

STUDY HIGHLIGHTS

Effectiveness of Early Literacy Instruction: Summary of 20 Years of Research

Children entering kindergarten vary greatly in their language and literacy skills. Therefore, up-to-date information about evidence-based practices is essential for early childhood educators as they support preschool children's language and literacy development. To address this issue, the Regional Educational Laboratory Southeast conducted a systematic review covering research from 1997 to 2017 using a review process modeled after the What Works Clearinghouse (WWC) methodology. The systematic review identified rigorous evidence on the effectiveness of early childhood curricula, lesson packages, instructional practices, and technology programs that aim to improve

students' performance in **language, phonological awareness, print knowledge, decoding, and early writing**. Please go to the glossary section for more information of terms in bold.



This fact sheet draws on the systematic review and explains the methodology and key findings for early childhood educators and policy makers. [Click here to view the report and related files.](#)

Eight Steps of Systematic Review

1. Establish review protocol

The review protocol includes the focus of the review, key definitions, eligibility criteria, and the process of literature review, screening, and full-text review.

2. Literature search using keywords

The research team identified **74,001** related studies using a comprehensive list of keywords.

3. Sift and select eligible studies

After removing irrelevant and duplicate studies, **357** studies were identified to meet eligibility according to the review protocol.

4. Assess the quality of eligible studies

The research team used a review process modeled after the What Works Clearinghouse (WWC) methodology to assess the quality and strength of eligible studies. Based on the review process, **109** studies were determined to be high-quality experimental, quasi-experimental, or single case design studies.

5. Extract data from high-quality studies

Within the 109 studies, **132** interventions were evaluated. The implementation characteristics (for example, group size) and instructional features of each intervention were coded to summarize the similarities and differences among interventions.

6. Combine data extracted from each study

Information about the effectiveness of each intervention was extracted. Interventions that shared the same instructional domain, whether the performance was measured by standardized or researcher-developed instrument, implementation characteristics, or instructional features were grouped. The weighted effect size for each group of interventions was estimated, which allowed the research team to compare the magnitude of effects among different groups.

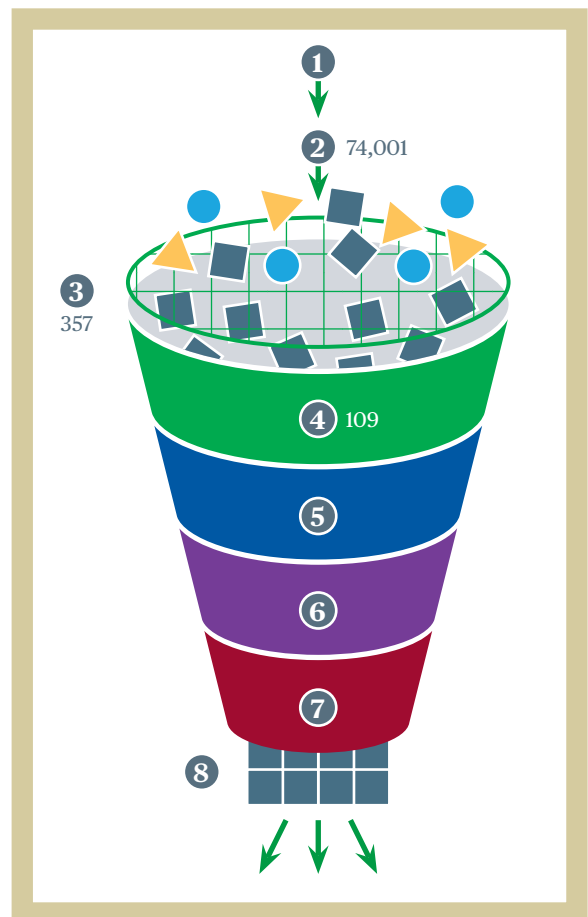
7. Discuss findings and draw conclusions

The systematic review provides an overview of evidence that has been empirically tested and summarizes effective instructional strategies associated with language and literacy outcomes.

8. Disseminate the systematic review

State-, district-, and school-level leaders can use the information from the systematic review to decide which types of programs to invest in and make informed decisions while supporting preschoolers' literacy and language development.

Please go to the other resources section for more information about the methodology and implications of systematic review.



Adapted from Jessica Kaufman, Cochrane Consumers & Communication Review Group, Centre for Health Communication & Participation, La Trobe University, 2011. CC-BY-SA License

What are the key findings and implications?

1. Which instructional domains are taught in the studied interventions?

Of the 132 interventions reviewed in this report, almost all (113 of 132) included some **language**-focused instructional activities and 50 taught **language** exclusively. Of those that taught more than one domain (77), **phonological awareness** (61) and **print knowledge** (69) frequently co-occurred in the same intervention. Few interventions taught **early writing** (30) or **decoding** (11).

Implication: The number of studies and interventions included in this review gave us confidence in the strength of the evidence. The review identified some effective instructional strategies and common misunderstandings on supporting preschoolers' language and literacy development. Educators and policymakers can compare their current practice to the interventions described in this [this report](#).

2. How effective are the interventions in promoting performance on taught and untaught outcome domains?

Interventions that intentionally taught **language**, **phonological awareness**, **print knowledge**, **decoding**, or **early writing** were likely to improve performance in the taught domains. In addition, the review found that interventions that included phonological awareness and print knowledge instruction separately benefited student performance in these areas as well as untaught skills like decoding and early writing performance. On the other hand, teaching language exclusively is not likely to yield improved performance in other untaught domains.

Implication: The results from this systematic review suggest that intentional instruction in the important early literacy domains of language, phonological awareness, print knowledge, decoding, and early writing can meaningfully benefit students. Educators and policy makers can select interventions that best fit their students' needs based upon the effectiveness evidence.

3. How do effects differ between researcher-developed and standardized outcome measures?

A study can evaluate the effects of an intervention on one or more outcome domains by administering different types of outcome measures. Standardized outcome measures typically capture a broad representation of one or more skills. Researcher-developed measures typically assess more specific target skills and are therefore more sensitive to changes in student performance. Among all the effects examined in the report, **weighted effect sizes** for researcher-developed outcome measures were slightly larger than standardized outcome measures. Among interventions that taught and evaluated effects on language outcomes, researcher-developed language measures resulted in significantly greater **weighted effect sizes** compared to standardized language measures.

Implication: These findings suggest that when educators and policy makers are evaluating the effectiveness of an intervention, they should keep in mind that some interventions are unlikely to yield sizable effects for standardized outcome measures. Specifically, the improved performance in language could be less noticeable when the outcome measure was assessing more than the skills that were taught.

4. Which implementation characteristics or instructional features effectively promote early literacy performance in different outcome domains?

Several **implementation characteristics** were explored with [varying results](#). Among interventions that taught language exclusively, those that utilized small groups (six or less) demonstrated significantly larger weighted effect sizes than those that utilized whole group configurations.

The research team also explored specific **instructional features** for each taught domain to identify those that led to improved performance. Important instructional features were identified for each domain and are detailed in [the report](#). For example, when delivering interactive book reading, asking questions before, during, or after can enhance the impact on language performance.

Implication: When appraising an evidence-based intervention, educators and policy makers should carefully consider the implementation characteristics and instructional features described in the study. Deviations in any of these components could result in intervention impacts that differ from those described in this report.

Glossary

Domains of interest

Language: The ability to comprehend or use spoken language, which can include vocabulary, listening comprehension, syntax, or narrative understanding and production.

Phonological awareness: The awareness of the sound units of spoken language, such as phonemes, onset-rimes, syllables, or words. Phonological awareness tasks include producing rhyming words or words that share common sound units; segmenting larger units into smaller ones (for example, words into phonemes or words into syllables); and identifying, deleting, and blending the separate sounds of a word.

Print knowledge: The knowledge of the names and sounds of the letters of the alphabet and the knowledge of concepts about print.

Decoding: The ability to translate a word from print to speech, usually by understanding sound-symbol correspondences; also, the act of deciphering a new word by sounding it out.

Early writing: The knowledge of letter or name writing, spelling, and conveying meaning through writing.

Implementation characteristics

The implementation characteristics of interest included intervention type, intervention duration, implementer type, group size, and the presence of professional development with or without ongoing support.

Instructional features

The core components of an intervention, including its essential practices, its structural elements, and the contexts in which it was implemented and tested. Instructional features were coded by instructional domain to better understand the instructional content of each domain. For example, instructional features coded in the language domain include the occurrence of shared book reading with or without questions.

Weighted effect size

To gauge the collective effect on one domain, interventions that share specific components were grouped and the effect sizes are weighted based on the sample size to avoid bias.

Other Resources

1. [Effect Size Basics: Understanding the Strength of a Program's Impact](#)
2. [Accessing & Assessing Research and Evidence](#)
3. [Identifying and Implementing Educational Practices Supported by Rigorous Evidence: A User-Friendly Guide](#)
4. [Applicability of Evidence-Based Interventions](#)
5. [A Leader's Role in Strengthening Emergent Literacy Instruction Through Collaborative Professional Learning](#)
6. [Self-study Guide for Implementing Early Literacy Interventions](#)