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Development and Evaluation of a Decision-Making Tool for Evaluating and Selecting Prompting Strategies

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ABSTRACT

Background: An extensive literature has demonstrated the successful application of various response prompts and prompt-fading strategies for teaching students with developmental and intellectual disabilities. However, few practical resources exist to guide special-education teachers and clinicians in the evaluation and selection of a prompting strategy for a given student and a targeted skill.

Researchers have found antecedent-based self-instructional modalities, such as enhanced written instructions (EWI) and video models with voice-over (VMVO), to be effective in training staff on a variety of procedures (e.g. Berkman et al., 2019; Graff & Karsten, 2012).

Purpose: Across two experiments we used a multiple baseline across participants design to develop and evaluate a decision-making tool for evaluating and selecting appropriate prompting strategies for a variety of students and skills.

GENERAL METHOD

Participants and Setting:

- Experiment 1: Eleven special-education teachers attending one of four 5-day sessions of university-based teacher-training program.
- Experiment 2: Five graduate students beginning their first semester at an on-campus masters-level behavior analysis program.
- All had varying levels of experience, but no formal training on selecting prompting strategies.
- Eight children (4-10 years) diagnosed with ASD receiving services at university-based clinic participated as students in generalization probes.
- Sessions took place in empty therapy rooms with all necessary session materials and recording equipment.

Materials:

- Training binder containing:
 - A training manual comprised of EWI, flowcharts, and data-collection sheets for each prompt-fading strategy.
- Assessment stimuli:
 - Materials participant could use to assess student response characteristics that were “unknown” in the learner profile.

GENERAL METHOD

- Systematic Worksheet for the Evaluation of Effective Prompting Strategies (SWEEPS).
- Learner profiles:
 - Bulleted list detailing a target skill and student characteristics of a simulated student for each session.
 - Based on information contained in the SWEEPS and were balanced across possible outcomes of the SWEEPS.

Scan me to see the SWEEPS and a Learner Profile.



Dependent Variables:

- Experiments 1 and 2: Occurrence vs. Nonoccurrence
 - Correct assessment of the unknown characteristic in each learner profile.
 - Correct written selection of the type(s) of prompt(s).
 - Correct written selection of the prompt-fading strategy.
 - Correct implementation of a least-to-most probe to determine the initial prompt level (when applicable).
- Experiment 2: Percentage of correct implementation of the correct prompting strategy in 6-trial teaching sessions.

Procedures:

- Pre-study training
 - Lecture and behavioral skills training (BST) on types of prompts and prompt-fading procedures.
- Baseline and Post-Training
 - Participants asked to select a prompting strategy based on a random learner profile.
 - Confederate student acted as the student and was available throughout the session if the participant wished to assess something.
 - Participants wrote down their selection on their data sheet.
 - Participants in Experiment 2 then conducted a 6-trial teaching session.
 - No feedback on selection or implementation.
- SWEEPS Training
 - Lecture and modeling on the use of the SWEEPS.
 - Participants given SWEEPS for all post-training session.
- Post-Training Feedback
 - Experiment provided corrective feedback on selection of prompting strategy.
 - Most feedback was brief, indirect feedback (e.g., “Double-check your work” or “Be sure to use all of your materials”).
- Generalization Probes
 - Identical to baseline and post-training sessions.
 - Student was a child with ASD.

RESULTS

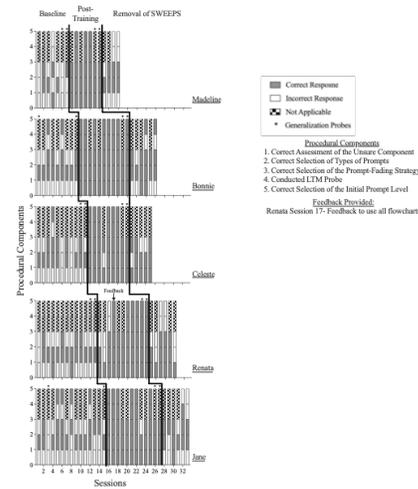


Figure 1. Evaluation and selection results for Experiment 2.

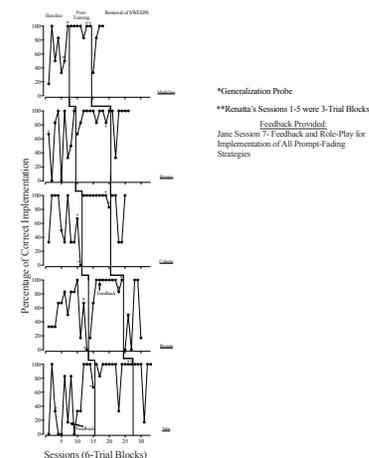


Figure 2. Implementation results for Experiment 2.

GENERAL METHOD

- Participant received a learner profile for that student and could assess any response characteristics with the student while making their selection.
- Removal of SWEEPS (Experiment 2)
 - Identical to baseline.
 - Evaluated maintenance of correct selection in absence of SWEEPS materials.
- Social Validity
 - Intervention Rating Profile (IRP; Eckert et al, 1999).
 - Anonymous Qualtrics™ survey 2-4 months after completing study.

Scan me to see the (a) training group and years of teaching experience for participants in Experiment 1 (b) the social validity data from the IRP, and (c) the results of Experiments 1 and 2.



CONCLUSIONS

The SWEEPS improved the selection (written and direct implementation) of appropriate prompting strategies with both simulated and actual students. Additionally, participants reported high measures of social validity for the SWEEPS in both the IRP and Qualtrics™ survey.

One limitation of any comprehensive decision-making tool, such as the SWEEPS, is that it must balance the degree of difficulty and comprehensiveness in creating a tool that is accessible to individuals who may have weaker repertoires of reading behaviors. Future research is required to determine parameters for this balance.

Future research (Experiment 3) should evaluate the efficacy of decision-making tools when delivered in a self-instructional modality.

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