

Translucency Ratings of Picture Communication Symbols across Cultural and Ethnic Groups

Ravi Nigam- Governors State University
Rajinder Koul- Texas Tech University Health Sciences Center

Document Abstract

Individuals from five diverse cultural and ethnic groups in Chicagoland rated 275 Picture Communication Symbols (PCS) on a 7-point Likert-type scale. The PCS symbols included nouns, adjectives, and verbs. Using the revised version of the Benet-Martinez Acculturation Scale, each participant's acculturation level was determined. The reliability of the participant's ratings was calculated. Results were analyzed using statistical analysis to determine the differences among cultural and ethnic groups and the translucency ratings of the PCS from different word classes. Results are discussed, with future directions.

Research Description

Augmentative and alternative communication (AAC) has opened opportunities for meeting the communicative needs of individuals with severe disabilities. About 49% of speech-language pathologists in schools serve individuals who are nonverbal or in need of AAC. Several studies suggest that 8 to 12 people per 1,000 experience severe communication impairments that need AAC.

INFLUENCE OF CULTURE ON SYMBOL SELECTION

Culture can be described as a unique and progressive set of beliefs, values, traditions, attitudes, social behaviors, and communication styles that influence the interaction of an individual or a group of individuals within and across different societies. Culture influences our thinking, feeling, and actions. For an AAC user to communicate effectively, he or she should have access to a culturally valid lexicon and its corresponding graphic symbols.

Graphic symbol selection is important in implementing an AAC system. The AAC users depend on graphic symbols on their AAC system. The communicative ability of AAC users will depend on the type and diversity of graphic symbols on their AAC system. In addition, new graphic symbols should be added periodically, depending on currently changing communication needs. For example, if the AAC user was going to a specific function, such as a sports bar or a trip to Las Vegas, new graphic symbols related to the specific environment would be needed. The graphic symbols that are specific to an environment or individual depend on the social-cultural background of that individual. Lack of culturally valid graphic symbols to meet individual communication needs could result in a communications breakdown. There are graphic symbols that are common to most cultures; however, there are also graphic symbols that are culturally

specific. For example, the graphic symbol for lexical item such as roti (a type of bread) might be more important for an individual from an Asian-Indian culture to meet the communication needs in his or her social-cultural environment. If culture-specific graphic symbols are not available in an AAC system, an individual will not be able to communicate effectively. In selecting lexical items and their corresponding graphic symbols, one must consider the social and cultural background of the individual

Knowledge about the individual's culture is most critical when developing intervention techniques for AAC users. Some of the commonly used symbol sets, such as Picture Communication Symbols developed mainly in North America, represent symbols that are suitable to the mainstream middle-class culture.

Little research has confirmed whether a particular symbol set and its underlying lexicon is culturally and ethnically meaningful to a particular group outside the dominant culture. Huer (2000) reported that adults from four separate ethnic groups (African-American, Chinese, European-American, and Mexican) assigned different translucency ratings to two target symbol sets (PCS and DynaSyms) and a symbol system (Blissymbols). Since there was no significant interaction (Ethnicity X Symbol), the results did not provide sufficient empirical evidence to support the theory that individuals from different cultural and ethnic groups perceive graphic symbols differently (Nigam 2003). It is important to know if diverse cultural and ethnic groups perceive or provide different translucency rating to graphic symbols.

The research questions explored in this study are: (1) What are the translucency ratings of PCS across diverse cultural and ethnic groups (2) Does the translucency vary within cultural and ethnic groups, depending on the word class?

Methods

Participants

To get the representative sample, cultural informants¹ representing different cultural and ethnic groups in Chicagoland recruited a group of 20-25 individuals. These individuals participated in the rating of graphic symbols and are referred to as "participants." Although the participants might be communicating using different primary languages (native language), their knowledge of functional English language skills was determined by a quick checklist completed by the coordinator. The culturally and linguistically diverse groups included, but not be limited to, European-American, Black or African-American, Hispanic or Latino, Asian and Native American or Alaska Native. All participants completed a demographic form that included information about cultural and ethnic group, gender, primary language, hearing and vision.

Stimuli

A data booklet was designed with 250 symbols. Randomly, 10% of the symbols from the booklet (i.e. 25 symbols) were repeated in the booklet to check the intraparticipant reliability of the participants' responses. The first page of the data booklet collected demographic information; the second page asked some simple questions to check the acculturation level of the participants; the third page had instructions and examples of the rating task. Five practice items with high, medium, and low translucency was selected. From the fourth page onward, there were 10 PCS symbols on

¹ Undergraduate and graduate students in CDIS program served as cultural informants.

each page. Each symbol had a Likert-type rating scale from 1 to 7 (1 = No relationship; 7 = Very strong relationship).

Procedures

Each coordinator explained the purpose of the study and the rating task to the participants and answered any questions. Participants were instructed to rate each item on how closely the symbol and its meaning were related. They were told that a rating of 1 indicates “no relationship between the symbol and its meaning,” whereas a rating of 7 indicates “a very strong relationship,” and they were told to use the numbers between 2-6 to “indicate some degree of relationship between none and very strong.” Participants were encouraged to complete the rating task in the presence of the coordinator. The estimated time to complete the rating task was approximately 10-12 minutes.

Data Analysis

Data analysis is in progress. Intraparticipant reliability will be assessed by comparing the score for the first occurrence of an item with the score for its second occurrence. Statistical analysis will be performed, using ANOVA with cultural and ethnic groups and word classes as effects, and the results will be discussed, with directions for future research.
