



# NSW Speech Pathology Evidence Based Practice Interest Group

## Critically Appraised Paper (CAP)

### **CLINICAL BOTTOM LINE:**

Parent training on shared-book reading techniques is effective in improving the language skills of 24-34 month-old children. Video training was more effective than direct training. The mothers were from middle to high SES and the children's language was initially average to above average.

### **Clinical Question [patient/problem, intervention, (comparison), outcome]:**

Does the use of books and narratives increase the expressive language in 2 – 4 year old children?

### **Citation:**

Arnold, D.H., Lonigan, C.J., Whitehurst, G.J.& Epstein, J.N. (1994) Accelerating language development through picture book reading: Replication and extension to a videotape training format. *Journal of Educational Psychology*, 86(2), 235-243.

### **Design/Method:**

- Pseudo-randomised controlled trial.
- Mothers volunteered following newspaper advertisement.
- 3 groups: Direct training, Video training and no treatment control.
- The initial recruitment was randomly allocated to either direct training or control.
- The video training package was made from these initial volunteers and then a second recruitment was randomly allocated to the 3 groups resulting in the video training group having a third less subjects.
- All parent-child dyads were seen for an initial visit and pre-test assessments. Pre-test assessments were the Reynell and PPVT-R.
- 1 week of baseline measures were collected on each subject. The subjects were instructed to read at least 4 times per week and to record 4 sessions per week.
- All children completed post-test assessments 2 weeks after the final session. Post-test assessments were Expressive One-Word Picture Vocabulary Test and the Grammatical Closure subtest of the ITPA

### **Participants:**

64 children (31 boys, 33 girls) 24-34 months of age and their mothers. The mothers were from middle to high SES. There were no significant differences between the groups for subjects' age, mothers' age, mothers' educational level, family income, frequency of story-book reading and pre-test age corrected language scores (which were average to above average).

### **Experimental Group:**

- Two experimental groups: Direct training (N=23) and Video training (N=14)
- Following the pre-assessment and baseline measures, the two experimental groups received two training sessions either via direct training with a male experimenter or via video training.

### **Control Group:**

- Attended two visits and two assessments. (N=27).
- The control group attended two sessions: one focussing on the importance of reading and the second the parent-child interactions were videotaped.

**Results:**

- The interventions did not affect the amount of reading conducted at home.
- Analyses of co-variance were conducted. Results indicated significant differences were found for PPVT-R, EOWPVT and ITPA-VE, but not for ITPA-GC.
- Pair-wise comparisons were conducted:
  - Video vs. control – video outperformed the control group on EOWPVT and ITPA-VE
  - Direct training outperformed the control group on ITPA-VE
  - Video training outperformed direct training on EOWPVT and PPVT-R.

**Comments:**

- Pseudo- random assignment resulted in fewer subjects for one group (video training).
- It seems counter-intuitive that video training is less effective than direct training.
- The direct training effect was not replicated from the original study.
- The measurement tools were different from pre-test to post test and there was no indication of correlation between them.
- It was a narrow sample of subjects and normally developing children.
- However it is an interesting, time effective concept.

**Level of Evidence (NH&MRC):** Level III (1) [well-designed pseudo-randomised controlled trial]

**Appraised By:** Paediatric Language Group  
**Clinical Group:**

**Date:** October 2006