



NSW Speech Pathology Evidence Based Practice Interest Group

Critically Appraised Paper (CAP)

CLINICAL BOTTOM LINE:

In children with moderate intellectual disabilities, acquisition of sight words may be faster when words are presented without extra stimulus pictorial prompts. For some beginning readers such prompts may be used effectively as feedback.

Clinical Question: In children with disabilities, does the use of pictures support literacy development?

Citation: Didden, R., Prinsen, H., & Sigafoos, J. (2000). The Blocking effect of pictorial prompts on sight-word reading. *Journal of Applied Behaviour Analysis*, 33(3), 317-320.

Design/Method: Alternating treatment design.

- Based on Singh and Solman (1990) study (which is not included) + added a condition where pictures were used as feedback.
- Compared the effects of 5 experimental conditions on word recognition. (Pictures, words or both presented for 15 seconds and in a random order.)
- Recording/reliability of data = criteria for correct response same as Singh and Solman (1990) 25% inter-observer reliability as well.

Materials: Pool of 70 words, 20 x 5 letter words selected. 4 words randomly assigned to each experimental condition. Pictures or words presented in 2 sizes – 2.5 cm or 5 cm.

Participants: 6 students with moderate intellectual disability aged between 7-9 years and only able to read 2-5 words. Their individual reading instruction was paused during the study.

Experimental Group: Group of 6. Not randomised. The children's previous skills were not outlined. Baseline – number of correct responses out of 20 trials were recorded.

Intervention sessions – 5 experimental conditions. Sessions once a day, 4 times a week.

1. Word/enhanced picture condition – picture presented 1st & then picture with word.
2. Word only – word presented alone.
3. Enhanced word – word presented alone
4. Enhanced word/picture – word presented alone then word and picture with word.
5. Word only/picture feedback – word presented alone & picture presented as feedback 2 sec after a response.

Post test - number of correct responses out of 20 trials were recorded.

Criterion for selection of condition to use during remediation was 1st condition in which the student read all 4 words correctly during 3 consecutive post tests.

Control Group: No control group

Results: Five out of six students reached criterion in conditions without extra stimulus prompts.

- Criterion reached the fastest for 2 with enhanced-word condition (word only, enhanced size)
- “ “ “ “ for 1 with word only + picture feedback
- “ “ “ “ for 2 with word only
- “ “ “ “ for 1 with word only and same with enhanced-word

- Supporting Singh and Solman (1990), that acquisition is achieved faster during the word-alone conditions

- Unable to say if the findings are a result of blocking, overshadowing or a combination of the two. They say most likely to be blocking b/c students were able to name the pictures (and not the words) prior to the intervention

- **Comments:** Not enough detail about method – would need to refer to another study- Singh & Solman (1990) article
- Overlap in data among experimental conditions – weakens inferences that can be made re differential effect of treatment.
- Functional use/comprehension of the new words not tested.
- Small group, no stats
- Doesn't really answer their question about blocking.

Level of Evidence (NH&MRC): IV

Appraised By
Clinical Group: AAC EBP

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