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Tangibles, Pictures, and Verbal Descriptions: Which Should Be Used in Choice Presentations?

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Abstract

Little research has examined how stimulus modalities influence choice responding. Should choice alternatives be presented using tangibles, pictures, or verbal descriptions? How should caregivers decide which modality to use? We have completed several studies to examine how discrimination skills, as measured by the Assessment of Basic Learning Abilities test, interact with choice stimulus modalities to influence responding. Our results suggest that for persons with developmental disabilities with limited or no communication skills, the ability to make simple visual, visual matching to sample, and auditory-visual discriminations should be the prime determinant of stimulus modalities in choice presentation and preference assessment.

Having choice opportunities is considered an important dimension of quality of life (Hughes, Hwang, Kim, Eisenman, & Killian, 1995). Nowadays, practitioners and caregivers strive to increase choice opportunities by integrating them into everyday activities. When choice presentation is done systematically, it can provide a measure of the person's preference, as indicated by the rate with which an item is chosen relative to others (Lohrmann-O'Rouke & Browder, 1998). Knowing a person's preference has considerable value for caregivers in providing supports in daily living (e.g., by providing preferred meals and leisure activities) and for therapists in designing treatments (e.g., by using effective reinforcers).

To identify preferences of persons with developmental disabilities, direct systematic assessment has been shown to be more reliable than caregivers' subjective opinions (Fisher, Piazza Bowman, & Amari, 1996; Green et al., 1988; Green, Reid, Canipe & Gardner, 1991; Green, Gardner & Reid, 1997). Within direct assessment, paired presentation (presenting two stimuli at a

time) has been found to be more efficient and sensitive than single stimulus presentation (presenting one stimulus at a time) in determining the relative preference among an array of alternatives (DeLeon & Iwata, 1996; Fisher et al., 1992; Fisher, Thompson, Piazza, Crosland & Gotjen, 1997; Pace, Ivancic, Edwards, Iwata & Page, 1985). However, little research has examined how stimulus modalities influence choice responding. Should choice alternatives be presented using tangibles, pictures, or verbal descriptions? How should caregivers decide which modality to use? Since each modality requires different discriminations, it seems reasonable to expect a strong relation between discrimination skills and stimulus modalities. We recently completed several studies to address these questions.

Conyers et al. (2002) examined whether the Assessment of Basic Learning Abilities (ABLA) test (Martin & Yu, 2000), which assesses the ease with which a person with developmental disabilities learns to perform basic visual and auditory discriminations, could be used to predict the appropriate stimulus modality for choice presentations. In a paired presentation or two-choice situation, Conyers et al. (2002) hypothesized that persons who could perform simple visual discriminations could make consistent choices with tangibles (actual objects), persons who could perform visual match-to-sample discriminations could make consistent choices with pictures as well as tangibles, and persons who could perform auditory-visual discriminations could make consistent choices in all three modalities. In their first experiment, high and low preference foods were first identified through direct preference assessment with tangibles (actual food items). The pair was then presented in either tangibles, pictures, or spoken words in a reversal design with replication across modalities with 9 adults with developmental disabilities. The results confirmed their hypotheses. Three participants who demonstrated only simple visual discrimination on the ABLA test consistently chose their preferred food on over 80% of the trials during the tangible conditions, but not when large color photographs of the same food items or spoken words were used. Three participants who demonstrated both simple visual and visual match-to-sample discriminations chose their preferred food consistently during both the tangible and picture conditions, but not when the same food items were presented in spoken words. Lastly, three participants who demonstrated all three discriminations chose their preferred food consistently in all three modalities. In a second experiment, similar results were replicated with non-food items, although choice consistency was slightly lower in some cases. The authors speculated that choice consistency with food items was higher than non-food items because the former were more powerful reinforcers.

In an alternating-treatments design involving six adults with developmental disabilities, Schwartzman, Yu and Martin (2003) systematically replicated the results by Conyers et al. (2002). Moreover, they compared the effects on choice consistency of different food items with different levels of preference. They found that within each modality, choices were more consistent with items that were more preferred than with items that were less preferred.

These results suggest that a person's ability to make simple visual, visual match-to-sample, and auditory-visual discriminations should be the prime determinant of stimulus modalities in choice presentation and preference assessment for persons with severe developmental disabilities. Assessment of a person's discrimination skills, such as those measured by the ABLA test, is needed to select the appropriate stimulus modality.

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