

Designing And Using Assessment Protocols In The Vantage (C) Communication Aid

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The Vantage communication aid includes software to monitor language activity. The same software can be used to record the results of assessment protocols. This presentation demonstrates how to do this. The data can then be saved as hard copy.

Language Activity Monitoring

A key component of determining the efficacy of any AAC intervention program is to have good, objective performance data. With high technology devices, software can be used to track how an individual uses a piece of technology. This process of tracking and recording how an individual uses a communication aid and the language generated is known as Language Activity Monitoring. The Prentke Romich Company produces devices that use a software-based Language Activity Monitor (LAM). Developed initially with a grant from the National Institute of Health (Romich & Hill, 1999, 2000; Romich, Hill & Spaeth, 2001) the LAM simply logs events within a communication aid. So, if a client activates a key, the date, time, and content of the event are recorded. This data can then be analyzed directly by a clinician or used with another piece of language analysis software, such as Systematic Analysis of Language Transcripts (SALT) (Miller & Chapman, 1984) or the Augmentative Communication Quantitative Analysis (ACQUA) (Leshner, Rinkus, Moulton, & Higginbotham, 2000).

In the Vantage communication aid, data logging is activated by selecting a special menu and simply hitting a toggle key that says "Data logging on/off." Logged data can then be either sent to a computer or cleared from the device. This transfer of information is achieved by either using a null modem cable (supplied as standard with the device) or infra-red transfer via a second piece of hardware called the Infra-red Receiver (IRR),

Simple Assessment Protocols

As a standard software component, the Vantage includes two simple assessment protocols that can help a clinician (a) evaluate how accurately a client can access different key sizes and range of movement, and (b) how effectively an individual can comprehend pictures on the basis of noun, verb, and super-ordinate category association.

In the former case, an overlay of 4 large keys is presented and the client is asked to select the target image. On selecting the image, the screen changes to place the target in a new location. After successive selections, the target image becomes smaller in an 8-location grid, then a 15-location grid, and finally a 45-key grid.

In the second protocol, a picture, for example, of an APPLE is presented on-screen along with other target images. The client is then asked “Find the apple,” “Find the one you eat,” or “Find the fruit.”

The results of these can be checked off manually by the assessor, using a scoring sheet also supplied with the device. However, it is technically possible to automate this process using the feature of the in-built LAM software. And if this can be done for these protocols, then it could also be done for others.

General Protocol Logging Procedure

The Vantage software allows a clinician to make modifications to the way in which it behaves. One strategy is to build what is typically called a “macro” – a series of sequential events that can be stored as a single execution. For example, to turn on the LAM in the Vantage requires the clinician to press a key to get into the programming area, then select a second key to choose the option to work on vocabulary, then a third keystroke to actually turn ON the logging. However, to simplify this process, a macro can be written that can be executed by a single keystroke. The actual macro looks like this;

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<REVIEW-VOCABULARY-MENU><ACTIVATE-KEY(R1,C8)><OK>
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Running this macro will turn on the LAM facility so that all events that follow will be logged. At the end of the evaluation, another macro can be constructed that turns OFF the logging. Finally, one more macro will automatically send the collected data to a computer ready for analysis.

Specific details of how this can be applied to the default Assessment Protocols will be illustrated during the session, the actual macros being made available as tools for clinical development.

Discussion Of Possible Applications

The general logging procedure lends itself to the development of future evaluation tools. The Vantage has 6 independent areas, each of which can be loaded into from a computer. Thus, a new assessment protocol designed for a specific client group can be shared among clinicians. And because these protocols are simply software, they can be made available on a web site, making for easy distribution.

In summary, the focus of this session is to demonstrate how the data collection facility built into the communication aid can also be used to provide assessment data in a specific and more focused way.

References

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