilities such as autism and cerebral palsy.

- **First, it is engaging, always a plus**!

It is an interactive, multimedia computer program that incorporates words, sounds and imagery. Instead of the clip-art we see so often in programs designed for students with disabilities, Rosetta Stone matches spoken words and text with photographic

images from real life. The program teaches language by the association of words and meaning derived from images. It presents a series of vivid photos, and a word or sentence describing the photo is spoken while the text is displayed on the screen. The learner then selects which picture goes with that word or sentence. The learner advances using language they've learned and clues from new images. Learners constantly interact with the program to confirm their intuition and check what they have learned. If they're right, they proceed. If not, they get another chance. It starts simply and builds systematically to the more complex.

The clear, colorful photographs are engaging for all kids, but can be especially appropriate for kids on the autism spectrum who are often visual learners. Dr. Temple Grandin, a prominent author and speaker with autism, wrote: "*I think in pictures*. Words are like a second language to me. I translate both spoken and written words into full-color movies, complete with sound, which run like a VCR tape in my head. When somebody speaks to me, his words are instantly translated into pictures."

- **Second, it is accessible, a big issue for this population.**

It is ideal for students who do not have the motor skills to do traditional worksheets and grammatical exercises with pen and paper. Also, the layout of the program lends itself for use by learners who do not have the motor skills to use a computer mouse and need a touch screen.

The core components of this program are:

- Listening: This is a critical skill, but especially difficult for non-speaking students (e.g. the difference between the sounds "king" and "ning" as in "cooking" and "running.") Some of the activity screens in Rosetta Stone are designed to specifically focus on listening skills. They do not have text. The words are

spoken and the learner chooses the picture that best matches the phrase heard.

- Writing: The writing portion can be accomplished by typing a word or sentence using a traditional keyboard or by using the mouse to click the onscreen keyboard.   Writing words this way is much easier for learners who struggle with handwriting, since they can concentrate on the function of the letters and words and don't have the extra work of trying to write the letters. Users who do not have the motor skills to use a traditional keyboard or a mouse can use their AAC device as input instead. Many dynamic screen devices (such as those manufactured by DynaVox Technologies and Prentke Romich Company) can be connected for either cabled or wireless access via the USB port. Using the device for writing gives AAC device users great practice learning the vocabulary in their devices, as well.

- Reading: The vivid photos and realistic situation portrayals make reading more interesting. Visual supports can be helpful for students learning to read and write, especially students on the autism spectrum. Some screens in Rosetta Stone are designed to reinforce reading skills. The written word or phrase appears, but is not spoken, and the learner must discern which photo best matches the phrase. Some screens use text as a prompt at the top of the screen to be matched with pictures or text boxes below. For example, one screen might have a prompt, "The dog is swimming." There are four pictures, one of a dog swimming in the water, a close-up of the face of a dog, a close-up photo of a horse, and a horse running. Just knowing the word "dog" isn't enough because there are two pictures of dogs, so the user must also know the word "swimming" to respond correctly.

- Speaking. Wait a minute, isn't that the problem with students with CCN? Why do we say "speaking?" Because this program's sophisticated speech recognition makes it possible for both speaking and non-speaking students to practice "speaking." How does that work, you may wonder? Well, when doing the microphone setup, the user is asked to say ("1,

2, 3, 4, 5") in a normal speaking voice so that the program can recognize the voice. For students who use an augmentative communication device, put the microphone headset near the speaker on the device and have the device "speak" the numbers. You even have the option to specify whether it is a male or female adult voice or a child's voice and to specify the speech precision level (i.e. difficult, normal or easy). Sometimes you have to play around with these settings to achieve the optimum level for AAC device users. Once the microphone setup has been done, the AAC device user would then use the device to produce words and phrases in the Speech Practice portion of the program. To make the "speech" of the AAC device easier for the program to distinguish, we have a couple of suggestions. 1) a high-quality microphone is needed, like the USB microphone headset that is included when you purchase the Rosetta Stone program. 2) minimize background noise.

- Vocabulary: Many times teachers only use single meaning symbols to teach simple language concepts to special needs students. In Rosetta Stone, vocabulary words are visually presented in authentic contexts and real life situations. For example, in teaching the word "ladder," a photo of men in work clothes carrying a ladder appears and the sentence "The men have a ladder." is presented. Then, a photo is shown of a man reaching for light fixtures on the ceiling to change the bulbs, but clearly cannot reach them. This sentence is presented as a prompt: "The man needs a ladder." Also most helpful for students with autism is the fact that when a photo is presented to teach a specific word, several different photos of the same item are shown. For example, when teaching the word "boy," photos of many different boys are presented, and when teaching the word "egg" the program shows a photo of a raw egg in the shell as well as cooked eggs on a plate.

- Grammar: Rosetta Stone teaches grammar concepts such as subject-verb agreement in naturally-occurring contexts. For example, a photo of a girl with dirty hands in front of a sink is shown with the prompt "She _____ soap." The choices presented are need/needs. Or a photo of a couple in a

market buying vegetables is shown with the prompt "_____ buying vegetables." The choices presented are they/they're/their.

- Pronunciation: This feature of the program helps kids with natural speech "breakdown" words. We have not found a way for this to work for AAC device users.

How do these core components fit in with literacy research? "Reading, writing, speaking and listening abilities develop concurrently and interrelatedly, rather than sequentially." (Koppenhaver et al., 1991; Teale & Sulzby, 1986).

- **Provides core vocabulary practice for AAC device users.**

As a side benefit, Rosetta Stone is also a great tool to help students who use AAC devices learn and practice the use of core vocabulary. The term "core vocabulary" refers to those top 100 words that account for about 50% of the words we use every day. We have found that the language taught by Rosetta Stone almost perfectly coincides with core vocabulary, and that was an exciting extra discovery. AAC device users need lots of practice using these core words and learning the motor plan for accessing them on their device if they are to be effective communicators. Since Rosetta Stone was designed as a language-learning software, and anyone trying to master a foreign language must use the new words they are learning over and over again, it provides that practice.

"What a fabulous idea to use Rosetta Stone software to help students with severe communication disabilities enhance their language and literacy skills. Rosetta Stone can easily be incorporated into curriculum by educators and SLP's." Nancy L. Inman, M.A.T., CCC-SLP

The school version of the program offers teacher and administrative tools to view students' progression through lessons, note potential areas of additional focus, and access easy-to-read

reports and graphs. A curriculum editor lets teachers customize courses for individual or classroom development needs. Rosetta Stone Homeschool offers several course options and a full- year lesson plan complete with lessons, worksheets, quizzes, tests and answer keys, and is easy for parents to use. A mother who is using Rosetta Stone to help her non-verbal son with autism and auditory processing deficits learn language concepts reports the following about her experience:

"Using Rosetta Stone, I have been able to quickly determine my son's areas of weakness and provide him with direct instruction and activities in those areas. I can print out the words targeted in each lesson and pre-teach them in preparation for a lesson, or use them to generalize. He is successfully advancing and increasing his auditory comprehension skills, word recognition skills, and reading skills. For example, at first he had difficulty discriminating between the words "woman" and "women," but the lessons and practice in Rosetta Stone helped him to master those words. Also, I appreciate the value of the realistic photos in Rosetta Stone. I have realized that, although my son could match a written word to a picture symbol on a worksheet, he was not generalizing this knowledge to his real life experiences. Completing the Rosetta Stone lessons that are rich with actual photo representations of language and concepts has helped my son to improve his understanding of words in his daily life."

This is just one example of how we can utilize resources and programs in novel ways to give students with disabilities the extra help they sometimes need to be successful. Our next article in this series will discuss ideas for combining readily-available resources and programs to quickly and easily create literacy lessons for your students.