An evaluation of the efficiency of equivalence-based instruction

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INTRODUCTION

• Many studies have demonstrated successful applications of EBI with various populations and instructional objectives.

• EBI is assumed to be an efficient approach to teaching due to eliminating the need for directly teaching every instructional target.

• Few studies have directly evaluated its efficiency compared to directly teaching all of the possible relations between stimuli in a set.

• EBI produced similar test performance and took less training to complete than sequential instruction of all stimulus relations (Fienup and Critchfield, 2011) and instruction of randomly selected relations (Zinn, Newland, & Ritchie, 2015).

• The purpose of the present study was to evaluate the efficiency of an EBI protocol compared to a simultaneous complete instruction (CI) protocol, using abstract stimuli.

METHOD

Participants: 48 undergraduate students were recruited from a psychology department's human subjects pool.

Setting and equipment: The experiment was programmed in SuperLab 5.0 and run on a laptop computer in a quiet room.

Figure 1. Experimental stimuli

PROCEDURE

• Replication of a previous Experiment in our lab

• One modification: The training mastery criterion for EBI group was 12 correct trials in a row for Phases 1 and 2.

RESULTS

• The results suggest that there was no effect of instructional condition on the number of trials it took to establish a 3-member class, but as class size increased, EBI gained advantage over DI.

• Expansion from 4 to 5-member classes, as observed in trials to pass ABCDE test, took significantly fewer trials with EBI than DI.

• However, there was no evidence that a history of EBI in Phase 1 affected learning via EBI in Phase 2.

• A potential limitation of the present study was the small number of stimuli used.
