



School Wide Early Literacy Screening: A Comparison of PALS-K and AIMSweb Tests of Early Literacy



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Introduction

Response to Intervention (RtI) aims to prevent academic failure through early identification and intervention as early as kindergarten (Bishop, 2003).

Academic Screeners are used to identify children at risk for future reading difficulties (Howell, Patton, & Deiotte, 2008).

Many early literacy screeners exist. Academic screeners need to be valid, reliable, efficient, inexpensive, and easily administered and interpreted (VanDerHeyden, & Burns, 2010)

Since 2012, Wisconsin schools are required to use the Phonological Awareness Literacy Screening (PALS) with all kindergarteners. Research is limited on PALS-K (Butterfuss & Gehring, 2014). Some schools also use AIMSweb as an early literacy screener in kindergarten.

While PALS-K and AIMSweb Tests of Early Literacy (TEL) assess early literacy skills, the two screeners vary in a number of ways. PALS-K allows for group administration while AIMSweb is administered individually. AIMSweb assessments emphasize fluency through timed tasks while PALS assessments are untimed.

Research Questions

1. What is the correlation between PALS-K Early Literacy subtests and AIMSweb TEL subtests?
2. What Kindergarten assessment, PALS-K or AIMSweb LNF, more accurately classifies students at risk or not at risk for first grade ORF?

Results

Question 1 Correlations

	Phonological Awareness		Literacy Skills			
	Rhyme Awareness	Beginning Sound Awareness	Alphabet Knowledge	Letter Sounds	Spelling	Concept of Word
LNF	.362	.313	.658	.719	.633	.549
LSF	.315	.378	.484	.755	.677	.649

Question 2 Predictive Accuracy

First Grade ORF Spring			
		Not at Benchmark	At Benchmark
PALS-K Sum Score	At Risk	4	1
	Not at Risk	9	43

First Grade ORF Spring			
		Not at Benchmark	At Benchmark
AIMSweb TEL LNF	At Risk	1	0
	Not at Risk	11	44

	PALS-K Sum Score	AIMSweb TEL LNF
Sensitivity	.80	1
Specificity	.83	.80

Sensitivity = true positives / (true positives + false negatives)

Specificity = true negatives / (false positives + true negatives)

Discussion

- PALS-K literacy skill subtests and AIMSweb LNF and LSF correlations were moderately high while AIMSweb correlations with PALS-K phonological awareness subtests were lower, suggesting good discriminant and convergent validity across assessments.
- Both AIMSweb TEL and PALS-K demonstrated adequate sensitivity. Those students identified as at risk in kindergarten remained below benchmark in reading in first grade.
- However, both screeners under identified students who went on to be below benchmark in reading in first grade. PALS-K demonstrated slightly better sensitivity.

Implications

- PALS-K assesses a broader range of reading skills, which may add to its diagnostic utility.
- The author defined cut scores for each screener result in large number of false negatives, which may hinder schools in identifying students in need of early intervention.

Limitations

- Fidelity of assessment administration is unknown.
- Small sample size.
- Generalization to school districts with different demographic characteristics.

Future Research

- Use of winter benchmarks may result in better sensitivity and specificity when predicting risk status for first grade ORF.
- Replication of study with a larger sample size.

Method

Participants.

Students from a northwestern Wisconsin school district. 28 (56%) male; 86% White, 6% Asian, 4% Hispanic, 4% 2 or more races

Procedure.

Archival data were obtained. Data from Fall Kindergarten 2012 and Spring First Grade 2014 were collected. Assessments were administered by school staff.

Measures.

AIMSweb Tests of Early Literacy (TEL): Individually administered measures of fluency with an early literacy skill. Total administration time, 5 minutes.

- **Letter Naming Fluency:** Say the names of visually presented letters for 1 minute.
- **Letter Sound Fluency:** Say the sounds of visually presented letters for 1 minute.

Tier 2 Cut scores for kindergarteners LNF in fall is 3 and 0 for LSF

AIMSweb Reading CBM: Individually administered assessment of oral reading fluency. Individual scores are total words read correctly in one minute. Tier 1

Cut score for spring first grade is 53.

PALS-K: Group administered, untimed assessments. Total administration time is estimated at 30 minutes. A Total Sum score is derived from seven subtests measuring either phonological awareness or early literacy skills. Scores below 29 are considered at risk.

Phonological Awareness

- **Rhyme Awareness:** Compare three pictures and identify one that rhymes with a target picture
- **Beginning Sound Awareness:** Compare three pictures and identify the picture with the same beginning sound as an orally presented word

Literacy Skills

- **Alphabet Knowledge:** Say names for all 26 visually presented lower-case letters
- **Letter-Sound Awareness:** Say the sound for visually presented letters
- **Concept of Word:** Point to words as a teacher reads them aloud
- **Spelling:** Spell consonant-vowel-consonant words
- **Recognition:** Read words from a word list

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