

Introduction

People with aphasia experience disabilities that range widely in severity – from mild difficulties in conversation to almost complete inability to formulate and understand language. For people living with severe aphasia, augmentative and alternative communication (AAC) strategies offer functional strategies that may improve communication effectiveness. Some people with aphasia rely on “unaided” AAC approaches, such as gesture, drawing, partner support, and handwriting. Other individuals with aphasia can access or formulate language through “aided” tools, such as communication notebooks and speech generating devices.

A few individuals with aphasia retain enough reading and writing ability to use aided AAC systems through traditional orthography while others use symbols to access and create messages. People with severe aphasia have successfully learned to access, manipulate, and combine graphic symbols (Koul & Harding, 1998; Steele, Weinrich, Wertz, Kleczewska, & Carlson, 1989). In addition, the use of graphic supports and tangible objects has improved the quality of conversation for some people with severe aphasia (Garrett & Huth, 2002; Ho, Weiss, Garrett, & Lloyd, 2005). Some studies have described how complex technology has been successful in improving conversations and daily interactions for people with aphasia (Lasker & Bedrosian, 2001; Lasker, LaPointe, & Kodras, 2005; McKelvey, Dietz, Hux, Weissling, & Beukelman 2007; van de Sandt-Koenderman, 2004; Waller, Dennis, Brodie, & Cairns, 1998). Inspection of the participant profiles in these studies reveals that people with a wide range of internal language competence are recipients of the treatment interventions, thereby making it difficult to draw conclusions about the appropriateness of any particular AAC approach for a particular person with aphasia.

Purdy and Koch (2006) identified the characteristic of “cognitive flexibility” as a strong predictor of strategy use by people with aphasia, regardless of aphasia severity. In order to fully triangulate the qualities of various communicators who might benefit from particular approaches, there has been a recent effort to illustrate and describe the behaviors of successful communicators with aphasia with and without AAC supports. In this way, clinicians may be able to select systematically the most appropriate strategies for clients who present with specific profiles of language and communication abilities.

The AAC-Aphasia Categories of Communicators (Garrett & Lasker, 2005; available online at <http://aac.unl.edu>) is a tool used to facilitate the process of systematically matching alternative communication strategies to the competencies of individual communicators with severe aphasia. The system was first introduced in 1992 (Garrett & Beukelman, 1992) and, based on feedback from an informal network of experienced aphasia clinicians, was recently reorganized into two broad tiers: *partner dependent* and *independent* communicators (Garrett & Beukelman, 2005; Lasker, Garrett, & Fox, 2007). Each of these primary categories is further divided into three subcategories based on behavioral descriptors of individuals with similar profiles. The three subcategories that comprise the partner dependent cluster are:

- emerging communicator;
- contextual choice communicator;
- transitional communicator

Three additional subcategories comprise the independent cluster:

- stored message communicator;
- generative communicator;
- specific need communicator.

Purpose of the Study

The purpose of this study was to investigate the validity of the construct used in the AAC-Aphasia Categories of Communicators. In particular, we wanted to examine the descriptors of *partner dependent* and *independent*. To this end, we are measuring the consistency with which experienced speech-language pathologists, naïve speech-language pathologists, and masters students in speech-language pathology categorize participants with aphasia after viewing videotapes of them engaged in a variety of communication tasks, both with and without the assistance of AAC. The primary research question is as follows:

Will experts, naïve speech-language pathologists, and masters students consistently classify communicators with aphasia as either partner-dependent or independent (according to the definitions used to create the AAC-Aphasia framework) when shown videotapes, written samples, and communication samples generated by people with aphasia?

Methods

Our rater pool consisted of three groups: (a) Group 1: 8 expert speech-language pathologists with at least 5 years of experience with adult neurogenetics, aphasia, and AAC assessment and intervention; (b) Group 2: 8 speech-language pathologists who defined themselves as generalists in adult rehabilitation; and (3) Group 3: 25 speech-language pathology masters students. Raters in Group 2 were speech-language pathologists who worked with clients with aphasia for at least 3 years but self-identified as having limited knowledge in the area of AAC (i.e., no more than 1 graduate level course in AAC, no specific experience as an AAC clinician, and no mentoring in the area).

Six participants with aphasia, whose videotaped interactions, test data, and writing samples comprised the materials used in the classification task, were adults ranging in age from 25 to 85 years. They were diagnosed with aphasia based on neurologic examination, results of brain imaging, and testing with a standardized test of aphasia (e.g., score of < 93.8 on the Western Aphasia Battery (Kertesz, 1982, 2008)). All participants were also rated by the principal investigators as meeting the criteria for a severe communication disorder according to a three-part rating scale developed by Garrett and Seale (2006). The individuals were also classified, a priori, into the categories of *partner dependent* and *independent* by the investigators who served as the gold standard for this initial round of validity testing; 3 samples were designated as partner dependent and 3 as independent.

Raters reviewed existing definitions of partner-dependent and independent communicators. Each rater then received the 6 randomly-ordered case studies that include the following information: medical information related to diagnosis, needs assessment results, test scores, written samples, videotapes of conversation (supported and unsupported), specific subtests of the *Multimodal Communication Screening Test for People with Aphasia* (Garrett & Lasker, 2005), and AAC

systems trials. After reviewing the definitions, case study materials, and the videos, raters completed forms classifying communicators as either partner-dependent or independent. In addition, raters provided written reasons as to “why” they rated the person with aphasia as they did.

Percentages of agreement, range, and standard deviations will be calculated for each of the raters and rating tasks. Nonparametric statistics will be employed to determine if ratings are consistent enough within each of the three groups to achieve significance. Thematic analysis of the raters’ written statements will be conducted.

Results and Analysis

To date, only Group 3 data has been analyzed (see Table 1). For 5 of the 6 participants with aphasia, the ratings provided by masters students in speech-language pathology were over 92% consistent with the “gold standard” ratings. This particular group appeared to have more difficulty assigning ratings to communicators identified as Stored Message or Transitional Communicators (both classifications toward the middle of the overall AAC-Aphasia framework). When providing the reasons for their ratings, masters students cited degree of cueing/support, device use/navigation, and appropriateness/effectiveness as the top 3 reasons for assigning a particular label (see Figure 1). Data are currently being collected from both “AAC-expert” and “AAC-naïve” SLP rating groups.

Given the overall consistency of ratings by student raters, we hypothesize that both groups of speech-language pathologists will demonstrate good consistency with the standard ratings. After exploring construct validity of the *partner dependent/independent* categories, we hope to test the validity of more specific categories within the framework. Preliminary results suggest that this tool may provide a simple means of guiding interventionists into selecting potentially useful AAC strategies for people with aphasia who cannot communicate via natural language modalities alone.

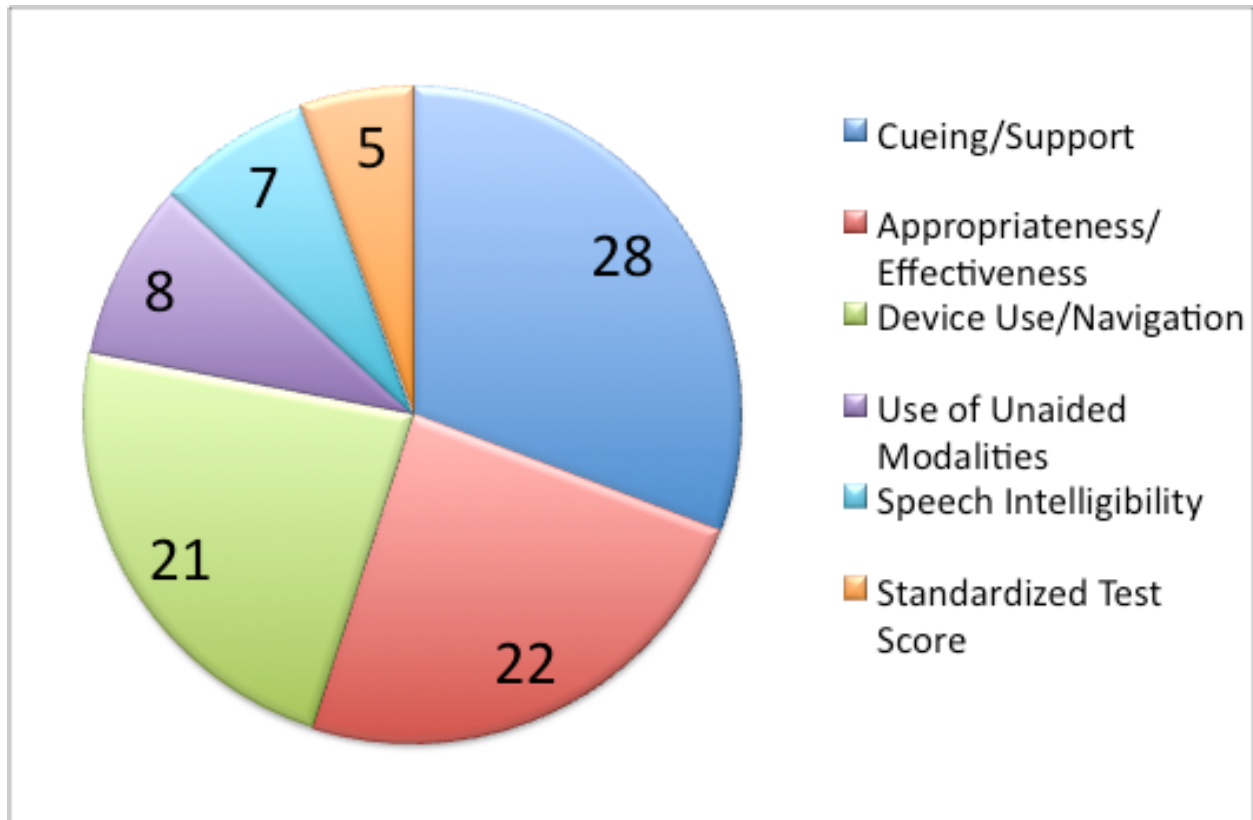
Table 1

Percent Agreement of Masters Students' Ratings of Participants with Standards

Participant with Aphasia	"Gold Standard" Rating	Percent in Agreement with Standard Ratings
Jan	Independent (Specific Need)	100% (25/25)
Rod	Independent (Generative)	100% (25/25)
Kelly	Independent (Stored Message)	76% (19/25)
Richard	Partner Dependent (Transitional)	96% (24/25)
Max	Partner Dependent (Contextual Choice)	92% (23/25)
John	Partner Dependent (Emerging)	100% (25/25)

Figure 1

Percent of Masters Students' Written Responses: "Why Did You Rate the Person as Partner Dependent or Independent?"



Note. The frequency of other thematic categories fell below 5% of total responses and are not included in this figure.

References

- Garrett, K. L. & Huth, C. (2002). The impact of graphic contextual information and instruction on the conversational behaviours of a person with severe aphasia. *Aphasiology*, 16(4-6), 523-536.
- Garrett, K. & Lasker, J. (2005). Adults with severe aphasia. In D.R. Beukelman and P. Mirenda (Eds.) *Augmentative and Alternative Communication: Supporting Children and Adults with Complex Communication Needs*, 3rd edition (pp. 467-516). Baltimore: Brookes Publishing Co.
- Garrett, K. & Lasker, J. (2005). AAC-Aphasia Categories of Communicators. Checklist Available at: <http://aac.unl.edu/screen/aphasiachecklist.pdf>.
- Garrett, K. & Lasker, J. (1997 and 2005). *Multimodal Communication Screening Task for Persons with Aphasia*: Booklet and Score Sheet. Disseminated on the World-Wide-Web, October 1998, revised 2005. Available at: <http://aac.unl.edu/screen/picture.pdf> and <http://aac.unl.edu/screen/score.pdf>.
- Ho, K.M., Weiss, S.J., Garrett, K.L., & Lloyd, L.L. (2005). The effect of remnant and pictographic books on the communicative interaction of individuals with global aphasia. *Augmentative and Alternative Communication*, 21(3), 218-232.
- Koul, R. K. & Harding, R. (1998). Identification and production of graphic symbols by individuals with aphasia: Efficacy of a software application. *Augmentative and Alternative Communication*, 14, 11-23.
- Lasker, J.P. & Bedrosian, J. L. (2001). Promoting acceptance of augmentative and alternative communication by adults with acquired communication disorders. *Augmentative and Alternative Communication*, 17(3), 141-153.
- Lasker, J.P., & Garrett, K. (2006) Using the Multimodal Communication Screening Test for Persons with Aphasia (MCST-A) to guide the selection of alternative communication strategies for people with aphasia. *Aphasiology*, 20(2/3/4), 217-232.
- Lasker, J. P., Garrett, K.L. & Fox, L.E. (2007). Severe aphasia (pp. 163-206). In D. R. Beukelman, K.L. Garrett, & K. M. Yorkston, (Eds.), *Augmentative communication strategies for adults with acute or chronic medical conditions*. Baltimore, MD: Paul H. Brookes.
- Lasker, J. P., LaPointe, L.L. & Kodras, J. (2005). Helping a professor with aphasia resume teaching through multimodal approaches. *Aphasiology*, 19(3/4/5), 399-410.
- McKelvey, M. L., Dietz, A. R., Hux, K., Weissling, K., & Beukelman, D. R. (2007). Performance of a person with chronic aphasia using personal and contextual features in a visual scene display prototype. *Journal of Medical Speech-Language Pathology*, 15(3), 305-317.

Purdy, M. & Koch, A. (2006). Prediction of strategy usage by adults with aphasia. *Aphasiology*, 20(2-4), 337-348.

Steele, R., Weinrich, M., Wertz, R., Kleczewska, M., & Carlson, G. (1989). Computer based visual communication in aphasia. *Neuropsychologia*, 27, 409-426.

van de Sandt-Koenderman, M.W.M.E. (2004). High tech AAC and aphasia: Widening horizons? *Aphasiology*, 18(3), 245-263.

Waller, A., Dennis, F., Brodie, J., & Cairns, A.Y. (1998). Evaluating the use of TalksBac, a predictive communication device for nonfluent adults with aphasia. *International Journal of Language & Communication Disorders*, 33, 45-70.