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Making Device Decisions for a Client with Global Aphasia Using an AAC-Aphasia Assessment Protocol

Laura H. Lasseter and Joanne P. Lasker
Florida State University

Abstract

This study illustrates components of an assessment protocol (Lasker, Garrett, & Fox, 2006) designed to determine whether a person with severe global aphasia can learn to use AAC techniques and devices for the purposes of communication. The clinician implemented a systematic evaluation process to explore the client's potential for using the following communication strategies: unaided modalities; partner-dependent conversation strategies; external stored information (i.e. a communication notebook); holophrastic messages on a static display voice-output device; and holophrastic messages stored on a dynamic display device. Based on the AAC-Aphasia Classification system developed by Lasker & Garrett (2005a), this individual presented as a contextual choice communicator. Results are discussed in terms of treatment planning and the device acquisition process.

Introduction and Purpose

The communication needs of people with global aphasia are varied and complex, posing challenges for the typical speech-language clinician. Natural speech alone rarely meets the communication needs of clients with severe, chronic aphasia, and clinicians sometimes explore AAC alternatives. Some family members and clinicians assume that "AAC" always means a voice-output device; however, not every communicator with aphasia benefits from a voice-output communication system. In fact, the process of assessing a person with aphasia and determining the most appropriate AAC approach involves careful observation, organized testing, and multiple systems trials (Lasker, Garrett, & Fox, in press).

The AAC-Aphasia Classification System (Garrett & Lasker, 2005a) proposes a two-tier classification system to describe communicators with aphasia who can learn to use AAC strategies – partner dependent and independent communicators. The primary difference between dependent and independent communicators is that partner-dependent communicators rely upon partners to cue, support, create, and co-construct messages, whereas independent communicators retrieve and encode messages on their own. In determining what sort of AAC technology to recommend for a particular client, this classification system can help clinicians predict who is likely to become a successful user of AAC approaches. For example, a partner-dependent

communicator who cannot fully comprehend representational symbols or written text and who does not think to look at external message systems in conversational situations, is unlikely to benefit substantially from a dynamic-display device with symbolic and orthographic message encoding.

Lasker, Garrett, and Fox describe an assessment process that helps clinicians achieve two related goals: (1) to classify a client with aphasia according to communicator type and (2) to select appropriate treatment strategies and goals. The current study illustrates the assessment process for a client with global aphasia. In particular, clinicians investigated how the use of a systematic assessment might help determine which sort of AAC device could be useful for a client with severe aphasia.

Methods and Results

The participant in this study was a 65-year-old man with severe global aphasia. He had a single, left CVA 1-year prior to this study; his *Western Aphasia Battery Aphasia Quotient* was 17.9 (out of 100). He participated in steps 1-4 of the assessment protocol. All sessions were videotaped. All sessions were conducted in the client's home.

Clinicians employed the assessment process described by Lasker, Garrett, & Fox (2006). It consists of a series of 5 questions with associated assessment tasks and activities. In general, a dynamic assessment approach was employed in which all activities were attempted, results were documented, and then clinicians determined how much cueing or teaching was required for the client to be successful with a particular technique.

Question 1: Unaided Modalities – Does the person with aphasia use strategies other than natural speech (such as writing, gesture, or drawing) to augment or substitute for ineffective spoken messages? If they do not, can they be taught to do so?

To answer this question, clinicians employed a barrier task or modified PACE activity in which the person with aphasia was asked to communicate ideas about a picture to a partner who could not see the picture. In this case, the client with aphasia demonstrated extreme difficulty (0 out of 3 attempts) using unaided communication strategies without maximal cueing; with no cueing, he tended to rely solely on unintelligible verbal expressions to try to convey the content of the pictures to his communication partner.

Question 2: Partner Supported Techniques – Does the person with aphasia use partner-supported communication strategies, such as Augmented Input (Garrett & Beukelman, 1992) and the Written Choice Conversation Strategy (Garrett & Beukelman, 1998)? If they do not, can they be taught to do so?

To answer these questions, clinicians engaged the client in personally relevant conversation and documented the client's successful responses with these techniques. In this case, the client clearly benefited from the use of Augmented Input and responded successfully and accurately to 5 of 5 conversational queries using the Written Choice Conversation Strategy.

Question 3: External Stored Information – Does the person with aphasia use external aided strategies, such as pictures in a communication book or a letter board, to communicate messages (Lasker & Garrett, 2006)? If they do not, can they be taught to do so?

To answer these questions, clinicians employed the *Multimodal Communication Screening Test for People with Aphasia (MCST-A; Garrett & Lasker, 2005b)*. The *MCST-A* is administered by presenting each page of a picture stimulus manual to the person with aphasia and then asking him or her to communicate a specific message. The person with aphasia can make a total of three attempts to communicate each item; the first attempt or trial is unsupported. (The *MCST-A* protocol is described in greater detail in Lasker and Garrett, 2006.) In this case, given cues such as repetition and clinician feedback, the client was successfully able to convey 9 out of 10 messages.

Question 4: Stored Messages through Voice-Output Systems – Does the person with aphasia utilize pre-stored whole messages, such as those on a digitized or synthesized voice-output device, to communicate? If they do not, can they be taught to do so?

To answer these questions, the clinicians devised a simple transactional role-play concerning the purchase of gardening supplies. They presented a simple, static-display, digitized device to the client and allowed him to access all of the messages independently. The clinicians then conducted a role-play with the client. The client responded adequately and appropriately on each turn of the role-play (6 of 6 turns), provided all of the items were presented sequentially on the device. If any item was not in a left-right sequence on the device, the client was unable to access it, despite repeated cues and teaching sequences.

The clinicians then assessed whether semantic categorization might help the client locate specific messages. They created a set of overlays on a dynamic display device and asked the client to locate particular conversational messages stored under 4 clearly marked locations. For example, the messages, “I was in the army for many years” and “I worked in the post-office for many years” were stored “under” the button with WORK and a picture of a worker on it. Despite repeated attempts to cue and teach semantic categorization, the client was unable to access any of these messages.

Question 5: Generative Messages through Voice-Output Systems – Does the person with aphasia generate novel communicative messages using letters, photographs, pictures, or symbols? If they do not, can they be taught to do so?

Question 5 was not explored in this assessment, due to the fact that the client was clearly not able to generate or formulate messages independently.

Discussion and Implications

The client was considered a contextual communicator according to the AAC-Aphasia Classification System (Lasker & Garrett, 2005a). He lacked the linguistic ability to add to conversation, but could respond to predictable questions and comments. A voice-output device was not recommended for purchase. While he would have been successful with simple scripted

interactions, if messages were presented sequentially on a system, his wife reported that he had little opportunity for these types of exchanges. AAC-oriented treatment focused on increasing his symbol representation knowledge to improve his ability to use externally stored message systems.

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