

Supporting AAC Through Therapy Materials, Professional Development and Data Collection

“

Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is most important.

~Bill Gates

”

The growth in computer-based technology over the past 25 years has probably been more rapid than that of any other technologies we can think of. Cars are still pretty much as they were when Henry Ford had them coming off an assembly line; washing machines still just take clothes and make them clean; a pencil is still a pencil; and Velcro® may come in a variety of sizes and colors but it's still what it was when it was invented in 1948.

The rapidity of evolution in consumer-orientated computer technology has engendered a sense of wonder

and awe in most people, to the point that we have all become enchanted, in the true sense of the word, by not only what it currently can do but also by what it can offer in the future. All of us working in the field of assistive technology are prone to suffering at times from bouts of technophilia, a love of all things technological and a belief in its power to do good.

The danger of over-enthusiasm about technology solutions is that it can undermine a very simple truth: that human support is an essential component of technological success.

Much as budget holders may want to replace an expensive professional with a \$200 tablet, the reality is that without support, such cheap “solutions” can turn out to be expensive wastes.

In the field of AAC, practitioners over the years have discovered that success with a client is more achievable with good and consistent human support. Manufacturers and suppliers of AAC solutions have, over the years, become more than just builders of boxes, but long-term partners in supporting the professionals by helping



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So what do we need to ask ourselves in order to become good supporters of a client? What are the keys to support? Here are three questions to consider:

1. Where is my client now in relation to their development of AAC skills?
2. What can I do to help my client move forward?
3. How do I learn new skills to help me improve my proficiency?

The Prentke Romich Company has been developing new resources to help practitioners answer these three questions in the form of new services.

DATA VISUALIZATION

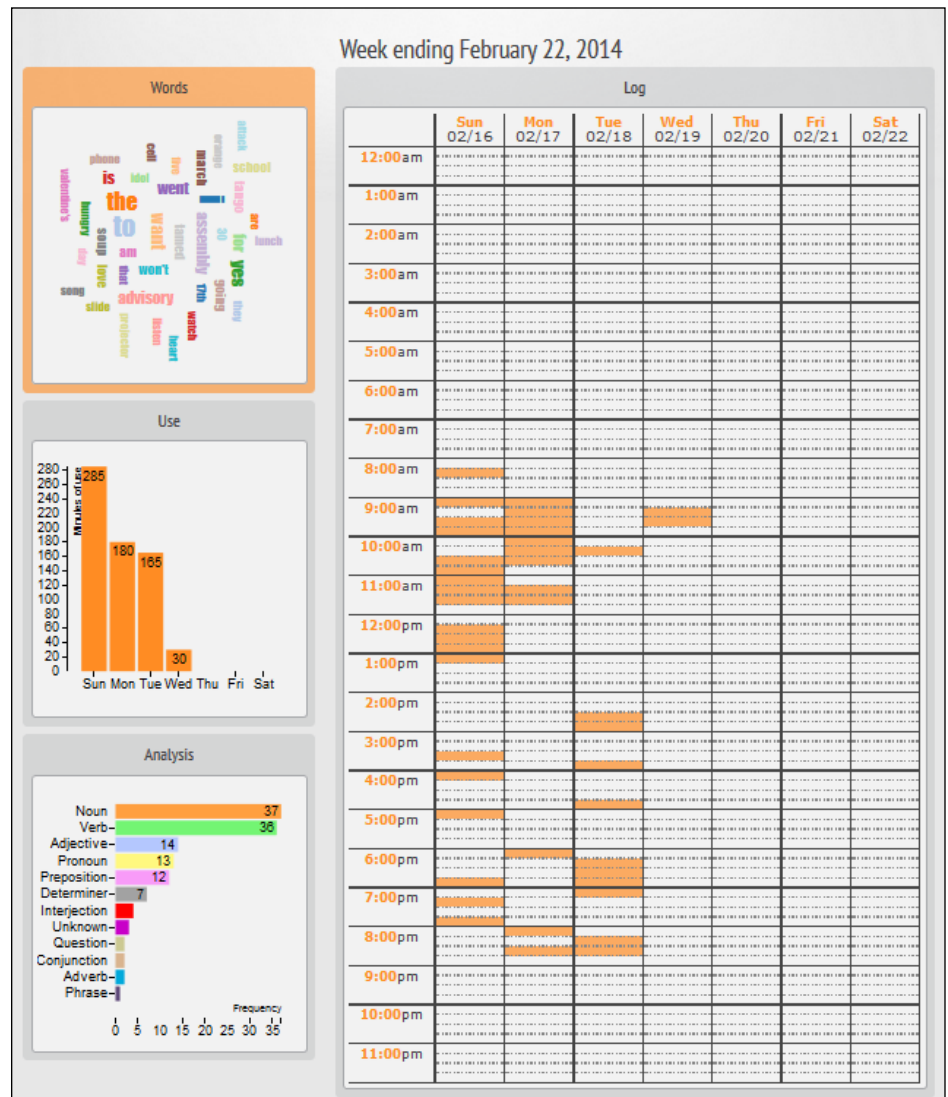
The first of these uses something called automated data logging (ADL) to create simple, graphical representations of how an individual is using a PRC speech generating device. A number of SGDs have the capacity to log how someone uses a device, but this new data visualization service can turn lists of coded letters and numbers into attractive, useful and interactive reports via a Web browser.

All SGD data logs help to identify three pieces of information: what is said, when and how. By tracking these three simple elements over long periods of time, it is possible to discover patterns of use that can form the basis for future structured intervention plans.

There are limitations to such data, which include:

- Absence of input from communication partners
- Absence of any multi-modal elements
- Absence of social/geographical context
- Need to mark explicitly if someone else is using the device for modeling/teaching.

However, given that these limita-



Data visualization summary graphic.

tions are taken into account, it is still possible to use the information in a fruitful and constructive way. For example, one simple measure of AAC use is to count words used, which can give an idea of an individual's knowledge of the lexicon available to them in their AAC system. Another is to measure the number of times a device is used during a specified time period and thus get a measure of when a client is able to be more productive. A third may be to look at the type of words being used and determine the

spread of different parts of speech.

Pioneering work in supplementing simple data logging with contextual support tracking has been undertaken by the Rehabilitation Engineering Research Center (RERC) (c.f. Higginbotham and Engelke, 2013), which could lead to more comprehensive methods for measuring aided communication.

Once data has been collected, the findings have to be processed, either manually or by an automated process. These include SALT (Miller and Chapman, 1983), AQUA (Leshner, Moulton,

Rinkus, and Higginbotham, 2000), PERT (Romich, Hill, Seagull, Ahmad, Strecker, & Gotla, 2003) and QUAD (Cross, 2010).

The PRC system, called the Realize Language™ service, allows for the uploading of a log file to a secure server, where it is parsed in a number of ways to as to present summary data in the form of a visual dashboard to a clinician. The system does not provide any interpretation, but rather makes the data easier to inspect and investigate. For example, a basic weekly calendar arrangement in the center of the screen shows the time periods when a client's AAC device is being used and the time periods when it is being used more or less than any other. By clicking on any quarter-hour time period on the calendar, the AAC practitioner can see, in a second window, the actual words being used. There is also data available on the time period between words, which gives an indication of communication rate.

The nearest the system comes to making comparisons is with a feature that matches the words used by the client against a database of high frequency words found across a number of AAC vocabulary studies (e.g. Balandin and Iacono, 1999; Banajee, DiCarlo & Stricklin, 2003; Clendon, Strum & Cali, 2013; and Fried-Oaken and More, 1992).

AAC LANGUAGE LAB

The second service PRC has developed is called the AAC Language Lab, which is an online collection of language teaching resources. The Lab is a comprehensive Web resource designed to support language development and promote communication through augmentative and alternative communication systems. The updated version features new materials specifically designed for speech language pathologists (SLPs), special

The screenshot shows the AAC Language Lab website. At the top, there's a navigation bar with links: Home, About, Lesson Plans, Language Stages, Resources, Blog, and Applab. Below this, the main content area is titled 'SLP' and 'Clinical Lesson Plans'. It features a sidebar with 'Language Stages' (Stage 1 to Stage 6) and 'Mobile Lesson Plans'. The main content area is titled 'Directing Activities' and includes sections for 'Expected Outcome', 'Purpose', 'Vocabulary' (with words like drink, play, work, eat, read, go, make, sleep), 'Language Skill' (Producing one word utterances), and 'Objectives'. There's also a 'Save or Print Lesson Plan' button and a section for 'Supplemental Materials'.

AAC Language Lab Screen Shot

educators and parents.

While continuing to support clinical practice, the site includes tools that reach beyond clinical environments to support communication and language development at school, work and home. SLPs and educators now have access to a multitude of clinical and classroom lesson plans aligned to Common Core Standards. Mobile lesson plans focused on popular apps and more than seventy books are available.

The parent section provides tools to help them encourage their child to use their AAC device at home. "Can-Do Cards" feature fun and motivational activities for the whole family, and "Communication Partner Cards" enable anyone who interacts with a child

to support their developing communication skills.

Although the Lab was created by PRC and has some materials specific to the PRC devices, many of the resources are "device agnostic" and target vocabulary that can be used across AAC modalities. There are three basic types of lesson plans: clinical, classroom and mobile.

Clinical lesson plans are based on specific expressive and receptive language objectives. They are designed to guide a student through developmental milestones as they improve their functional and academic communication skills, using their preferred expressive method (i.e. verbal speech, voice output communication device, etc.). The plans are organized

and grouped by language stage and each lesson contains:

- a target language outcome
- a short list of vocabulary words
- suggested objectives
- ideas for teaching activities
- links to Smart Charts with Unity icons
- Common Core Standards by grade level

Classroom Lesson Plans are designed to guide a teacher through the steps to teach specific functional skills during structured and unstructured academic activities. All lessons reference the Common Core Standards and are provided for all grade levels (K-12). The plans are organized by language concepts or stage: beginner, intermediate or advanced, and are also grouped by themes.

Mobile lesson plans are designed for a variety of language levels, using popular education apps. The focus of each lesson plan is to show different ways the apps can be used to help a student become a better communicator. Lesson plans are divided according to skill level, and activities can be adjusted to address the needs of each student. Common Core Standards by grade level are referenced in each lesson plan, and like Classroom Lesson Plans, they are organized by language stages beginner, intermediate or advanced.

Finally, a “Let’s Talk AAC” blog features tips on implementation, AAC success stories and real-life stories from people who are using communication aids on a daily basis.

TRAINING AND PROFESSIONAL DEVELOPMENT

The third component of the keys to support list, “How do I learn new skills,” is addressed in the Training Program, which offers two types of education: basic AAC device operations, focused on the mechanics of programming and modifying technol-



Training and product development.

ogy, and a professional development course that focus on the practice of AAC. Content is delivered in a variety of ways:

- Self-study options that can be taken at any time
- YouTube videos
- Scheduled live online trainings
- Face-to-face regional trainings
- Special interest focused course, e.g., “Strategies for Access and Language Intervention,” which focuses specifically on the needs of individuals with complex access issues.

The purpose of the Professional Development courses is to provide specific and detailed content related to particular aspects of AAC. PRC will also host third-party presentations from individuals who have specialist knowledge that they want to share and, in fact, encourage suggestion from potential presenters.

SUMMARY

The available technology that acts as a platform on which to distribute AAC systems has been, and always will be, subject to frequent change, but the need for support remains constant, and all of us in the AAC field can have significant impact on the

success of our clients, provided we apply the keys to success of making sure we know where we are, what we need to do to move our clients on and what we have to do to improve our own knowledge and skill.

PRODUCT DETAILS

AAC Language Lab: <http://www.aaclanguagelab.com>

Free and Annual Subscription \$84

Training and Professional: <http://www.prentrom.com/training>

Free and fee-based ranging from \$35 to \$49

Data Visualization: <http://www.re-alizelanguage.com>

Annual Subscription \$84 for up to 10 clients.

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