



ARIZONA DEPARTMENT OF EDUCATION

Each reading intervention program will be scored using a rubric. A response must meet **all** the criteria in each scored area to be included on the K-3 MOWR vetted reading intervention program list. Peer Review will be noted but does not disqualify overall approval.

Study: [Preventing Reading Failure in Young Children With Phonological Processing Disabilities Group and Individual Responses to Instruction](#)

Date of Study: September 1994

Grade Levels of Study: Kinder-2nd grade

Reading Intervention Program's Marketed Name: Lindamood Phoneme Sequencing LiPS Program

	Rating or Measure Select: Y or N	Rationale
ESSA Evidence Tier	Yes	Tier 3 due to small sample size
Independent Researchers (Y/N)	Yes	Journal of Educational Psychology
Established Measure (Y/N)	Yes	The pretest battery included measures of three types of phonological processing, including phonological awareness (sound matching, sound categorization, and blending phonemes), verbal short-term memory (memory for digits and recalling sentences), and rapid automatic naming ability (rapid color naming, rapid object naming, rapid letter naming). We also measured expressive and receptive language using four subtests (Oral Directions, Word Structure, Sentence Structure, and Recalling Sentences) of the Clinical Evaluation of Language Fundamentals-Revised (Semel, Wiig, & Secord, 1987), general verbal ability (Listening Comprehension from the Woodcock Johnson Psycho-Educational Battery-Revised, Woodcock & Johnson, 1989 and the Boston Naming Test, Kaplan, Goodglass, & Weintraub, 1983), nonverbal ability (Pattern Analysis and Copying from the Stanford-Binet Intelligence Test, 4th Edition; Thorndike, Hagen, & Sattler, 1986), and visual processing skill (Visual Matching and Visual Memory from the Woodcock Johnson Psycho-Educational Battery-Revised). Finally, we

		included a variety of measures of reading and reading-related knowledge and skill (Word Identification and Word Attack subtests from the Woodcock Reading Mastery Test-Revised (Woodcock, 1987), a list of real words and a list of nonwords that increased more gradually in difficulty than the standardized tests, and a measure of letter sound knowledge.
Sample Size	Yes	One hundred eighty children who obtained the lowest combined scores on the letter naming task and the phoneme elision task, and who had an estimated Verbal Intelligence score above 75, were selected for the study. Over the 2 and a half years of the study, we experienced a 23% dropout rate, so the sample at the end of second grade contained 138 children.
Research Design	Yes	quasi experimental
Outcome	Yes	The most phonemically explicit condition produced the strongest growth in word level reading skills, but there were no differences between groups in reading comprehension. Word level skills of children in the strongest group were in the middle of the average range. Growth curve analyses showed that beginning phonological skills, home background, and ratings of classroom behavior all predicted unique variance in growth of word level skills.
Effect Size	Yes	For the measures of phonemic decoding skill (Word Attack and Nonword List), both the effects of group $F(6,264) = 4.7$, and the interaction between group and time $F(12,393) = 3.0$, were statistically reliable ($p < .001$). Simultaneous individual contrasts showed that the PASP group was reliably different ($p < .05$) from the other groups, who did not differ among themselves. Of the measures that were assessed at the end of the intervention, only the developmental spelling test showed significant differences across groups, $F(3, 133) = 3.1$, $p < .05$. Differences among groups for phonemic awareness, untimed phonemic decoding, and untimed real word reading were all statistically significant ($p < .05$), with $F_s(1, 49) = 5.78, 21.6$, and 4.83, respectively.
*MTSS Level of Support	Yes	Tier 2 and 3
*Peer Review (Y/N)	Yes	Journal of Educational Psychology

MOWR Committee decision:

-Will continue to stay on the MOWR Intervention Program Vetted List.