



# NSW Speech Pathology Evidence Based Practice Interest Group

## Critically Appraised Topic (CAT)

**CLINICAL BOTTOM LINE:** Presenting the word alone (i.e. without pictures) is more effective when teaching children with mild to moderate intellectual disabilities, to read new words.

**Background and Objectives:** There was group interest in the area of literacy.

**Clinical Question:**

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

**Search Terms/Systems:**

Children/Child/Paediatric/Pictures/Graphics/Symbols/Icons/Literacy/Reading/Literature/Spelling/Reading Comprehension (ERIC/PubMed/OVID/CINAHL/Web of Science)

**Selection Criteria:** All articles were included in the CAT if relevant to the clinical question. There was no exclusion criterion in regards to level of evidence. Articles were excluded if they only looked at picture fading techniques. All articles used in CAT included comparisons between pictures and words.

**Results:** 8 Articles were appraised by the Clinical Group. The search results yielded insufficient high quality evidence. All articles were Level 4 (NHRMC Level of Evidence Scale). 4 included in the CAT, 2 were mentioned for interest (did not address clinical question), 2 were not included.

Singh and Solman 1990

All students had lowest rate of learning under the maximum blocking condition where the size of the picture was enhanced compared to the word; six students had the fastest rate of learning when the word was presented alone; 2 remaining students had the fastest rate with reduced blocking where the size of word was enhanced compared to the picture.

Didden, Prinsen and Sigafoos 2000

Compared the effects of 5 experimental conditions on word recognition(word/enhanced picture, word alone, enhanced word alone, enhanced word/picture, word alone/picture feedback ). Criterion reached fastest for 2 students with enhanced word alone condition; 1 student with word alone and picture feedback; 2 students with word alone and 1 student with word alone and same with enhance word. Findings supported Singh and Solomon (1990) that acquisition of sight words achieved faster during the word alone conditions.

Didden, de Graaff, Nelemans, Vooren and Lancioni 2006

3 training procedures to teach sight words – word presented alone, word presented with integrated picture, integrated picture was faded out of the word. 10/13 children reached criterion level fastest in the word alone; 3/13 children reached criterion level in the picture-fading condition; no children reached criterion in the integrated –picture condition.

Fossett and Mirenda 2006

Picture to text matching was more effective than paired associate instruction for developing a small sight word vocabulary;1 participant showed maintenance of skills developed 4 months after intervention

**Included in the CAT**

Singh,N.N. & Solomon, R.T. (1990) A Stimulus Control Analysis of the Picture-Word Problem in Children Who are Mentally Retarded: The Blocking Effect. *Journal of Applied Behaviour Analysis* 1990,23,525-532, No. 4 (Winter)

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.

Didden,R. de Graaff,S. Nelemans,M. Vooren,M. and Lancioni,G. (2006). Teaching Sight Words to Children With Moderate to Mild Mental Retardation: Comparison Between Instructional Procedures. *American Journal on Mental Retardation*, Vol.III, No.5, 357-365

Fossett,B. and Mirenda,P. (2006). Sight word reading in children with developmental disabilities: A comparison of paired associate and picture-to-text matching instruction. Research in Developmental Disabilities 27(4) 411-429

For interest

Dorry, G.W., Zeaman, D. (1975). Teaching a Simple Reading Vocabulary to Retarded Children: Effectiveness of Fading and Nonfading Procedures. American Journal of Mental Deficiency, 79 (6), 711-716.

Hoogeveen,F.R., Smeets,P.M., and Lancioni, G.E. (1989) Teaching Moderately Mentally Retarded Children Basic Reading Skills. Research in Developmental Disabilities, 10,1-18.

Tabe, N. and Jackson, M. (1989) Teaching Sight Vocabulary to Children with Developmental Disabilities, Australian and New Zealand Journal of Developmental Disabilities, 15(2), 27-39

**Appraised By:** AAC EBP Group

**Date:** December 2007

**Appraised By:**  
**Clinical Group:**

**Date:**