

Doherty, J. (1985). *The effects of translucency and handshape difficulty on sign acquisition by preschool children*. Unpublished doctoral dissertation, Purdue University, West Lafayette. George R. Karlan and Lyle L. Lloyd (Advisors): 132 pages of text, 65 references, 5 appendices, 15 tables, and 9 figures.

The two studies reported herein investigated the effects of three sign characteristics on the productive acquisition of Signed English signs by nonretarded preschool children: translucency, handshape difficulty, and number of hands used in production. Toward this end, a 2 (Handedness Groups) by 3 (Levels of Translucency) by 3 (Levels of Handshape Difficulty) design was employed in each study. Handedness groups were defined by the number of hands required to produce stimulus signs in their Signed English citation form. In each study, one group of children learned only one-handed signs whereas a second group learned only two-handed signs. The 18 signs each group learned represented 9 sign types derived by crossing levels of translucency and handshape difficulty. Levels of translucency were defined by trichotomizing ratings made by college students on a seven-point scale of perceived relationship between signs and their referents: high (5.00-7.00), medium (3.00-4.99), and low (1.00-2.99) (Lloyd & Karlan, 1985). Levels of handshape difficulty were defined by the successive stages of handshape acquisition proposed by Boyes-Braem (1973), with higher stages indicating greater difficulty. Levels in Study 1 comprised stages 1, 2 and 3; those in Study 2, stages 2, 3 and 4. Two measures of productive acquisition were taken: accuracy of production with respect to all four phonological parameters (total accuracy scores) and with respect to all four phonological parameters (total accuracy scores) and with respect only to handshape (handshape accuracy scores). Each score ranged from 0 to 10.

Results of both studies indicated that, when handshape difficulty is controlled, translucency does not facilitate handshape or total accuracy of production on an early acquisition task such as used in this research. Similarly, neither study yielded an effect for the number of hands used in production; handshape and total accuracy were generally equivalent for one- and two-handed signs. And, finally, handshape difficulty was found to inhibit acquisition in both studies but only for one-handed signs: stage 1 and 2 signs were easier in handshape and total accuracy than stage 3 signs (Study 1); and stage 2 signs were easier in handshape and total accuracy than stage 3 and 4 signs (Study 2).