

Fuller, D. R. (1987). *Effects of translucency and complexity on the associative learning of Blissymbols by cognitively normal children and adults*. Unpublished doctoral dissertation, Purdue University, West Lafayette, Lyle L. Lloyd (Advisor): 135 pages of text, 130 references, 13 appendices, 7 tables, and 11 figures.

This study was an attempt to determine the effects of translucency and complexity on the learning of Blissymbols by children and adults having normal cognitive ability. Both translucency and complexity have been quantified according to adult perceptions. This paper investigated the generalizability of adult-based data for these variables to the population of cognitively normal children. A second purpose of this study was to determine the effects of translucency and complexity on Blissymbol learnability according to different modes of response in children.

Two experiments were conducted to answer these questions. In Experiment I, children and adults were required to learn the labels of 40 Blissymbols. These symbols were selected according to high and low levels of translucency and complexity so that ten symbols were in each orthogonal category. Subjects in this experiment were required to orally name the stimulus items (spoken response mode). In Experiment II, the data obtained from the children who participated in the first experiment were used for the spoken response mode. A second group of children was required to point to the same stimuli used in Experiment I (pointing response mode).

In Experiment I, there were quantifiable differences in the learning of Blissymbols between children and adults; however, qualitative differences did not seem to exist between these two groups. Results of Experiment II revealed quantitative differences in the mean number of symbols learned between a spoken and a pointing mode of response, but qualitative differences did not appear to be evident. For both experiments, translucency was found to have a significant influence on learning. However, complexity did not have an influence on learning unless translucency was low. In this case, more high complexity symbols were learned than low complexity symbols.

The possible reasons why high complexity symbols were easier to learn in the absence of strong symbol-to-referent associations were discussed. The limitations of the study and future directions for research were also discussed.