

Adult Preferences between Two Symbol Sets: Comparing Boardmaker[®] and Overboard[®]

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Abstract. The present study was designed to determine whether significant differences existed in typical adults in the preferences across two symbol sets (Boardmaker[®] or Overboard[®]) frequently displayed on the augmentative and alternative communication (AAC) systems. Three research questions were addressed. Is one symbol set more preferable than the other for typical adults? Is one symbol set preferred over the other by age groups? What qualitative data can be found to validate symbol preferences? A total of 56 participants participated in the study. Three tasks were involved in the study. The results indicated that regardless of the category (i.e., nouns, verbs, descriptors), the Boardmaker[®] symbol set is most preferred among the most typical participants except the age of 51-60, but did not reach the significant difference statistically.

Introduction

In recent years, augmentative and alternative communication (AAC) systems have been provided to these individuals who are unable to communicate efficiently using spoken speech and writing. AAC attempts to temporarily or permanently compensate for speech/language impairments which results in communication disorders in individuals [1]. Symbols can be used on communication devices for individuals who cannot speak. Several previous studies were designed to investigate the transparency, translucency, and learnability across different symbols, such as Blissymbols, Picture Communication System (PCS), Picsyms, Rebus symbols, Carrier symbols, manual signs, and Pictogram symbols. Two commercially available software programs generate two different symbol sets, Boardmaker[®] and Overboard[®], are used by some speech-language pathologists (SLPs) and special educators. Limited data exists regarding AAC users' preference for symbols, therefore symbols are typically chosen based on SLPs' and special educators' preference or accessibility in their working environments. The purpose of the study was to determine whether significant differences exist in typical adults in the preferences across two symbol sets (Boardmaker[®] or Overboard[®]) frequently displayed on the AAC systems. These two symbol sets can be used on communication devices for individuals with non-speaking or limited speaking.

Participants & Procedures

A total of 56 participants, in the groups of ages 20-35, ages 36-50, ages 51-65, and ages 66-80, were recruited in the study. Participants selected for inclusion met the research criteria: living in Wichita, Kansas in the United States; vision and hearing within normal limits determined by self report; English spoken as the primary language at home; no apparent handicaps, neither mental nor emotional disorders as determined by direct observation; educational levels range from high school equivalency to mater's degree; and lack of familiarity with any of these two symbol sets as determined by the short interview. All participants were naïve to the Boardmaker[®] and Overboard[®] symbol sets according to their self-report.

Three tasks were involved in the study. Participants were tested individually in a quiet room in a session lasting approximately 30 minutes. The tester gave the same instruction to each participant in each task. In Task 1, participants were asked to name each symbol to verify the transparency of the symbols. If the 50 symbols were not identified with 100% accuracy, the tester provided additional practice until the participant achieved 100% accuracy on the identification task. In Task 2, the participants were asked to indicate which of the two symbols they would prefer to represent a particular target word. In Task 3, participants were asked to respond to open-ended questions about each symbol set. They were then asked to indicate which symbol they believed they selected/preferred most often and to identify what they saw as positive (likes) and negative (dislikes) characteristics of each symbol set.

Additionally, they were asked to indicate on a Likert-type scale, with 5-point scale values ranging from 1 (least acceptable) to 5 (most acceptable), how acceptable/unacceptable they would find each symbol set if they were to need to use a communication board with picture symbols for communication purposes.

Results

A significant effect was found in the identification task (Task 1) for age groups ($F(3, 104) = 6.52, p < .05$). The 66-80 year old age group required significantly more trials to achieve the criterion of 100% accuracy in the identification of symbol sets than the 20-35 and 36-50 year old groups. More trials were needed to reach the 100% correct criterion for identification for the Overboard[®] symbol set compared to the Boardmaker[®] symbol set across all age groups. For Task 2, no significant difference was seen for the symbol set selected to best represent a target word or concept. Three of the four age groups had a slighter higher mean for preferring Boardmaker[®] symbol set; the 51-65 year old age group had a slightly higher mean for preferring the Overboard[®] symbol set. For Task 3, participants across all age groups believed they had selected the Boardmaker[®] symbol set to represent target words or phrases significantly more often than the Overboard[®] symbol set ($F(1, 104) = 4.63, p < .05$). In reality, there was no clear difference on the actual selection task (see Task 2 results). There were no significant differences among age groups or between symbol sets on the Likert-type scale responses, asking for the participants' opinions about the acceptability of each symbol set for a potential communication board or device. Both symbol sets were judged to be "moderately" acceptable by all age groups.

Conclusions

Although typical adults believed they selected the Boardmaker[®] symbol set more frequently than the Overboard[®] symbol set, actual performance did not support that perception. Overboard[®] symbol set took more trials to reach 100% criterion for naming (significantly more trials for the oldest age group), suggesting that this symbol set may not be as transparent (easily recognized) as the Boardmaker[®] symbol set. All age groups indicated that either symbol set would be acceptable to them if they require a communication board or system in the future. Boardmaker[®] symbol set is readily available in most clinic and education settings; Overboard[®] symbol set is a more recent addition to the marketplace. This study would suggest that just because one symbol set is more accessible to the speech-language pathologists (SLPs) and special educators who might be developing a communication system, that symbol set may not be the most transparent or appropriate for the individual who would use the system. Future research needs to address these individuals' preferences for these and other symbol sets so that individuals can be best served.

Acknowledgements

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Reference

- [1] American Speech-Language-Hearing Association (2005). Roles and responsibilities of speech-language pathologists with respect to alternative and communication: Position statement. *ASHA Supplement 25*, in press.