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Using Blissymbolics to Develop Improved Tactile Symbols for Individuals with Communication Impairments

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This study focused on determining the feasibility of Blissymbols as the foundation for tactile communication for individuals with augmentative and alternative communication (AAC) needs. A commonly used method of AAC for these individuals involves tangible symbols, like real objects, which limit communication. For example, it is difficult to have tangible symbols readily available for the multitude of possible messages the user might want to convey. Blissymbols were chosen for the present study because they: 1) are minimalistic, which maximizes tactile processing; 2) are semantically combinatory in that they can be combined to represent new words and meanings; 3) are portable and provide a readily available large inventory of symbols; and 4) extend the range of communication environments.

Participants were asked to identify a target tactile representation from among five raised-line tactile choices. Preliminary analysis indicates participants could correctly discriminate tactile Blissymbols on over 90% of trials. Additional analyses are planned to identify the features of those few Blissymbols that are difficult to tactilely discriminate from each other and characteristics that contribute to difficulty in discriminating one symbol from another. These analyses will be instrumental in developing a tactile symbol system and enhancing the capacity for individuals with tactile AAC needs to communicate.

Research advisors Lyle L. Lloyd and Mick Issacson write, "Initial research examined the capacity for tactile discrimination of 74 simple Blissymbols, including all basic shapes of Blissymbolics. Results indicate that it is feasible to develop a tactile-Blissymbol system of communication capable of producing an infinite number of words and concepts for individuals unable to use the print or Braille alphabet."

Smith uses a Repro-Tronics Tactile Image Enhancer to produce tactile stimuli.

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