



Research on Motivation, Literacy, and Reading Development: A Review of Best Practices

Final Report for the Institute of Museum and Library Services

Ozen Guven, PhD

Yasmina Haddad

SEPTEMBER 2023

Contents

- Executive Summary..... iii
 - Objectives iii
 - Methods..... iii
 - Summary of Key Findings iii
- 1. Introduction 1
 - 1.1 Overview 1
 - 1.2 Purpose of the Review 1
 - 1.3 Scope of the Review 2
 - 1.4 Document Roadmap..... 3
- 2. Conceptual Framework and Key Definitions 4
- 3. Methods of the Review 6
 - 3.1 Phase I: Database Search and Screening 6
 - 3.2 Phase II: Review and Synthesis of Findings..... 7
- 4. Findings 9
 - 4.1 Content-Based Approaches 9
 - 4.2 Instructional Practices 11
 - 4.4 Supportive Resources..... 22
 - 4.5 Family and Community Engagement..... 26
- 5. Discussion and Recommendations 29
 - 5.1 Evidence Gaps and Recommendations for Future Research 29
 - 5.2 Current Evidence Base and Recommendations for Future Interventions..... 30
- Appendix A. References 32
- Appendix B. Search Strings..... 39

Executive Summary

Objectives

Literacy development in the early childhood and elementary school years is critical for learning and the acquisition of other skills essential for educational achievement. Although schools assume the primary responsibility in developing children’s literacy and reading skills, a holistic approach to literacy development requires the involvement of other important actors, including parents, caregivers, community members, and libraries. Public libraries play a key role in these literacy efforts by providing a variety of free programs and rich resources for children and families from all backgrounds. The Institute of Museum and Library Services commissioned the American Institutes for Research® (AIR®) to conduct a review of research literature on the effects of literacy and reading programs in public libraries¹. The review aimed to answer the following research questions:

- What are the best practices that promote children’s motivation and positive attitudes toward reading?
- To what extent and in what ways are these practices also related to improving reading competence?

Methods

For this study, we conducted a review of both quantitative and qualitative research literature identified through multiple database searches using relevant key terms. The review was initially commissioned to review evidence only from public library programs; however, due to limited research on libraries, it was extended to include research from non-library programs. Therefore, although this study is not a systematic review, it is an extensive review including evidence on the best literacy practices from both library and non-library programs.

Summary of Key Findings

1. This review showed that there is a dearth of empirical research on the effectiveness of the literacy and reading programs run by public libraries. Moreover, most evidence that exists in the library context is qualitative or anecdotal; therefore, we still know little about what works to improve child literacy in library programs.
2. There is a large evidence base on the effectiveness of literacy and reading programs implemented outside of public libraries, especially school interventions. This research also varies widely in terms of the methodological rigor, but many of the studies use

¹ The findings and views expressed herein do not necessarily represent those of the Institute of Museum and Library Services.

experimental and quasi-experimental design, showing the causal pathways or strong correlations between program inputs and outcomes.

3. Overall, research from both library and non-library programs indicated the importance of combining various evidence-based practices to increase program effectiveness. Most of the successful programs we reviewed embedded effective content, instructional methods, and motivational practices.
4. Research on school programs integrating complex knowledge domains or concepts (informational texts) with reading instruction indicates positive effects on reading motivation and comprehension, particularly for the upper elementary grades.
5. Evidence from both library and non-library programs showed that only exposing children to books, even those of high interest, appears to be ineffective unless supplemented with reading strategies and adult reading support.
6. Regarding specific instructional practices, research is limited on libraries but suggests promising results on programs incorporating read-aloud, book discussions, and social interaction. For non-library programs, strong evidence, especially from schools, indicates the effectiveness of the following practices: read-aloud, repeated reading, developing cognitive strategies for reading, using interesting texts with adult scaffolding, balancing student autonomy with individualized support, using challenging texts with individualized support, book discussions, collaboration, and social interaction.
7. Overall, research from non-library programs demonstrates the positive effects of family engagement in children’s reading activities. This evidence is largely from summer reading and book giveaway programs, with adult support to children mostly happening at home. Although parents and caregivers are at the core of many library programs, there is little research assessing library programs with a family engagement component.
8. Finally, research from libraries suggested that programs facilitating community participation had promising results on children’s reading motivation and reading skills.

Table ES-1 contains a summary of the literature that contributed to each detailed finding in the body of the report. The table is intended to be an easy reference for practitioners who are looking for suggestions to improve the effectiveness of their child reading programs.

Table ES-1. Summary of Evidence Mapping for Best Literacy Practices

Content-Based Approaches				
Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
Types of reading text				
Finding 1: Motivation for reading narrative texts (e.g., fiction, fairy tales, novels) seems to be related to general reading motivation and reading comprehension.				
<ul style="list-style-type: none"> • Emphasizing content goals • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Hands-on science activities – Interesting texts (both narrative and informational) tied to conceptual themes – Self-selected reading – Collaboration & social interaction 	Grade 4	Non-library	Guthrie et al., 2007	Mixed methods: quasi-experimental and qualitative interviews
Integration of knowledge domains or concepts with reading instruction				
Finding 2: Embedding a complex knowledge domain (e.g., ecology, American history, solar system) in reading instruction can increase reading motivation and comprehension for upper elementary grades.				
<ul style="list-style-type: none"> • Emphasizing content goals • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Hands-on science activities – Interesting texts (both narrative and informational) tied to conceptual themes – Self-selected reading – Collaboration & social interaction 	Grade 3	Non-library	Guthrie et al., 2004	Quasi-experimental
	Grade 4	Non-library	Guthrie et al., 2007	Mixed methods: quasi-experimental and qualitative interviews
Finding 3: Integration of conceptual themes with reading instruction has mixed results for younger students. Specifically, although this approach has some promising results on reading outcomes, it appears to be ineffective on young children’s reading motivation.				
<ul style="list-style-type: none"> • Use of thematic units • Concept mapping • Argumentative writing • Motivational practices <ul style="list-style-type: none"> – Read-aloud – Discussion – Collaborative research 	Grade 1	Non-library	Kim et al., 2021a	Experimental
	Grades 1–2	Non-library	Kim et al., 2021b	Experimental
<ul style="list-style-type: none"> • Use of project-based thematic units • Graphic organizer • Motivational practices <ul style="list-style-type: none"> – Reflection – Discussion – Collaboration 	Grade 2	Non-library	Duke et al., 2021	Experimental

Instructional Practices				
Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
Instructional practices focused on fluency				
Finding 4: Reading approaches or programs incorporating <i>read-alouds</i> tend to have positive impact on child literacy, reading outcomes, and reading motivation. These include both library programs (e.g., story times) and non-library interventions.				
<ul style="list-style-type: none"> • Read-aloud • Integration of literacy skills (phonological awareness and alphabetic knowledge) in story times 	Birth–60 months	Library	Campana et al., 2016	Quasi-experimental
			Mills et al., 2014	
<ul style="list-style-type: none"> • Providing families with free books • Read-aloud • Family and community engagement • Motivational practices <ul style="list-style-type: none"> – Independent reading – Reading together – Book discussion 	PK–Grade 5	Library	Ness, 2010	Qualitative
<ul style="list-style-type: none"> • Read-aloud • Mentorship • Library-college partnership • Book discussions 	PK–Grade 6	Library-run program in schools	Grimes, 2021	Qualitative
<ul style="list-style-type: none"> • Read-aloud • Differentiated reading instruction • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Interesting texts – Self-selected and independent reading – Challenging reading experiences 	Grades 3–6	Non-library	Reis et al., 2007	Experimental
	Grades 2–5	Non-library	Reis et al., 2011	Experimental
	Not specified	Non-library	Reis et al., 2020	Evidence synthesis
Finding 5: Existing evidence shows that programs with a major focus on <i>repeated reading</i> improved both fluency and comprehension for early grades and only fluency for upper grades. The programs did not have a significant positive effect on reading motivation or attitudes toward reading.				
<ul style="list-style-type: none"> • Assisted reading (one-on-one teacher-student reading) • Read-aloud (with good expression) • Repeated reading (student reads aloud) • Motivational practices <ul style="list-style-type: none"> – Challenging texts (1 year above reading level) – Read together (teacher reads slightly ahead of student) 	Grades 1–3	Non-library	Young et al., 2017	Experimental

Instructional Practices

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
<ul style="list-style-type: none"> • Read-aloud (with appropriate prosody and rate) • Repeated reading (partner reading and silent reading) • Corrective feedback • Self-timing reading rate 	Grades 5–6	Non-library	Farrell, 2016	Quasi-experimental
<ul style="list-style-type: none"> • Repeated choral reading • Motivational practices <ul style="list-style-type: none"> – Interesting texts – Discussion 	Grade 3	Non-library	Newsome, 2008	Quasi-experimental

Instructional practices focused on cognitive skills

Finding 6: Building children’s knowledge and skills around reading strategies (e.g., questioning, organizing, summarizing content) is critical to increase their reading fluency, comprehension, and motivation to read.

<ul style="list-style-type: none"> • Emphasizing content goals • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Hands-on science activities – Interesting texts (both narrative and informational) tied to conceptual themes – Self-selected reading – Collaboration and social interaction 	Grade 3	Non-library	Guthrie et al., 2004	Quasi-experimental
<ul style="list-style-type: none"> – Hands-on science activities – Interesting texts (both narrative and informational) tied to conceptual themes – Self-selected reading – Collaboration and social interaction 	Grade 4	Non-library	Guthrie et al., 2007	Mixed methods: quasi-experimental and qualitative interviews
<ul style="list-style-type: none"> • Instruction on reading strategies (reread, predict, ask questions, make connections, and summarize) • Parent scaffolding (i.e., oral reading support) • Motivational practices <ul style="list-style-type: none"> – Independent reading – Books that match children's interests and reading levels 	Grades 3–5	Non-library	Kim & White, 2008	Experimental
<ul style="list-style-type: none"> • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Student choice – Interesting texts – Having students read independent-level texts – Social interaction after reading 	Grade 3	Non-library	Lehman, 2011	Mixed methods: pre-/post-tests and qualitative interviews

Instructional Practices

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
<ul style="list-style-type: none"> • Read-aloud • Differentiated reading instruction • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Interesting texts – Self-selected and independent reading – Challenging reading experiences 	Grades 3–6	Non-library	Reis et al., 2007	Experimental
	Grades 2–5	Non-library	Reis et al., 2011	Experimental
	Not specified	Non-library	Reis et al., 2020	Evidence synthesis
Instructional practices focused on motivation and attitudes				
Finding 7: In most of the successful programs and approaches included in the review, the use of <i>interesting texts</i> was a key component of the implementation.				
<ul style="list-style-type: none"> • Emphasizing content goals • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Hands-on science activities – Interesting texts (both narrative and informational) tied to conceptual themes – Self-selected reading – Collaboration and social interaction 	Grade 3	Non-library	Guthrie et al., 2004	Quasi-experimental
	Grade 4	Non-library	Guthrie et al., 2007	Mixed methods: quasi-experimental and qualitative interviews
<ul style="list-style-type: none"> • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Student choice – Interesting texts – Having students read independent-level texts – Social interaction after reading 	Grade 3	Non-library	Lehman, 2011	Mixed methods: pre-/post-tests and qualitative interviews
<ul style="list-style-type: none"> • Read-aloud • Differentiated reading instruction • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Interesting texts – Self-selected and independent reading – Challenging reading experiences 	Grades 3–6	Non-library	Reis et al., 2007	Experimental
	Grades 2–5	Non-library	Reis et al., 2011	Experimental
	Not specified	Non-library	Reis et al., 2020	Evidence synthesis

Instructional Practices

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
Finding 8: Only exposing children to interesting books appears to be ineffective unless supplemented with reading strategies and adult scaffolding (i.e., oral reading support).				
<ul style="list-style-type: none"> • Instruction on reading strategies (reread, predict, ask questions, make connections, and summarize) • Parent scaffolding (i.e., oral reading support) • Motivational practices <ul style="list-style-type: none"> – Independent reading – Books that match children's interests and reading levels 	Grades 3–5	Non-library	Kim & White, 2008	Experimental
<ul style="list-style-type: none"> • Children received books that matched their interests and reading levels 	Grades 1–5	Non-library	Kim, 2007	Experimental
<ul style="list-style-type: none"> • Interesting books • Independent reading • Self-selected reading • Incentives for reading 	Grades 2–3	Library	Dynia et al., 2015	Experimental
Finding 9: Self-selected reading and independent reading, when combined with appropriate support and strategies, seem to improve reading fluency, comprehension, and motivation to read.				
<ul style="list-style-type: none"> • Emphasizing content goals • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Hands-on science activities – Interesting texts (both narrative and informational) tied to conceptual themes – Self-selected reading – Collaboration and social interaction 	Grade 3	Non-library	Guthrie et al., 2004	Quasi-experimental
	Grade 4	Non-library	Guthrie et al., 2007	Mixed methods: quasi-experimental and qualitative interviews
<ul style="list-style-type: none"> • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Student choice – Interesting texts – Having students read independent-level texts – Social interaction after reading 	Grade 3	Non-library	Lehman, 2011	Mixed methods: pre-/post-tests and qualitative interviews

Instructional Practices

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
<ul style="list-style-type: none"> • Read-aloud • Differentiated reading instruction • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Interesting texts – Self-selected and independent reading – Challenging reading experiences 	Grades 3–6	Non-library	Reis et al., 2007	Experimental
	Grades 2–5	Non-library	Reis et al., 2011	Experimental
	Not specified	Non-library	Reis et al., 2020	Evidence synthesis
<ul style="list-style-type: none"> • Interesting books • Self-selected and independent reading • Incentives for reading 	Grades 2–3	Library	Dynia et al., 2015	Experimental

Finding 10: Programs incorporating strategy instruction and challenging texts to build *self-efficacy* and *confidence* are effective in improving reading performance and motivation to read. (See Finding 6 for papers on strategy instruction.)

<ul style="list-style-type: none"> • Assisted reading (one-on-one teacher-student reading) • Read-aloud (with good expression) • Repeated reading (student reads aloud) • Motivational practices <ul style="list-style-type: none"> – Challenging texts (1 year above reading level) – Read together (teacher reads slightly ahead of student) 	Grades 1–3	Non-library	Young et al., 2017	Experimental
<ul style="list-style-type: none"> • Read-aloud • Differentiated reading instruction • Developing reading strategies • Motivational practices <ul style="list-style-type: none"> – Interesting texts – Self-selected and independent reading – Challenging reading experiences 	Grades 3–6	Non-library	Reis et al., 2007	Experimental
	Grades 2–5	Non-library	Reis et al., 2011	Experimental
	Not specified	Non-library	Reis et al., 2020	Evidence synthesis

Instructional Practices

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
Finding 11: In many successful programs included in the review, collaboration and social interaction was part of the program design, likely contributing to the positive effects.				
<ul style="list-style-type: none"> Independent reading Talking about books (discussion) 	Grades 4–9	Library	Dillon et al., 2017	Mixed methods: pre-/post-surveys, focus groups, interviews, & observations
<ul style="list-style-type: none"> Read-aloud Mentorship Library-college partnership Book discussions 	PK–Grade 6	Library-run program in schools	Grimes, 2021	Qualitative
<ul style="list-style-type: none"> Providing families with free books Read-aloud Family and community engagement Motivational practices <ul style="list-style-type: none"> Independent reading Reading together Book discussion 	PK–Grade 5	Library	Ness, 2010	Qualitative
<ul style="list-style-type: none"> Emphasizing content goals Developing reading strategies Motivational practices <ul style="list-style-type: none"> Hands-on science activities Interesting texts (both narrative and informational) tied to conceptual themes Self-selected reading Collaboration and social interaction 	Grade 3	Non-library	Guthrie et al., 2004	Quasi-experimental
	Grade 4	Non-library	Guthrie et al., 2007	Mixed methods: quasi-experimental and qualitative interviews
<ul style="list-style-type: none"> Developing reading strategies Motivational practices <ul style="list-style-type: none"> Student choice Interesting texts Having students read independent-level texts Social interaction after reading 	Grade 3	Non-library	Lehman, 2011	Mixed methods: pre-/post-tests and qualitative interviews
<ul style="list-style-type: none"> Use of project-based thematic units Graphic organizer Motivational practices <ul style="list-style-type: none"> Reflection Discussion Collaboration 	Grade 2	Non-library	Duke et al., 2021	Experimental

Instructional Practices

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
<ul style="list-style-type: none"> Repeated choral reading Motivational practices <ul style="list-style-type: none"> Interesting texts Discussion 	Grade 3	Non-library	Newsome, 2008	Quasi-experimental
<p>Finding 12: Programs using strategies to increase involvement in reading (i.e., amount of time spent on reading) seemed to have positive effects on engagement and promising results on reading outcomes.</p>				
<ul style="list-style-type: none"> Personalization of texts Online reading 	Grade 5	Non-library	Ertem, 2013	Experimental
<ul style="list-style-type: none"> Read-aloud Differentiated reading instruction Developing reading strategies Motivational practices <ul style="list-style-type: none"> Interesting texts Self-selected and independent reading Challenging reading experiences Enrichment activities 	Grades 2–5	Non-library	Reis et al., 2011	Experimental
<ul style="list-style-type: none"> Interesting texts and books Collaboration and social interaction Interesting, real-life activities to increase involvement and engagement Family and community engagement 	Ages 4–11	Non-library	Copeland & Martin, 2016	Mixed methods: pre-/post-surveys and qualitative interviews

Supportive Resources

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
<p>Finding 13: Existing evidence is limited but suggests promising results for the effectiveness of library spaces on children’s language development and engagement in learning activities.</p>				
<ul style="list-style-type: none"> Use of library spaces where children can play and learn 	1–10 years old	Library	Hassinger-Das et al., 2020	Qualitative study
<ul style="list-style-type: none"> Use of library spaces where children can play and learn Parents’ engagement focusing on the five practices of talking, singing, reading, writing, and playing 	Infants, toddlers, preschoolers, and teens	Library	Neuman et al., 2017	Mixed methods: observations, interviews, surveys, and content analysis

Supportive Resources

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
Finding 14: Programs incorporating technology (specifically digital reading) seemed to have no significant effects on reading outcomes and mixed results on motivation and attitudes toward reading.				
<ul style="list-style-type: none"> Use of digital texts Strategy instruction 	Grade 5	Non-library	Long & Szabo, 2016	Quasi-experimental and qualitative interviews
<ul style="list-style-type: none"> Personalization of texts Online reading 	Grade 5	Non-library	Ertem, 2013	Experimental
Finding 15: Dog-assisted reading indicates promising outcomes on reading skills and attitudes, but results are inconclusive.				
<ul style="list-style-type: none"> Students read to dogs in small groups or individually Writing component incorporating the dog reading program experience Vocabulary games with a dog theme 	Grades K–4	Non-library	Kirnan et al., 2016	Quasi-experimental and qualitative interviews
<ul style="list-style-type: none"> Children read to a literacy tutor/dog team 	Grades 2–5	Non-library	Levinson et al., 2017	Experimental
<ul style="list-style-type: none"> Children read to dogs individually 	Grade 2	Non-library	Lenihan et al., 2016	Experimental
Finding 16: Research is limited on the use of music for reading instruction. Existing evidence is mixed, indicating insignificant effects on achievement outcomes and observable changes in motivation and attitudes.				
<ul style="list-style-type: none"> Integrated music curriculum Use of instruments and songs to engage with the story 	Kindergarten	Non-library	St. Clair, 2014	Experimental and student observations

Family and Community Engagement

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
Finding 17: Programs incorporating family support or scaffolding generally reported positive effects on reading performance and motivation due to parent and caregiver engagement.				
<ul style="list-style-type: none"> Provision of free books Shared book reading (caregivers-children) Guidance from program staff 	Up to 5 years old	Non-library	de Bondt et al., 2020	Evidence synthesis
<ul style="list-style-type: none"> Provision of free books Shared book reading (caregivers-children) 	Up to 5 years old	Non-library	Funge et al., 2017	Surveys and focus groups

Family and Community Engagement

Intervention components	Grade level or age group	Context: library or non-library	Studies that contributed to review finding	Study design
<ul style="list-style-type: none"> • Instruction on reading strategies (reread, predict, ask questions, make connections, and summarize) • Parent scaffolding (i.e., oral reading support) • Motivational practices <ul style="list-style-type: none"> – Independent reading – Books that match children's interests and reading level 	Grades 3–5	Non-library	Kim & White, 2008	Experimental
<ul style="list-style-type: none"> • Providing families with free books • Read-aloud • Family and community engagement • Motivational practices <ul style="list-style-type: none"> – Independent reading – Reading together – Book discussion 	PK–Grade 5	Library	Ness, 2010	Qualitative

Finding 18: Qualitative and anecdotal evidence shows promising results from initiatives incorporating community participation, specifically library-college partnerships.

<ul style="list-style-type: none"> • One-on-one tutoring • University-school-library partnership • Use of Sycamore Readers tutoring model (authentic children's literature, vocabulary, higher order thinking questions, and literature-based writing activities) 	Grades K–5	Library	Bauserman & Knaebel, 2016	Informal communications and observation
<ul style="list-style-type: none"> • Read-aloud • Mentorship • Library-college partnership • Book discussions 	Grades K–5	Library	Knaebel et al., 2013, 2015	Pre-/post-tests and post-program surveys
<ul style="list-style-type: none"> • Read-aloud • Library-university partnership • Volunteer university students visited childcare homes to read aloud (lap reading) to children 	PK–Grade 6	Library-run program in schools	Grimes, 2021	Qualitative
<ul style="list-style-type: none"> • Read-aloud • Library-university partnership • Volunteer university students visited childcare homes to read aloud (lap reading) to children 	Infants, toddlers, and preschoolers	Library-run program in childcare homes	Lamme et al., 2004	Informal communications and observation

1. Introduction

1.1 Overview

A growing body of evidence shows that developing strong literacy skills in the early years of schooling is critical to children’s long-term academic success (Hanover Research, 2016; Kirsch et al., 2002). The ability to read and comprehend different text genres is an important prerequisite for learning and the acquisition of other skills essential for educational achievement (Kirsch et al., 2002). Despite widespread attention to literacy development among educators and researchers, many early learners struggle with reading in the United States and continue to have difficulty throughout their schooling (Wigfield et al., 2016). Results from the National Assessment of Educational Progress (NAEP) showed that only 33% of fourth-grade students were reading at or above the NAEP proficiency level in 2022, consistent with a declining trend since 2017 (37% in 2017 and 34% in 2019; National Center for Education Statistics [NCES], 2022a, 2019, 2017). Moreover, students from low-income households continue to score lower than students from higher socioeconomic levels (NCES, 2022b).

Public libraries contribute to national literacy efforts in important ways. As a free universal service, libraries provide access to a wealth of resources for children and families from all backgrounds. Public libraries also offer a variety of programs that aim to develop children’s early literacy skills, support their reading competence in later years of schooling, and engage parents and caregivers. A primary focus of these programs is to promote children’s love for reading, which builds on an assumption that positive attitudes toward reading are critical to improve reading skills (Clark & Douglas, 2011; Briggs, 1987). Although this assumption is in line with ample evidence demonstrating a positive relationship between motivation and reading competence (Guthrie & Wigfield, 2000; Wigfield et al., 2016), there is still limited understanding of if or how public library programs influence reading. Given the critical role of public libraries, especially in disadvantaged communities, it is important to understand the effects and potential of public library child reading programs as well as identify what works and what does not in these programs.

1.2 Purpose of the Review

The primary focus of this literature review is child (age < 12 years) literacy programming in public libraries. Therefore, use of the term “library” in this report means “public library.” The review aims to achieve two main goals: (1) to identify the best practices that promote motivation and positive attitudes toward reading in early childhood and elementary years, and (2) to examine to what extent and in what ways improvement in motivation and reading attitudes is related to literacy and reading outcomes. To achieve these goals, we reviewed and

synthesized evidence from public libraries' literacy and reading programs. Although we sought to identify evidence both on reading motivation and attitudes and on reading outcomes, research is scarce on library programs, particularly related to reading outcomes. Given the scant evidence in the library context, we also reviewed evidence from non-library programs (e.g., school interventions). We included non-library programs only if they had a focus on *both* motivation/attitudes and reading outcomes. Because reading motivation is at the core of public library programming, we hypothesized that evidence from non-library programs with a motivational or attitudinal component could be extrapolated to library contexts.

1.3 Scope of the Review

We defined the scope of this review in the following ways (summarized in Table 1). First, we focused on interventions, programs, and approaches aimed at early learners and students in general elementary education (age < 12 years). The following topics are beyond the scope of this review: remedial, preventive, and special education programs; gifted education programs; middle and high school reading programs; and programs for English learners or multilingual children.

Second, although language development is strongly related to literacy and reading, it is a distinct academic area. Therefore, language development programs also are outside of the scope. That said, when programs had a literacy focus—for example, early literacy programs—with effects on language development, we included these programs.

Third, we acknowledge that there is a diversity of programs—both within and outside public libraries—that target numerous levels of *outputs*, such as an increase in family literacy, improvement in family and community engagement (e.g., Every Child Ready to Read program), or changes in librarians' knowledge and skills. These programs build on the assumption that achieving these outputs will likely impact child literacy, reading, and attitudinal outcomes. Evaluations that assess these outputs in isolation, without also examining the results on the ultimate goal of child literacy and motivation to read, are beyond the scope of this review. Whenever these outputs were assessed in relation to literacy, reading, and motivation, we included them.

Finally, in our focus on “reading performance,” we did not limit the scope to any particular reading skill, so we aimed to include all the evidence we could identify on the development of children's knowledge and use of sounds, ability to associate sounds with letters, silent or oral reading fluency, vocabulary, and comprehension of written or oral language. However, because the papers we reviewed were largely focused on oral reading fluency and comprehension of written texts, these are the two primary reading skills explored in this study.

Table 1. Summary of Scope of the Review

Inclusion Criteria	Included Studies	Excluded Studies
Target groups	Early learners and students in general elementary education (age < 12 years)	Participants of <ul style="list-style-type: none"> remedial, preventive, and special education programs; gifted education programs; middle and high school reading programs; and programs for English learners or multilingual children
Content focus	Literacy and reading programs	Language development programs (included when they have a literacy focus)
Target program outcomes	Child-level outcomes on literacy skills, reading performance, motivation to read, and attitudes toward reading	Studies focused on family literacy, family and community engagement, or librarians’ knowledge and skills without showing effects on child outcomes
Target literacy and reading skills	The scope is not limited to any particular reading skill. However, included papers are largely focused on oral reading fluency and comprehension of written texts, so these are the two primary skills explored in the review.	

1.4 Document Roadmap

The remainder of this report is organized as follows. Section 2 presents the conceptual framework that underpins the study and provides the key definitions. Section 3 describes the methods used for the literature review. Section 4 presents the results in five subsections organized by best practices in content, instructional strategies, motivational practices, supportive resources, and family and community engagement. In section 5, we conclude with a discussion of our findings and recommendations for future research and programming.



2. Conceptual Framework and Key Definitions

The theoretical approach to reading that underlies the current review places an equal emphasis on the motivational aspects and cognitive processes of reading. Building on Guthrie and Wigfield's (2000) seminal work on the theoretical integration of motivation and comprehension, this approach posits that child engagement and enjoyment in reading are positively related to reading performance, both in preschool and early grades (Onatsu-Arivilommi & Nurmi, 2000) and in later elementary years (Guthrie et al., 2007; Wang & Guthrie, 2004). The approach also emphasizes the importance of reader attitudes, suggesting that positive attitudes toward reading can increase motivation and engagement, which in turn increase reading achievement (McKenna et al., 1995). **To improve reading performance, therefore, it is critical to integrate practices focused on motivation and attitudes with effective content, instructional strategies, and resources** (Guthrie et al., 2004, 2007; Wigfield et al., 2004). Below, we define the key terms relevant to this framework.

Reading motivation refers to the affective aspects of reading, such as readers' beliefs, values, and goals for the reading activity (Wigfield et al., 2016). Motivation to read is commonly conceptualized in two main categories: intrinsic reading motivation and extrinsic reading motivation (Stutz et al., 2016; Troyer et al., 2019). Intrinsic motivation is involvement oriented; therefore, readers with intrinsic motivation enjoy the reading activity and find it rewarding in itself (Stutz et al., 2016). Extrinsic motivation, on the other hand, is externally oriented; readers who are extrinsically motivated read to attain goals or external rewards, such as incentives or good grades (Stutz et al., 2016). It is often intrinsic reading motivation that is associated with literacy and reading development, whereas extrinsic reading motivation seems to be nonsignificantly or negatively related to reading performance (Stutz et al., 2016; Wang & Guthrie, 2004). In this review, we seek to collect evidence on both types of motivation, although the large majority of studies we reviewed focus only on intrinsic reading motivation as an outcome and its relationship with reading achievement.

Building on Guthrie et al. (2007), this review considers the motivational aspects of child reading in five primary categories:

1. *Interest in reading* is related to children's feelings toward texts, genres, topics, or authors (e.g., curiosity) that may stimulate involvement in and enjoyment during reading.
2. *Perceived control* refers to children's beliefs about their autonomy to make choices and decisions about their reading activities.
3. *Self-efficacy* is the belief in one's ability to read and understand well and accomplish different tasks.

4. *Collaboration and social interaction* refer to children’s participation in activities or communication with other individuals about reading.
5. *Involvement in reading* is the sense of immersion or being absorbed in reading whereby children spend extended amounts of time in engaged reading (pp. 284–285).

These motivational constructs are central to the engagement model of reading development (Guthrie & Wigfield, 2000) and have evidence-based links to reading achievement (Guthrie et al., 2007; Wigfield, et al., 2004).

Reading attitudes are defined as the feelings toward reading that motivate the reader to adopt or avoid positive reading behaviors (Cooter & Alexander, 1984), or approach or evade a reading situation (Alexander & Filler, 1976). In the papers we reviewed, reading attitudes are often not clearly distinguished from motivational aspects. Although some papers treat reading attitudes as a separate construct (e.g., Martinez et al., 2008; Newsome, 2008), others consider them as part of the motivational attributes (e.g., Duke et al., 2021; Kim & White, 2008; Park, 2011). In this review, we made a distinction between reading attitudes and motivation due to libraries’ focus on “love of reading” as a core attitudinal outcome. Where possible, we discussed evidence focused on reading attitudes specifically, showing if or how attitudes are related to motivation and/or reading outcomes.

Content refers to the substance of reading material, such as subject matter, thematic focus, and types of reading text (e.g., narrative versus informational texts).

Instructional strategies are the teaching approaches or methods aimed at building children’s knowledge, skills, and motivation for reading. Although it is primarily teachers who use these strategies in formal education settings, a wide range of other key actors also may utilize them outside of schools, including librarians, parents, caregivers, tutors, and community volunteers. This review is specifically focused on instructional strategies that aim to promote reading fluency, comprehension, motivation, and/or positive attitudes.

Resources support or aid the teaching and learning processes related to reading development, such as the use of technology, music, animals, and props (e.g., puppets, toys) during instruction as well as the use of space to provide a welcoming, comfortable area for children to read.

3. Methods of the Review

This report reviews quantitative and qualitative research literature on the best practices for promoting children’s reading. The review was initially commissioned to identify evidence only from public library programs. Due to limited research on libraries, the review was extended to include research from non-library programs. The review aimed to answer the following research questions:

- What are the best practices in library and non-library programs that promote children’s motivation and positive attitudes toward reading?
- To what extent and in what ways are these practices also related to improving reading competence?

Although this study is not a systematic review, it is an extensive review of two types of literature that we completed in two phases. In Phase I, we searched databases, collected relevant studies, and screened them against the inclusion criteria described below to decide which papers would move to the review and synthesis phase. In Phase II, we analyzed the included papers in NVivo, a qualitative data analysis software, and synthesized the findings to answer the research questions. Below, we describe the steps we undertook for each phase.

3.1 Phase I: Database Search and Screening

We conducted two separate database searches on library and non-library research literature. First, for each search, we ran the searches in the scholarly databases, including Academic Search Premier, Education Source, APA PsychInfo, and ERIC. To guide the search process, we used the [Population, Intervention/Issue, and Outcome \(PIO\) framework](#). The PIO framework helped develop the search strings that we used to run Boolean searches (AND/OR combinations of key terms). Given the review’s focus on programs implemented in the United States, we also included context/setting key terms in our search strings. (see Appendix B for detailed search strings.) We conducted searches with the following parameters:

- Key terms are searched in abstracts
- Dates: January 2000–February 2023
- Language: English
- Publication type: Academic journal, dissertation, report, review, working paper

Second, we ran the searches in Google Scholar. Because Google Scholar does not allow Boolean searches, we used more simplified combinations of the key terms. Finally, while reviewing papers in Phase II, we used their references to identify relevant studies.

We logged all returned papers into a spreadsheet and screened them for relevance. Table 2 presents the results from the overall search process (i.e., database searches, Google Scholar searches, and references identified through papers) and from screening for relevance.

Table 2. Search and Screening Results

Database Search Question	Number of Studies Identified Through Database Searches and Screened for Relevance	Number of Studies That Qualified for Phase II Review (including those not publicly available)	Number of Studies Included in the Review (publicly available)
Library search	228	15	12
Non-library search (general literature)	661	41	24

3.2 Phase II: Review and Synthesis of Findings

We imported all PDFs that met the criteria for inclusion into NVivo. For our analysis, we focused on the sections on literature reviews, the theoretical framework, findings, and the author’s conclusions. We developed deductive codes based on our conceptual framework (see Table 3), but also undertook an interpretive, inductive process to identify new themes that emerged from the data but did not align with the deductive themes. To ensure intercoder reliability, each team member independently coded the same two papers using the codebook and then compared and addressed any inconsistencies in their coding. Once consensus was achieved, each researcher coded an assigned subset of studies.

Table 3. Deductive and Inductive Codes

Thematic Category	Codes	Subcodes
Global codes	Positive effects or relationship	–
	Negative effects or relationship	–
	No effects or relationship	–
	Mixed results	–
Content-based approaches	Conceptual or thematic focus	–
	Text type	–
Instructional strategies: fluency	Read-aloud	–
	Repeated reading	–
Instructional strategies: cognitive skills	Developing reading strategies	–

Thematic Category	Codes	Subcodes
Motivational practices	Promoting interest	Hands-on activities
		Interesting and/or personalized texts
	Promoting perceived control	Self-selected reading
		Independent reading
	Building self-efficacy and confidence	Feedback
		Challenging texts
	Collaboration and social interaction	Book sharing
		Talking about books (discussion)
Reading together		
Involvement or engagement	–	
Increased exposure to books	–	
Supportive resources	Technology use	–
	Integrating music	–
	Dog-assisted learning	–
Family engagement		–
Community engagement		–

4. Findings

Overall, our review showed that reading programs—offered in or outside libraries—are often evaluated holistically, with little or no emphasis on outcomes for specific program components or implementation practices, such as duration and experience of implementer. Therefore, it is not always possible to attribute overall program outcomes to specific activities or to identify best practices. That said, successful programs included in the review tended to use a combination of similar content, practices, and resources, providing insight into what works to improve literacy and reading. So, to identify the best literacy practices, we collated and synthesized this information on the components of successful programs and matched it with theory. We present the findings from this analysis in the following sections. First, we discuss the best practices related to the content, instruction, and resources used in literacy and reading programs. Then, we present the findings on family and community engagement.

4.1 Content-Based Approaches

In this section, we present findings on the relationship between reading content, motivation, and performance. Specifically, we focus on the types of reading text and integration of knowledge domains with reading instruction for which effectiveness has been assessed in the existing research. All the findings presented in this section are from formal education settings. **Our search identified no library studies** that examined content-based approaches in library literacy programming.

KEY FINDINGS

- There are large evidence gaps regarding what types of texts are most appealing to children.
- Existing research does not assess the effects of narrative texts on reading motivation or outcomes. Evidence from programs embedding complex knowledge domains or concepts (informational texts) with reading instruction indicates positive effects on reading motivation and comprehension, particularly for upper elementary grades.
- Integration of knowledge domains with reading instruction has mixed results for younger students; there is limited evidence for positive effects on comprehension, but no effects on fluency or motivation.

Types of Reading Text

Types of reading text include narrative (e.g., fiction, fairy tales, novels) and information (e.g., trade books on science or history topics, instructional texts, primary source material). The

common assumption is that narrative texts are more attractive to children (Guthrie et al., 2007), but we were unable to identify any studies testing this assumption. Moreover, there is little research on the effects of specific genres on motivation and reading outcomes. The only comparative study on the text types examined how motivation for narrative versus informational books related to general reading motivation and reading comprehension (Guthrie et al., 2007). Pre-/post-test data and teacher ratings were collected for Grade 4 students who participated over 12 weeks in Concept-Oriented Reading Instruction (CORI), a reading program combining strategy instruction, science instruction, and motivational practices. Findings showed that **motivation for reading narrative texts was significantly correlated with general reading motivation and reading comprehension**, whereas motivation for reading informational texts was not significantly correlated with general motivation and reading comprehension.

Although a comparison of motivation for narrative versus informational texts indicated promising results for narrative texts (Guthrie et al., 2007), rigorous evaluations of programs using informational texts showed positive effects both on motivation and reading comprehension. We discuss these programs below, highlighting their focus on conceptual themes or knowledge domains.

Integration of Knowledge Domains with Reading Instruction

Existing evidence shows that **embedding a complex knowledge domain (e.g., ecology, American history, solar system) in reading instruction can increase motivation and reading comprehension, especially for the upper elementary grades** (Guthrie et al., 2004, 2007). In programs integrating a conceptual theme, children work with content goals while reading an informational text, which helps them build knowledge and understanding of a meaningful topic rather than focusing on skills or rewards only (Guthrie et al., 2004). For example, a quasi-experimental study of the CORI program with Grade 3 students showed that when content goals were used in ecology reading and in combination with hands-on activities, self-selected reading, interesting texts, collaboration, and strategy instruction, both reading motivation and comprehension increased significantly (Guthrie et al., 2004). In another CORI implementation study in Grade 4, students studied the survival processes of plants and animals in woodland and wetland habitats while receiving strategy instruction and engaging in motivational activities (Guthrie et al., 2007). A quasi-experimental evaluation of students' motivation indicated improvement in self-efficacy and involvement in reading, although there was no significant change in other aspects of motivation (i.e., interest, perceived control, collaboration).

Integration of conceptual themes or thematic units with reading instruction has mixed results for younger students. Specifically, although this approach has some promising results on reading outcomes, it appears to be ineffective on young children's reading motivation. For example, in the Model of Reading Engagement (MORE) intervention, Grade 1 students studied the topic of

Arctic animal survival in combination with cognitive and motivational activities that included concept mapping, argumentative writing, read-alouds, discussion, and collaborative research (Kim et al., 2021a). An experimental study of the intervention indicated significant positive effects on reading comprehension, but there were no effects on basic literacy skills (e.g., word reading fluency and oral reading fluency) and reading motivation (Kim et al., 2021a). Another MORE intervention, which had the same components and included an additional focus on social science texts, was implemented with Grade 1–2 students (Kim et al., 2021b). An experimental evaluation of the program found no significant effects on reading comprehension and basic literacy skills (Kim et al., 2021b). Although motivational activities were part of the implementation, motivation outcomes were not assessed. Finally, in a project-based learning implementation with Grade 2 students, teachers integrated project-based social studies units with reading instruction while engaging students in motivational activities, such as reflection, discussion, and collaboration (Duke et al., 2021). Findings from a randomized experiment showed significant positive effects on informational reading, but no effects on motivation (Duke et al., 2021).

4.2 Instructional Practices

This section presents findings on teaching approaches or methods designed to build children’s knowledge, skills, and motivation for reading. **We include evidence from both schools and nonformal learning environments, including libraries.** The findings are organized by instructional practices targeting reading fluency, comprehension, and motivation and attitudes toward reading.

KEY FINDINGS

- Studies assessing instructional practices in school programs often used an experimental or quasi-experimental design, revealing causal links or strong correlations between program inputs and outcomes.
- Evidence from the library programs was largely non-experimental, qualitative, or anecdotal, making it impossible to establish causal links to the program. That said, qualitative evidence provides valuable insights into participant experiences with program implementation, a quality missing from experimental studies.
- Evidence from library and non-library programs indicates the importance of combining various strategies to increase reading program effectiveness. Most of the successful programs embedded effective content, instruction, and motivational practices. For example, although exposure to interesting books was not effective when done in isolation, supplementing it with strategy instruction and engaging activities increased effectiveness.

- There is little research on what works for effective instruction or facilitation in library programs. However, existing evidence suggests promising results on programs incorporating read-aloud, book discussions, and social interaction.
- Strong evidence on non-library programs, especially in schools, indicates the effectiveness of the following instructional practices: read-aloud, repeated reading, developing cognitive strategies for reading, using interesting texts with adult scaffolding, balancing student autonomy with individualized support, using challenging texts with individualized support, book discussions, and collaboration and social interaction.

4.2.1 Instructional Practices Focused on Fluency

Some of the instructional practices targeting oral reading fluency include read-alouds, repeated reading, partner reading, choral reading, and echo reading (Newsome, 2008). This section is only focused on read-aloud and repeated reading, which have been assessed more commonly compared with other fluency practices. *This focus does not necessarily mean that partner reading, choral reading, and echo reading are not as effective but instead indicates a need for further research of these items to understand their impacts relative to read-aloud and repeated reading.*

Read-aloud. In this instructional practice, librarians, teachers, parents, or other facilitators read texts aloud to children. They incorporate “variations in pitch, tone, pace, volume, pauses, eye contact, questions, and comments to produce a fluent and enjoyable delivery” (Morrison & Wheeler, 2009, p. 111). Read-alouds can happen one-on-one, in a small group of students, or as a whole class. Read-alouds also can occur interactively where a reader “read[s] aloud a selected text to the whole class, occasionally and selectively pausing for conversation. Students think about, talk about, and respond to the text as a whole group or in pairs, triads, or quads. Both reader and listeners actively process the language, ideas, and meaning of the text (Fountas & Pinnell Literacy, n.d.). Because discussion and social interaction are among the core motivational practices (Guthrie et al., 2007), read-alouds can influence reading motivation while contributing to literacy and reading development.

Read-aloud was a key component in several programs **offered by both schools and libraries. Overall, reading approaches or programs incorporating read-aloud had a positive impact on literacy, reading outcomes, and motivation.** Because read-aloud is often part of an approach or program with many other components, its effectiveness cannot be attributed to read-aloud only. However, the fact that highly successful school programs—such as the Schoolwide Enrichment Model Reading Framework (SEM-R)—widely use this practice attests to its importance among reading experts (Reis et al., 2007, 2011, 2020). That said, not all school programs incorporating read-aloud in their design have mostly positive effects. For example, as

mentioned previously, MORE implementation with Grade 1 and 2 students did not improve children’s fluency and motivation, and had mixed results on their comprehension (Kim et al., 2021a, 2021b).

For public libraries, one of the most popular programs incorporating the read-aloud strategy is story time. Our review showed that until recently there was little to no systematic research on the effects of early literacy story time in U.S. libraries. Valuable Initiatives in Early Learning that Work Successfully 2 ([VIEWS2](#))—which is a 3-year research project funded by an Institute of Museum and Library Services (IMLS) grant (2011–14)—is the only rigorous evaluation we located on story time. Findings from this quasi-experimental study indicate the effectiveness of story time (Campana et al., 2016; Mills et al., 2014; [VIEWS2](#)). Year 1 data from 40 libraries in Washington state showed a strong correlation between librarians’ behaviors during story time and children’s early literacy skills (for children ages 0–60 months). The positive relationship between story time and early literacy development demonstrated the importance of incorporating a purposeful focus on early literacy skills in story time (Campana et al., 2016; [VIEWS2](#)). Based on this outcome, in Year 2, librarians were trained to incorporate phonological awareness and alphabetic knowledge in story time—two early literacy concepts related to reading readiness (Mills et al., 2014). Although outcomes on children are not available, there was a significant increase in librarians’ use of early literacy skills in story time ([VIEWS2](#)).

Qualitative or anecdotal evidence also suggests the effectiveness of library programs with a read-aloud component. For example, Real Men Read is a library-run initiative implemented with PK–Grade 6 students, especially boys (Grimes, 2021). As part of the initiative, male mentors from a university visit schools to read aloud grade-appropriate books to children. As they read, they interact with students, engaging them in discussions of the story as well as sharing their own experiences and love of reading. Even though the initiative was not evaluated systematically, informal assessment based on conversations with school staff and the author’s observations suggested that the initiative is likely to contribute to student motivation (Grimes, 2021). Books in Motion is another library-run initiative that incorporates read-aloud along with other motivational practices, such as independent reading, reading together, and discussion (Ness, 2010). As a community literacy project, this initiative primarily targets families and community members, encouraging them to read books (selected monthly by librarians) with their children. A qualitative study of the initiative found a perceived improvement in children’s attitudes toward reading as reported by participants (Ness, 2010). One teacher who participated in the program as a community member carried it over into his own classroom.

For 20 minutes each day, he read aloud from the selected book for the month while students followed along in their own copies. He explained:

“While I occasionally talked around the rich vocabulary and comprehension opportunities that arose in these engaging texts, mostly my kids benefited from simply getting to see how fun reading together can be.”

—School teacher as cited in Ness (2010)

Repeated reading. Repeated reading is an instructional strategy that requires children to read text several times to increase reading automaticity and accuracy (Samuels, 1979). Repeated reading is considered effective because “rather than continually encountering new text, readers have the opportunity to repeatedly read a given text until they have mastered it and can read it fluently” (Kuhn, 2005, p. 131). Indeed, there are numerous studies showing the method’s effectiveness on reading achievement, particularly fluency (Kuhn, 2005; Vadasy & Sanders, 2008; Vaughn et al., 2000). Yet, few studies examine how it may influence motivation and attitudes along with reading outcomes. **Overall, three studies we identified as having a major focus on this strategy confirm positive outcomes on fluency and comprehension for early elementary grades and on fluency only for upper grades.** The studies do not indicate the method’s effectiveness on motivation or attitudes toward reading. All three studies assess the school-based interventions. **Our search identified no library studies of this instructional strategy.**

One study we reviewed compared the effects of two programs on Grade 1–3 students: Read Two Impress (R2I) and Neurological Impress Method (NIM) (Young et al., 2017). Both programs used similar instructional practices, including assisted reading (one-on-one teacher-student reading), challenging texts (1 year above reading level), read-aloud (with good expression), and read together (teacher reads slightly ahead of student). The only activity that differentiated R2I from NIM was the addition of repeated reading. A pre-/post-test evaluation comparing R2I, NIM, and a control group showed that both R2I and NIM had significant positive effects on reading comprehension and fluency while neither had significant effects on attitudes toward reading (Young et al., 2017). The only difference between R2I and NIM was that R2I had a larger effect on students’ ability to retell the events from the text. Although extending NIM by adding a repeated reading component did not lead to large differences in results, R2I continued to produce positive effects on fluency and comprehension, and increased students’ ability to recall events from their reading.

Another study focused on an intervention that relied on repeated reading as the key instructional strategy, merging it with the following activities: teacher read-aloud (with appropriate prosody and rate), partner reading, silent reading, corrective feedback, and self-timing the reading rate or words identified correctly per minute (WCPM) (Farrell, 2015). Implemented with Grade 5–6 students, the intervention was added to the regular routine of the English language arts (ELA) class for the treatment group. A quasi-experimental evaluation showed that students who participated in the intervention had significantly higher mean scores

on fluency and reading motivation than students who did not receive the intervention (Farrell, 2015). There were no significant effects on comprehension scores.

Finally, a poetry intervention with third graders in regular and special education classes employed repeated choral reading where students read aloud in unison across multiple attempts (Newsome, 2008). The method also was combined with a variety of other strategies, including teacher read-aloud, discussion of the poem, and use of interesting texts. A quasi-experimental evaluation found that regular education students significantly improved their oral fluency and comprehension after participating in the intervention, whereas gains in reading outcomes were not significant for special education students (Newsome, 2008). For all participants, attitudes toward the poetry genre slightly improved, but there was a significant increase in their positive attitudes toward listening to the teacher-read poems.

4.2.2 Instructional Practices Focused on Cognitive Skills

In this section, we present findings on instructional practices that aim to improve children's cognitive skills and strategies for reading comprehension. There is a substantial body of research studying the instruction of reading strategies and skills in isolation (e.g., Dewitz et al., 2009; Gersten et al., 2001; Sanders & Garwood, 2022). Below, we present evidence on cognitive strategy instruction when it is used and evaluated in combination with motivation and/or attitudes toward reading. All the studies reviewed in this section examine the effects of school-based programs. **Our search identified no library studies of this instructional strategy.**

Cognitive strategy instruction. Seven of the studies we reviewed showed that **building children's knowledge and skills of reading strategies is critical to increase their reading fluency, comprehension, and motivation to read** (Guthrie et al., 2004, 2007; Kim & White, 2008; Lehman, 2011; Reis et al., 2007, 2011, 2020). These strategies include activating prior knowledge to process similar information in text, questioning the content being read, searching for information, organizing information graphically, summarizing and structuring content, and monitoring comprehension (Guthrie et al., 2004, 2007).

In one experimental study we reviewed, positive outcomes on achievement and motivation were largely attributed to instruction on reading strategies (Kim & White, 2008). For a summer reading intervention, Grade 3–5 students were randomly assigned to four conditions: (1) the control group, which did not receive the intervention; (2) the second group, which received books that matched their interests and reading levels but did not receive any strategy instruction or scaffolding; (3) the third group, which received the matched books and scaffolding; and (4) the fourth group, which received the matched books, scaffolding, and strategy instruction. The strategy instruction was provided by teachers and focused on five strategies (reread, predict, ask questions, make connections, and summarize) while scaffolding referred to oral reading support

by parents over the summer. The study found that children who received both the books and strategies on oral reading and comprehension showed a significant increase in vocabulary and comprehension compared with the control group and performed marginally better than the “books-only” students (Kim & White, 2008). These students also showed an increase in reading motivation, engaging in significantly more literacy-related activities than children in the control group. Finally, the study found no significant differences in achievement between the control and the “books-only” groups, indicating the importance of supplementing books with reading strategies and adult support (Kim & White, 2008).

In other studies, strategy instruction is mostly evaluated as part of a whole program with many other components, so the program’s effectiveness cannot be attributed to developing reading strategies only. For example, Scaffolded Self-Selected Reading (ScS-SR) is a reading approach that combines strategy instruction and scaffolding with self-selected and independent reading (Lehman, 2011). In one implementation of this approach with third graders, the teacher taught students seven reading comprehension strategies, as outlined by the Transactional Strategy Instruction framework: activating prior knowledge, text structure, predicting, questioning, imagery, monitoring, and summarizing (Reutzel et al., 2005 as cited in Lehman, 2011). Then, students selected texts to read during silent reading time, and the teacher interacted with students during this time to reinforce the use of the strategies. Pre-/post-test results and qualitative data showed that participation in the program was associated with an increase in reading fluency, comprehension, and motivation to read.

Strategy instruction also is a core component of CORI, which appears to be a successful program based on the existing evidence (see section 4.1 for more detail; Guthrie et al., 2004, 2007). CORI incorporates strategy instruction in a concept-oriented reading approach and supplements it with motivational practices. Similarly, SEM-R, a highly effective enriched reading program, often incorporates reading strategies along with differentiated reading instruction and motivational activities (Reis et al., 2007, 2011, 2020).

4.2.3 Instructional Practices Focused on Motivation and Attitudes

As discussed in section 2, our conceptual framework posits that merging motivational practices with instruction on cognitive skills and strategies is critical to improve reading competence. So far, our findings already highlighted the importance of this approach, showing the positive effects on numerous programs and interventions that incorporated motivational practices in their design. In this section, we explore the effectiveness of these practices more in depth. Building on Guthrie et al. (2007), we organize findings by interest, perceived control, self-efficacy, involvement, and collaboration.

Promoting interest. Interest in reading derives from the thoughts and feelings toward text, topics in text, genres, knowledge domains, authors, and activities taking place during reading (Guthrie et al., 2007). Children who are interested in reading have positive interactions with text and high engagement in the reading activity, which in turn is associated with high comprehension, recall, and organization of knowledge (Guthrie et al., 2007). In the programs we reviewed, the most common strategies used for promoting interest in reading were (1) the selection of interesting texts that matched children’s preferences and reading levels, and (2) the use of engaging materials and activities during reading. Below, we present evidence on the method’s effectiveness as a component of **both library and non-library programs**.

In most of the successful programs and approaches we reviewed, the use of interesting texts was a key component. To identify interesting texts, these programs primarily relied on self-selection of books where children either chose the specific texts or books they would read or expressed preference for what types of books they would like to read. For instance, in all implementation versions of SEM-R and CORI as well as in ScS-SR, we identified a focus on self-selection of texts and activities to promote interest in and perceived control over the reading practice (Guthrie et al., 2004, 2007; Lehman, 2011; Reis et al., 2007, 2011, 2020; also see below “promoting perceived control” for more detail).

However, only exposing children to interesting books appears to be ineffective unless supplemented with reading strategies and adult scaffolding (i.e., oral reading support). For example, a school-run summer reading program identified interesting books to send out to each student by using a scoring system that combined data from surveys on children’s reading preferences with test scores estimating their reading levels (Kim, 2007; Kim & White, 2008). Experimental evaluation of program implementation with Grades 3–5 indicated no significant difference between the control group and the children receiving the books when providing the books was not supplemented with strategy support and adult scaffolding (Kim & White, 2008). The same program was implemented with Grades 1–5 with a “books-only” approach—that is, without reading or engagement strategies (Kim, 2007). Experimental evaluation of the program similarly showed that the “books-only” approach, even of high-interest books, did not have significant effects on comprehension, although children who received the books reported engaging in more literacy activities (Kim, 2007). Finally, in a library-run summer reading program, second and third graders were instructed to read books they selected without any adult support or engagement activities (Dynea et al., 2015). Experimental evaluation of the program found no significant effects on children’s reading activities (associated with motivation in the paper) and reading achievement (Dynea et al., 2015).

Overall, these findings suggest that using interesting books only, without reading or engagement strategies, is likely not an effective approach to improve reading performance or

motivation to read. Interestingly, however, when *online texts* are aligned with children’s interests but not supplemented with additional support, they seemed to increase motivation while the effects on comprehension were still not significant (Ertem, 2013; for more detail on this study, see “Technology-Assisted Reading” in section 4.4).

Promoting perceived control. Perceived control is defined as “students making choices or decisions about reading and being in control of their reading activities” (Guthrie et al., 2007, p. 284). Perceived control is related to motivation in that people must feel both competent and autonomous in a task to reach a high level of intrinsic motivation (Ryan & Deci, 2000). In our review, we found two main practices for promoting perceived control: self-selected reading and independent reading. Self-selected reading refers to when students choose the texts and/or reading activities they will engage in, and independent reading is when students read on their own, with minimal to no assistance from adults (Guthrie et al., 2007). These two practices are not mutually exclusive and are often employed in tandem. Below, we present evidence on their effectiveness as a component of **both library and non-library programs**.

Overall, existing research from school-based programs shows that **self-selected reading and independent reading, when combined with appropriate support and strategies, seem to improve reading fluency, comprehension, and motivation to read**. In many programs we have discussed so far—including SEM-R, CORI, and ScS-SR—students received instruction on specific reading strategies and then were encouraged to pick the texts or books they would read during a designated independent reading time. While students read independently, teachers also provided individualized support. Both experimental evaluations and qualitative evidence indicated the effectiveness of these programs, both on motivation to read and on reading achievement (Guthrie et al., 2004, 2007; Lehman, 2011; Reis et al., 2007, 2011, 2020).

Balancing student autonomy with individualized teacher support seems to be particularly important during challenging reading experiences. To examine the level of scaffolding needed by Grade 4–5 students, Clark and Graves (2008) compared teachers’ use of directed text mediation (low student autonomy with focused reading activities facilitated by the teacher) with their use of open text mediation (high student autonomy with silent, independent reading and self-selected reading activities). Post-test results showed that for Grade 4 students, directed text mediation worked better than open text mediation for both comprehension and attitudes toward text, specifically for texts that were harder to comprehend (Clark & Graves, 2008). For fifth graders, who read the same texts as did fourth-grade students, whether instruction used directed or open text mediation did not make a significant difference in comprehension or attitudes. The authors concluded that teachers’ decisions about student autonomy and scaffolding should be guided by the degree of challenge that students are likely to experience while they read the text (Clark & Graves, 2008).

The only library-run initiative we identified was a summer reading program that combined self-selected reading and independent reading without providing any additional instruction or social activities (Dydia et al., 2015). Students were encouraged to read any book of their choice for 20 minutes a day over the course of 36 days, keeping track of their reading in a booklet. As mentioned previously, the impact study of the program found no significant effects on children's reading activities and reading achievement, indicating the importance of combining self-selected, independent reading with effective reading strategies and individualized support (Dydia et al., 2015).

Building self-efficacy and confidence. Self-efficacy in reading is defined as “beliefs a person has about his or her capabilities to learn or perform behaviors at designated levels” (Schunk & Zimmerman, 1997, p. 34). Self-efficacy has evidence-based links to reading achievement (Guthrie et al., 2007; Wigfield, et al., 2004). When students feel efficacious about reading, they are motivated to continue to read (Guthrie et al., 2007). Practices that are known to support students' self-efficacy include reading challenging texts, reading strategy instruction, and providing constructive, motivational feedback (Guthrie et al., 2004).

In this review, programs that had an explicit focus on self-efficacy were all implemented in the school setting. **Our search identified no library studies of this instructional practice. These programs primarily used strategy instruction and/or challenging texts (i.e., texts above students' current reading levels) to build self-efficacy and confidence in children and had positive effects on reading performance and motivation.** Because we discussed strategy instruction under “cognitive skills” (see section 4.2.2.), here we only present evidence on using challenging texts. Moreover, although it is highly likely the programs also relied on providing various forms of feedback to readers, this component was not often mentioned explicitly as a program component, so we did not include it in our discussion.

We located three successful programs embedding challenging texts in their design, although program effectiveness cannot be attributed to this specific component due to the existence of other activities. As we discussed previously, in a comparative implementation of the NIM and R2I programs with Grade 1–3 students, the programs mostly employed the same activities, including the use of challenging texts that were approximately 1 year above students' independent reading level (Young et al., 2017). (The only difference between the programs was the addition of repeated reading to R2I; see section 4.2.1 for more detail.) When the reading of challenging texts was combined with one-on-one teacher support, read-aloud, and read together (the teacher reads slightly ahead of the student), both programs significantly improved reading comprehension and fluency, while their effects on attitudes toward reading were not significant (Young et al., 2017). Similarly, SEM-R used texts slightly above students'

grade levels (Reis et al., 2007, 2011, 2020). Teachers provided differentiated reading support to help students learn through the challenging reading experiences.

Collaboration and social interaction. Collaboration and social interaction in reading includes interpersonal behavioral patterns, such as book sharing, book discussions, reading together, and peer-assisted learning (Guthrie et al., 2007). Interactions may occur between children and their friends, peers in class, teachers, tutors, and family members. Many programs we included in this review incorporated book discussions, reading together, and collaborative activities in their design. In this subsection, we present evidence on **both library and non-library programs**.

We identified three studies that assessed the effectiveness of library programs with a focus on collaboration and interaction. Because none of these studies are experimental, and mostly qualitative, the results should be considered cautiously. **Overall, qualitative findings point at promising results on reading motivation and attitudes.** For example, Guys Read summer book club is a summer reading program in which boys from Grades 4–9 come together with male facilitators to discuss selected books (Dillon et al., 2017). The program aims to encourage participants to read more over the summer and beyond, developing positive relationships and fostering positive attitudes toward reading. Based on pre-/post surveys and qualitative data, most participants reported reading more after participating in the program and said they would continue reading more in the future (Dillon et al., 2017). They particularly enjoyed engaging in book discussions, and, as one boy mentioned, “[t]alking to other kids about how they feel about books” (Dillon et al., 2017, p. 7). Similarly, the Real Men Read program—run by a library and implemented in schools—brought together boys from PK–Grade 6 with male mentors from a university (Grimes, 2021). The mentors read aloud books and engaged children in discussions of the story. Informal assessment based on conversations with school staff and the author’s observations indicated a potential influence on student motivation (Grimes, 2021). Books in Motion also focused on reading together and book discussions, both within the family and as a community activity (Ness, 2010). Qualitative data from participants showed perceived improvement in children’s attitudes toward reading (Ness, 2010).

In many successful school programs we have reviewed, collaboration and social interaction was part of the program design, likely contributing to the positive effects. In CORI, for example, student collaboration was supported with various reading activities whereby students were able to share their questions, meanings of texts and core concepts, and information they gained (Guthrie et al., 2004, 2007). In project-based learning, students worked collaboratively on intellectually challenging, authentic issues and engaged in discussions (Duke et al., 2021). Indeed, discussion of the reading texts in particular was a key component in numerous school programs or teaching approaches (Lehman, 2011; Newsome, 2008). Not all programs that consisted of collaboration and interaction were effective, however. MORE, which engaged

students in collaborative research, had mixed results on comprehension and no significant effects on fluency and motivation (Kim et al., 2021a, 2021b).

Involvement or engagement. Student involvement or engagement in reading is defined as students' sense of immersion or absorption during reading and the investment of many hours of reading books and materials (Reed & Schallert, 1993). Building on Guthrie et al. (2007), we distinguish involvement from interest in reading by associating the former with amount of time spent on reading. A reader with low involvement can report high interest in a topic, although the reverse—high involvement versus low interest—may rarely occur (Guthrie et al., 2007). Research exploring the effects of involvement on reading achievement only indicates the positive relationship between reading amount and reading development (Allington & McGill-Franzen, 2021). In this review, we focus on research examining the method's effectiveness on both reading achievement and motivation to read. Of the programs or approaches we reviewed, only three explicitly addressed involvement in reading: two in schools and one as a literacy immersion camp. **Our search identified no library studies of this instructional practice.**

Overall, all three programs we reviewed had positive effects on engagement and promising results on reading outcomes. Of the school interventions, the first one used personalized online texts to improve reading comprehension and motivation for fifth graders (Ertem, 2013). Texts were personalized based on each student's information, interest (e.g., name; favorite objects, places, events), and choices of color, font style, and pictures. The experimental evaluation revealed that although there was no significant effect on comprehension scores, students reading personalized texts showed higher motivation, interest, and engagement in reading (Ertem, 2013). The SEM-R program also had a student involvement and engagement component whereby students were given designated time to explore different aspects of reading, such as going on the computer and looking at author webpages or complete interest-based projects. The experimental evaluation of the SEM-R implementation in five elementary schools found increased student enjoyment and engagement in reading across all the implementing schools (Reis et al., 2011). The findings also showed a significant increase in reading fluency in two of the schools and improved reading comprehension in one of the schools, a high-poverty urban school.

The third program, Camp Read-a-Rama, is a summer reading program using literacy immersion camps to increase reading engagement and attitudes toward reading (Copeland & Martin, 2016). Targeting young children aged 4–11, the program was initially run by Clemson University (2009–11) and was later taken over by the University of South Carolina (2012–14). As a summer day camp, the program combines interesting books and reading experiences with engaging outdoor activities and educational fun. Social interaction with peers and camp staff, as well as family and community engagement, are other important components of the program. To evaluate the program's effectiveness, Copeland and Martin (2016) conducted pre-/post-surveys

with children, parents, and caregivers. They also interviewed parents and caregivers. Survey data from parents and caregivers revealed a statistically significant, perceived improvement in children’s attitudes toward reading. In surveys and interviews, parents and caregivers also reported improvement in the following areas: reading and listening skills, reading fluency, social skills, quantities of reading, variety in the subjects and genres that children chose to read, and the ability to focus when reading (Copeland & Martin, 2016, p. 123). Based on 6 years of program experience, the authors identified the following factors as contributing to the program’s success: staffing and professional development; a low staff-to-child ratio; interesting and diverse texts; an inclusive learning environment; engaging, creative, and real-life activities; and parent and community engagement.

4.4 Supportive Resources

In this section, we discuss the effectiveness of resources used to support teaching and learning processes related to literacy and reading development. These resources are often integrated in the content, curriculum, and instruction to make the reading experience more enjoyable and engaging for children and, in turn, to improve literacy and reading skills (St. Clair, 2014; Long & Szabo, 2016; Kirnan et al., 2016). Our review identified four categories of resources that have been evaluated in the existing research: technology, play and games, animals (specifically dogs), and music. Of the studies included in this section, **only one study is from the library context**, examining the effectiveness of space for playful learning on developing children’s early literacy skills.

KEY FINDINGS

- There are large evidence gaps regarding the effectiveness of supportive resources in reading instruction, especially for the use of play, games, and technology.
- Limited evidence suggests promising results from library programs incorporating space for playful learning and mixed results from technology use, specifically digital texts, and integration of music in reading instruction.
- There is a growing body of research on dog-assisted reading programs. The results from previous reviews of literature are generally promising, although findings from our review offered mixed results.

Space for Playful Learning

There is strong evidence showing the value of play and games in child development (Robinson, 2019). Play and games can enhance children’s social and emotional competencies—such as problem solving, creativity, resiliency, and collaboration—and contribute to their educational

development (Taylor & Boyer, 2019; Case-Smith & O'Brien, 2010). *Playful learning* embeds play and games with explicit learning objectives (Little, 2021). Children's engagement in playful learning activities is enriched with learning materials and scaffolded by adults.

High-quality, literacy-rich environments or spaces integrating playful learning are critical to improve young children's language and literacy skills, both in and outside of formal education settings (Little, 2021). Given that early learners only spend a small portion of their waking hours in classrooms, it is essential to create literacy-rich, playful environments beyond schools, such as in libraries and museums, where children can play and learn while building meaningful relationships with peers, parents, and librarians (Little, 2021).

We located two studies on the use of spaces for reading, both from the library setting. Specifically, the studies examined the role of library spaces in playful learning, **suggesting promising results for the effectiveness of library spaces on children's language development and engagement in learning activities**. One of the studies assessed the effectiveness of the Play-and-Learn Spaces project implemented at three neighborhood libraries in Philadelphia (Hassinger-Das et al., 2020). The project built enriching library spaces where children (ages 1–10) could learn and play with their parents and caregivers. The spaces consisted of cutout reading nooks, pattern blocks, a magnetized board with words and letters, a stage for performances, and a climbing wall with letters to create words. This observational study compared the children and their caregivers using these spaces with those from a non-implementing library (Hassinger-Das et al., 2020). The findings revealed that children using Play-and-Learn Spaces showed improvement in their language development, specifically an increase in their use of spatial-related language and letter-/sound-related language.

In the second study, a research team conducted a 3-year, mixed-methods evaluation of Every Child Ready to Read, which is a parent education initiative implemented by more than 6,000 libraries across the United States (Neuman et al., 2017). Although the study was focused on parents' engagement without examining child outcomes, naturalistic observations of the use of library spaces indicated child-parent engagement with books and other learning activities in these spaces (Neuman et al., 2017). Researchers reported that they "frequently saw children, parents, and grandparents spending time together, working on homework, reading, and playing" (Neuman et al., 2017, pp. 16–17).

Technology-Assisted Reading

Technology-assisted reading refers to the use of computers, tablets, smartphones, apps, and other digital resources (e.g., digital or online texts) to promote motivation to read, positive attitudes toward reading, and reading performance. There is a substantial body of research examining the effects of technology use on reading achievement only, generally indicating

positive but small effects on reading skills (Cheung & Slavin, 2012, 2013). For this review, we sought to identify studies assessing the outcomes both on motivation and reading performance. **Our search returned only two studies, both school-based, that indicated no significant effects on reading outcomes and mixed results on motivation and attitudes toward reading.**

One of the studies evaluated the effectiveness of a teaching approach that used digital texts, or e-readers, for reading instruction (Long & Szabo, 2016). For this study, teachers offered guided reading instruction to fifth-grade students either using e-readers (treatment group) or hard copies (control group). Findings from the quasi-experimental study found that using e-readers had no significant effect on students' reading motivation, attitudes towards reading, or reading comprehension (Long & Szabo, 2016). The qualitative component of the study revealed that technical issues with the e-readers, such as freezing, losing battery, and difficult connectivity, led to a lot of class time being wasted. The second study also assessed the use of digital texts, but this time the primary strategy was the personalization of online texts to promote reading through engagement (Ertem, 2013). The online texts were tailored to students' interests in topic and preferences in color, font style, and pictures. The experimental evaluation found significant positive effects on reading motivation, although no significant effects on comprehension, suggesting the potential of digital texts for reading engagement when they match children's interests and preferences.

Animal-Assisted Reading

In our review of programs using supportive resources, we found the highest number of studies on animal-assisted reading, specifically dog-assisted reading programs. In these programs, either children read to dogs (one-on-one or in small groups) or dogs are present in the learning environment when an adult is reading to children. A review of dog-assisted reading programs showed that these programs were implemented in a variety of formal and non-formal learning environments, including public libraries, school libraries, after-school programs, and classrooms (Kirnan et al., 2016). The programs ranged from highly structured sessions to informal activities, some targeting the whole class while others focusing on specific students with reading difficulties. Although the methodological rigor varied widely across evaluations of the programs, the authors of the reviewed studies agreed that "the use of therapy dogs as an addition to reading programs increases student interest and enthusiasm, improves self-esteem, reduces disruptive behaviors, and leads to improvements in reading and writing skills" (Kirnan et al., 2016, p. 639).

Our review of three non-library programs *partially* confirmed the effectiveness of dog-assisted reading programs. Two of the programs we reviewed seemed to improve reading skills, while the third program likely helped to prevent the summer slide in reading. Moreover, quantitative findings indicated no effects on attitudes toward reading; however, qualitative

data suggested a perceived increase in positive attitudes. In one of these programs, therapy dogs visited each classroom (Grades K–4) once a week for about 1 hour (Kirnan et al., 2016). During dog visits, students in regular classrooms read to the dogs in small groups, whereas students in special education classes mostly read to the dogs individually. Dogs also were incorporated into reading and writing in other ways; for example, fourth graders created a dog-themed class newspaper, and kindergarteners had dog-themed vocabulary exercises. A quasi-experimental evaluation of the program showed a significant increase in reading scores only for children in kindergarten; however, the qualitative component indicated perceived improvements in reading and writing skills as well as attitudes toward reading across all grade levels (Kirnan et al., 2016). When explaining the improvement in reading, some participants pointed at students' willingness to take risks and try new words when reading aloud to a dog: "The dog doesn't judge. It won't say, 'You missed a word'... The dog just hangs out and loves all the attention" (a dog owner, as cited in Kirnan et al., 2016, pp. 647–648).

For the experimental evaluation of another program, Grade 2–5 students were randomly assigned to two groups: one group read to a tutor/dog team twice a week for 15 minutes, while the other group read to their peers for the same amount of time (Levinson et al., 2017). Results showed that students who read to the tutor/dog team tended to have higher oral reading fluency outcomes than those who read to peers, although the results did not reach the level of statistical significance (Levinson et al., 2017). The authors noted that the positive effects were "more prominent and consistent" at Grade 2 than at later grades, suggesting that the dog-assisted programs may be more effective for younger children (Levinson et al., 2017, p. 50). The study found no significant effects on children's attitudes toward reading.

Finally, the Reading Education Assistance Dogs (R.E.A.D) program was implemented with Grade 2 students over 5 weeks in July and August (Lenihan et al., 2016). Children who participated in the R.E.A.D. program read to the dogs individually over two half-hour sessions, while the control group read to the human volunteers. The evaluation showed a numerical but not statistically significant improvement in reading ability and a non-significant change in attitudes toward reading (Lenihan et al., 2016). Importantly, however, the control group experienced a non-significant decrease in reading ability and a significant decrease in attitudes toward reading. Given that the program was implemented in the summer months, the authors suggested it might have helped prevent a summer slide in reading: "Although further research is required, the R.E.A.D. program could be a fun, creative way to reduce the loss of reading ability in children during vacation" (Lenihan et al., 2016, p. 7).

Using Music for Reading Instruction

Existing literature makes a connection between music and literacy development, suggesting that integrating music in reading instruction has the potential to bolster student engagement,

develop language, and improve reading skills (Darrow, 2008; Hansen & Bernstorf, 2002; Mizener, 2008). There is little research, however, assessing the links between music, motivation, and literacy or reading development. **Also, the only evaluation we identified indicates mixed results.** For this evaluation, the researcher, who also is a teacher, designed and implemented an integrated music curriculum to support the reading achievement of kindergarten students in a Midwestern suburban elementary school (St. Clair, 2014). The integrated music curriculum was comprised of lesson plans that started with the introduction of a text, followed by the teacher encouraging students to use instruments and songs to engage with the story. Quantitative results from the mixed-methods experimental study showed that the intervention did not have a significant effect on reading achievement outcomes (i.e., letter-naming fluency and letter-sound fluency; St. Clair, 2014). Based on personal observations of students, the researcher reported observable changes in children’s motivation and attitudes toward reading (St. Clair, 2014). Although this is a promising area, more research is needed to understand the role of music in engagement, motivation, and reading outcomes.

4.5 Family and Community Engagement

In this review, we are interested in family and community engagement to the extent that it is a key component of literacy and reading programs focused on increasing motivation and reading outcomes. **As such, programs that aim to improve parents’ and caregivers’ own literacy skills or involvement in their children’s reading (e.g., Every Child Ready to Read program) are outside the scope of this review.**

KEY FINDINGS

- Rigorous research from non-library settings showed that programs facilitating parent and caregiver engagement in children’s reading improved child interest in reading, literacy skills, and reading outcomes. The effectiveness was attributable to parent and caregiver engagement.
- Although families are at the center of many library programs, there is little research assessing library programs with a family engagement component. Existing evidence is qualitative and verifies the positive findings from non-library programs.
- The review identified a focus on community engagement only in library-run programs, primarily in the form of library-university-school partnerships. Qualitative and anecdotal evidence suggested promising results on children’s reading motivation and reading skills.

Family Engagement

In this review, the programs that involved parents and caregivers aimed to enhance the home literacy environments in support of children’s literacy and reading development. **All these programs were run by non-library entities, except for one library book club program. The programs generally reported positive effects due to parent and caregiver engagement.**

One group of programs that rely on family engagement is book giveaway programs, which aim to increase exposure to books for children from all backgrounds. The programs send out free books to homes and encourage caregivers to begin reading to their children soon after birth (de Bondt et al., 2020). A meta-analysis of evidence from 44 studies examined the effectiveness of three book giveaway programs implemented with young children (<5 years old) in and outside of the United States: the Dolly Parton Imagination Library, Reach Out and Read, and Bookstart (de Bondt et al., 2020). The results showed that family participation in book giveaway programs had a statistically significant effect on children’s literacy-related behavior and skills, including children’s interest in reading, literacy skills, school results, and expressive and receptive vocabulary. The study also found that the Reach Out and Read program had a substantially higher effect on literacy-related behavior and skills compared with the two other programs. The difference was explained by the information and guidance provided to parents by the Reach Out and Read program (de Bondt et al., 2020). An evaluation examining the effects of the Dolly Parton Imagination Library only also confirmed these findings (Funge et al., 2017). Surveys and focus groups with parents indicated an increase in caregiver-child shared book reading, which in turn had perceived positive effects on children’s reading, love of reading, and readiness for school (Funge et al., 2017).

Summer reading programs similarly demonstrate the effectiveness of family engagement. We described the implementation of a school-based summer reading program in section 4.2.2. “Cognitive Strategy Instruction.” Findings from this program showed that parents’ oral reading support, combined with teachers’ strategy instruction, significantly increased children’s vocabulary, comprehension, and motivation to read (Kim & White, 2008). Providing children with books without any reading or engagement support from parents and teachers did not improve reading outcomes or motivation (Kim, 2007; Kim & White, 2008).

Finally, Books in Motion, a library community literacy program, encouraged parents and children to read selected books together and discuss them afterwards (Ness, 2010). At the end of each month, all parents and children came together to watch a film adaptation of the book and discuss it as a community. A qualitative evaluation of the program indicated perceived improvement in children’s attitudes toward reading, as reported by participants (Ness, 2010).

Community Engagement

Of the programs we reviewed, **only library-run programs had a focus on engaging community members in children’s literacy and reading development.** Community involvement was often facilitated through partnerships consisting of libraries, universities, schools, and volunteers.

Qualitative and anecdotal evidence shows promising results from such initiatives. For example, Sycamore Readers, an after-school tutoring program, focused on struggling students from Grades K–5 in a community with high rates of unemployment and poverty (Bauserman & Knaebel, 2016; Knaebel et al., 2013, 2015). The program took place in the local public library whereby students from the local university, primarily elementary education majors, provided one-on-one tutoring support to children using the Sycamore Readers tutoring model (including authentic children’s literature, vocabulary from the literature, prediction and higher order thinking questions, and literature-based writing activities). The library provided supervision for the program as well as materials (e.g., books, manipulatives, software, magazines), office supplies, and tutoring supplies. An evaluation using a pre-/post-test design showed that children scored higher on the reading tests after their participation in the program (Knaebel et al., 2015). Although the results cannot be attributed to the program only, they were promising for the value of one-on-one tutoring support for reading. Post-surveys indicated that students also perceived an improvement in their motivation to read, enjoyment of reading, and confidence in their reading abilities (Knaebel et al., 2013, 2015). Anecdotal evidence from library staff and parents supported the findings from students, indicating a perceived increase in children’s reading levels and positive attitudes toward reading (Bauserman & Knaebel, 2016).

The Real Men Read initiative also relied on a partnership between the local library, university, and schools (Grimes, 2021). Run by the local library, in this program, students from the local university visited schools to read aloud books to children in PK–Grade 6. Acting as mentors and reading tutors, these university students interacted with children while reading together, engaging them in discussions of the story as well as sharing their own experiences and love of reading. The program was not evaluated systematically; however, conversations with school staff and the author’s observations suggested the program’s positive influence on students’ motivation to read (Grimes, 2021).

Finally, as part of Project Booktalk, university students volunteered to lap-read to infants, toddlers, and preschoolers in childcare homes (Lamme et al., 2004). Based on their experiences of 10-week lap reading, program volunteers reported that children developed strong book preferences and learned how to engage with and enjoy books. Overall, they observed, children made progress toward becoming engaged readers; for example, staying focused while listening, talking about the pictures, and predicting parts of a story.

5. Discussion and Recommendations

This review showed that, to date, there is very little empirical evidence on the effectiveness of literacy and reading programs run by libraries. Therefore, most of the findings we discussed come from nonlibrary programs, particularly school-based interventions. Overall, the research varies widely in terms of the methodological rigor (i.e., control groups, randomizations, pre-/post-measures) and data sources (i.e., standardized test scores, self- or adult report of child attitudes, observation of behavior, anecdotes). The existing research generally focuses on the effectiveness of instructional and motivational practices, while far less is known about the effects of content and resources used in the programs. This concluding section has two main goals. First, it discusses the gaps in the existing evidence base and suggests areas of inquiry for future research. Second, based on the available evidence, it draws conclusions and offers recommendations for future programs and interventions.

5.1 Evidence Gaps and Recommendations for Future Research

Overall, this review showed that there are large evidence gaps on the effectiveness of the literacy and reading programs run by public libraries. Moreover, most of the existing evidence is qualitative or anecdotal, falling short of showing the causal pathways between program components and outcomes. As a result, we still know little about what works or what does not work in library programs to improve reading performance or love of reading.

There is a larger, more rigorous evidence base on the effectiveness of literacy and reading programs implemented outside of public libraries, especially school interventions. It appears that most activities used in these programs—and the rationale behind them—are similar to those of library programs. As such, until more research is available on library literacy programs, it is possible to extrapolate results from non-library programs, interventions, and approaches.

More research on library literacy programming is needed, particularly in the following areas:

- Given that books are at the center of all the literacy activities in public libraries, it is important for future research to identify what types of texts used by libraries are most effective in promoting children’s motivation, literacy, and reading development.
- More research is needed to better understand if and how instructional methods or strategies used in libraries affect children’s reading, motivation, and attitudes. For example, some of the common literacy practices used by libraries are story time, playful learning, book clubs, early literacy activities, and technology use. It is imperative to study these strategies and identify best practices to increase their effectiveness in library contexts.

- Although parents and caregivers are at the center of many library programs, there is little research assessing the effectiveness of family engagement. Although evidence from non-library programs indicates the importance of involving parents and caregivers in child reading activities, these are summer reading and book giveaway programs, with parent support mostly happening at home. Because libraries aim to engage parents and caregivers in many other ways—for example, literacy spaces in libraries, book clubs, and early literacy activities—future research should examine family engagement in library settings to understand the effects and identify the persistent gaps.

5.2 Current Evidence Base and Recommendations for Future Interventions

Content used in literacy programs and interventions. Existing evidence from school programs embedding complex knowledge domains or concepts (i.e., informational texts) with reading instruction indicates positive effects on reading motivation and comprehension, particularly for the upper elementary grades (Guthrie et al., 2004, 2007). Integration of knowledge domains with reading has mixed results for younger students; there is limited evidence for positive effects on comprehension, but no effects on fluency or motivation (Duke et al., 2021; Kim et al., 2021a, 2021b). Because our review did not identify any similar studies from the library context, to date, we know little about to what extent or in what ways these findings may translate into library programming. However, given rigorous evidence showing positive effects on reading comprehension, reading programs should consider using interesting, real-world topics from various knowledge domains (e.g., ecology, American history, the solar system), especially for upper elementary children.

Instructional practices. Arguably, the most important findings that emerged from our review is the importance of combining various strategies to increase program effectiveness. Most of the successful programs we reviewed embedded effective content, instructional methods, and motivational practices. For example, school programs such as SEM-R, CORI, ScS-SR, R2I, and NIM all integrate numerous strategies and approaches shown to be effective by previous research (Lehman, 2011; Reis et al., 2020, 2011, 2007; Young et al., 2017). To increase effectiveness, programs must identify and use effective combinations of the best literacy practices.

Another critical finding of the review is that only exposing children to books, even those of high interest, appears to be ineffective unless supplemented with reading strategies and adult scaffolding. This finding is based on evidence from both libraries (Dynia et al., 2015) and non-library programs (Kim, 2007; Kim & White, 2008). Increased exposure to books is the core strategy for many literacy programs in or outside libraries, such as summer reading programs and book giveaway programs. Given the growing, rigorous evidence on book exposure, it is imperative to complement children’s reading of books, especially over the summer, with family scaffolding, peer book discussions, and other engaging and, ideally, strategy-based activities.

Overall, regarding specific instructional practices, our review found little research on what works in library contexts. However, existing evidence suggested promising results on programs incorporating read-aloud, book discussions, and social interaction. For non-library programs, there is strong evidence, especially from schools, indicating the effectiveness of the following practices: read-aloud, repeated reading, developing cognitive strategies for reading, using interesting texts with adult scaffolding, balancing student autonomy with individualized support, using challenging texts with individualized support, book discussions, and collaboration and social interaction.

Family and community engagement. Existing evidence from non-library programs—specifically summer reading programs and book giveaway programs—*showed that parents and caregiver engagement improved literacy skills, reading performance, and attitudes toward reading.* Qualitative evidence from libraries verified these findings. Our review identified a focus on community engagement only in library programs. Qualitative and anecdotal evidence suggested that programs facilitating community participation had promising results on children’s reading motivation and reading skills.

Appendix A. References

- Alexander, J., & Filler, R. (1976). *Attitudes and reading*. International Reading Association.
- Allington, R. L., & McGill-Franzen, A. M. (2021). Reading volume and reading achievement: A review of recent research. *Reading Research Quarterly, 56*(S1), S231–S238.
- Bauserman, K. L., & Knaebel, D. R. (2016). Sycamore Readers: All stakeholders win! *The Journal of Community Engagement and Higher Education, 8*(2).
- Briggs, L. D. (1987). A poor attitude: A deterrent to reading improvement. *Reading Horizons, 27*(3), 202–208.
- Campana, K., Mills, J. E., Capps, J. L., Dresang, E. T., Carlyle, A., Metoyer, C. A., ... & Kotrla, B. (2016). Early literacy in library storytimes: A study of measures of effectiveness. *Library Quarterly: Information, Community, Policy, 86*(4), 369–388.
- Case-Smith, J., & O'Brien, J. C. (2010). *Occupational therapy for children*. Mosby Elsevier.
- Cheung, A. C., & Slavin, R. E. (2012). *The effectiveness of education technology applications for enhancing reading achievement in K-12 classrooms: A meta-analysis*. Center for Research and Reform in Education.
http://173.213.237.113/word/tech_read_April_25_2012.pdf
- Cheung, A. C. K., & Slavin, R. E. (2013). Effects of educational technology applications on reading outcomes for struggling readers: A best-evidence synthesis. *Reading Research Quarterly, 48*(3), 277–299.
- Clark, C., & Douglas, J. (2011). *Young people's reading and writing. An in-depth study focusing on enjoyment, behaviour, attitudes, and attainment*. National Literacy Trust.
- Clark, K. F., & Graves, M. F. (2008). Open and directed text mediation in literature instruction: Effects on comprehension and attitudes. *The Australian Journal of Language and Literacy, 31*(9).
- Cooter, R. B., & Alexander, J. E. (1984). Interest and attitude: Affective connections for gifted and talented readers. *Reading World, 24*(1), 97–102.
- Copeland, C. A., & Martin, M. H. (2016). Camp Read-a-Rama® and fully-engaged literacy learning: Implications for LIS education. *Journal of Education for Library and Information Science, 57*(2), 112–130.

- Darrow, A. (2008). Music and literacy. *General Music Today*, 21(2), 32–34.
- de Bondt, M., Willenberg, I. A., & Bus, A. G. (2020). Do book giveaway programs promote the home literacy environment and children’s literacy-related behavior and skills? *Review of Educational Research*, 90(3), 349–375.
- Dewitz, P., Jones, J., & Leahy, S. (2009). Comprehension strategy instruction in core reading programs. *Reading Research Quarterly*, 44(2), 102–126.
- Dillon, D. R., O’Brien, D. G., Scharber, C., & Nichols-Besel, K. (2017). Motivating boys to read: Guys Read, a summer literacy library reading program for boys. *Children & Libraries*, 15(2), 3–8.
- Duke, N. K., Halvorsen, A. L., Strachan, S. L., Kim, J., & Konstantopoulos, S. (2021). Putting PjBL to the test: The impact of project-based learning on second graders’ social studies and literacy learning and motivation in low-SES school settings. *American Educational Research Journal*, 58(1), 160–200.
- Dynia, J. M., Piasta, S. B., Justice, L. M., & Columbus Metropolitan Library. (2015). Impact of library-based summer reading clubs on primary-grade children’s literacy activities and achievement. *The Library Quarterly*, 85(4), 386–405.
- Ertem, I. S. (2013). The influence of personalization of online texts on elementary school students’ reading comprehension and attitudes toward reading. *International Journal of Progressive Education*, 9(3), 218–228.
- Farrell, M. (2015). *Examining the effects of repeated reading on the adolescent reader’s accuracy, rate, prosody, reading comprehension, and motivation to read* [Unpublished doctoral dissertation]. Northeastern University.
- Fountas & Pinnell Literacy. (n.d.). What is interactive read-aloud? [Blog].
<https://fpblog.fountasandpinnell.com/what-is-interactive-read-aloud>
- Funge, S. P., Sullivan, D., & Tarte, K. (2017). Promoting positive family interactions: Evaluating a free early childhood book distribution program. *Early Childhood Education Journal*, 45(5), 603–611.
- Gersten, R., Fuchs, L. S., Williams, J. P., & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of research. *Review of Educational Research*, 71(2), 279–320.
- Grimes, N. (2021). Real Men Read—A library led reading initiative program. *College & Undergraduate Libraries*, 1, 105–118.

- Guthrie, J. T., Hoa, A. L. W., Wigfield, A., Tonks, S. M., Humenick, N. M., & Littles, E. (2007). Reading motivation and reading comprehension growth in the later elementary years. *Contemporary Educational Psychology, 32*(3), 282–313.
- Guthrie, J. T., & Wigfield, A. (2000). Engagement and motivation in reading. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Reading research handbook* (Vol. III, pp. 403–424). Erlbaum.
- Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H., Scaffidi, N. T., & Tonks, S. (2004). Increasing reading comprehension and engagement through Concept-Oriented Reading Instruction. *Journal of Educational Psychology, 96*(3), 403–423.
- Hanover Research. (2016). *Early skills and predictors of academic success*.
https://portal.ct.gov/-/media/SDE/ESSA-Evidence-Guides/Early_Skills_and_Predictors_of_Academic_Success
- Hansen, D., & Bernstorff, E. D. (2002). Linking music learning to reading instruction. *Music Educators Journal, 88*(5), 17–21.
- Hassinger-Das, B., Zosh, J. M., Hansen, N., Talarowski, M., Zmich, K., Golinkoff, R. M., & Hirsh-Pasek, K. (2020). Play-and-Learn Spaces: Leveraging library spaces to promote caregiver and child interaction. *Library and Information Science Research, 42*(1).
- Kim, J. S. (2007). The effects of a voluntary summer reading intervention on reading activities and reading achievement. *Journal of Educational Psychology, 99*(3), 505–515.
- Kim, J. S., Burkhauser, M. A., Mesite, L. M., Asher, C. A., Relyea, J. E., Fitzgerald, J., & Elmore, J. (2021a). Improving reading comprehension, science domain knowledge, and reading engagement through a first-grade content literacy intervention. *Journal of Educational Psychology, 113*(1), 3–26.
- Kim, J. S., Relyea, J. E., Burkhauser, M. A., Scherer, E., & Rich, P. (2021b). Improving elementary grade students' science and social studies vocabulary knowledge depth, reading comprehension, and argumentative writing: A conceptual replication. *Educational Psychology Review, 33*(4), 1935–1964.
- Kim, J. S., & White, T. G. (2008). Scaffolding voluntary summer reading for children in grades 3 to 5: An experimental study. *Scientific Studies of Reading, 12*(1), 1–23.
- Kirnan, J., Siminerio, S., & Wong, Z. (2016). The impact of a therapy dog program on children's reading skills and attitudes toward reading. *Early Childhood Education Journal, 44*, 637–651.

- Kirsch, I. S., De Jong, J., Lafontaine, D., McQueen, J., Mendelovits, J., & Monseur, C. (2002). *Reading for change. Performance and engagement across countries (results from PISA 2000)*. OECD.
- Knaebel, D., Bauserman, K., & Quatroche, D. (2013, Spring). The Sycamore Readers: Partnering with nonprofits to help struggling readers. *Delta Kappa Gamma Bulletin*, 21–24.
- Knaebel, D., Bauserman, K., & Quatroche, D. (2015). Sycamore Readers: A successful model to improve student learning. *Journal of Education and Social Policy*, 2(2), 53–60.
- Kuhn, M. (2005). A comparative student of small group fluency instruction. *Reading Psychology*, 26(2), 127–146.
- Lamme, L. L., Sabis-Burns, D., & Gould, J. (2004). Project Booktalk: Library books and lap reading in childcare homes. *Early Childhood Education Journal*, 32(1), 45–50.
- Lehman, M. (2011). *The contribution of scaffolded self-selected reading to third-grade students' reading motivation and achievement* [Unpublished doctoral dissertation]. Arizona State University.
- Lenihan, D., McCobb, E., Diurba, A., Linder, D., & Freeman, L. (2016). Measuring the effects of reading assistance dogs on reading ability in elementary schoolchildren. *Journal of Research in Childhood Education*, 30(2), 252–259.
- Levinson, E. M., Vogt, M., Barker, W. F., Jalongo, M. R., & Van Zandt, P. (2017). Effects of reading with adult tutor/therapy dog teams on elementary students' reading achievements and attitudes. *Society & Animals*, 25(1), 38–56.
- Little, P. M. (2021). *Transforming community spaces into opportunities for playful learning: Measuring progress and success*. The Forum for Youth Investment and Big Picture Approach Consulting. <https://forumfyi.org/wp-content/uploads/2021/10/FFYI-Playful-Learning-Brief.pdf>
- Long, D., & Szabo, S. (2016). E-readers and the effects on students' reading motivation, attitude and comprehension during guided reading, *Cogent Education*, 3(1).
- Martinez, R. S., Aricak, O. T., & Jewell, J. (2008). Influence of reading attitude on reading achievement: A test of the temporal-interaction model. *Psychology in the Schools*, 45(10), 1010–1022.
- McKenna, M. C., Kear, D. J., & Ellsworth, R. A. (1995). Children's attitudes toward reading: A national survey. *Reading Research Quarterly*, 30(4), 934–956.

- Mills, J. E., Urban, I. B., Campana, K., & Nelson, J. T. (2014). Hooray for research: A glimpse at an early literacy project. *Children & Libraries*, 12(4), 32.
- Mizener, C. P. (2008). Enhancing language skills through music. *General Music Today*, 21(2), 11–17.
- Morrison, V., & Wheeler, L. (2009). Revisiting read-aloud: Instructional strategies that encourage students' engagement with texts. *The Reading Teacher*, 63(2), 110–118.
- National Center for Education Statistics (NCES). (2017). *No significant change in the percentage of fourth-grade students at or above Proficient in reading compared to 2015*. https://www.nationsreportcard.gov/reading_2017/nation/achievement?grade=4
- NCES. (2019). *See how U.S. students performed in reading grades 4 and 8*. <https://www.nationsreportcard.gov/highlights/reading/2019/>
- NCES. (2022a). *Scores decline in NAEP reading at grades 4 and 8 compared to 2019*. <https://www.nationsreportcard.gov/highlights/reading/2022/>
- NCES. (2022b). *Scores lower on average for many student groups compared to 2019*. <https://www.nationsreportcard.gov/reading/nation/groups/?grade=4>
- Ness, M. (2010). Books in Motion: How a community literacy project impacts its participants. *Community Literacy Journal*, 5(1), 133–49.
- Neuman, S. B., Moland N., & Celano, D. (2017). *Bringing literacy home: An evaluation of the Every Child Ready to Read program*. Association for Library Service to Children and Public Library Association. <http://everychildreadytoread.org/wp-content/uploads/2017/11/2017-ECRR-Report-Final.pdf>
- Newsome, K. E. (2008). Using poetry to improve fluency and comprehension in third-grade students. *Georgia Educational Researcher*, 6(1).
- Onatsu-Arvilommi, T., & Nurmi, J. (2000). The role of task-avoidant and task-focused behaviors in the development of reading and mathematical skills during the first school year: A cross-lagged longitudinal study. *Journal of Educational Psychology*, 92(3), 478–491.
- Park, Y. (2011). How motivational constructs interact to predict elementary students' reading performance: Examples from attitudes and self-concept in reading. *Learning and Individual Differences*, 21(4), 347–358.
- Reed, J. H., & Schallert, D. L. (1993). The nature of involvement in academic discourse tasks. *Journal of Educational Psychology*, 85(2), 253–266.

- Reis, S. M., McCoach, D. B., Coyne, M., Schreiber, F. J., Eckert, R. D., & Gubbins, E. J. (2007). Using planned enrichment strategies with direct instruction to improve reading fluency, comprehension, and attitude toward reading: An evidence-based study. *The Elementary School Journal*, *108*(1), 3–24.
- Reis, S. M., McCoach, D. B., Little, C. A., Muller, L. M., & Kaniskan, R. B. (2011). The effects of differentiated instruction and enrichment pedagogy on reading achievement in five elementary schools. *American Educational Research Journal*, *48*(2), 462–501.
- Reis, S. M., & Peters, P. M. (2020). Research on the Schoolwide Enrichment Model: Four decades of insights, innovation, and evolution. *Gifted Education International*, *37*(2), 109–141.
- Reutzel, D. R., Smith, J. A., & Fawson, P. C. (2005). An evaluation of two approaches for teaching reading comprehension strategies in the primary years using science information texts. *Early Childhood Research Quarterly*, *20*(3), 276–305.
- Robinson, J. (2019). *Philadelphia playful learning landscapes: Scaling strategies for a playful learning movement*. Brookings Institute. <https://www.brookings.edu/wp-content/uploads/2019/10/PPLL-FINAL-REPORT-web.pdf>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78.
- Samuels, S. J. (1979). The method of repeated readings. *The Reading Teacher*, *41*, 756–760.
- Sanders, S., & Garwood, J. D. (2022). Assessment of effective strategy instruction and reading comprehension. *Preventing School Failure: Alternative Education for Children and Youth*, *66*(4), 320–326.
- Schunk, D. H., & Zimmerman, B. J. (1997). Developing self-efficacious readers and writers: The role of social and self-regulatory processes. In J. T. Guthrie & A. Wigfield (Eds.), *Reading engagement: Motivating readers through integrated instruction* (pp. 34–50). International Reading Association.
- St. Clair, T. (2014). *The effect of an integrated music curriculum on reading achievement outcomes of kindergarten students*. Dissertations. 413. <https://digitalcommons.lindenwood.edu/dissertations/413>
- Stutz, F., Schaffner, E., & Schiefele, U. (2016). Relations among reading motivation, reading amount, and reading comprehension in the early elementary grades. *Learning and Individual Differences*, *45*, 101–113.

- Taylor, M. E., & Boyer, W. (2019). Play-based learning: Evidence-based research to improve children's learning experiences in the kindergarten classroom. *Early Childhood Education Journal, 48*(2), 127–133.
- Troyer, M., Kim, J. S., Hale, E., Wantchekon, K., & Armstrong, C. (2019). Relations among intrinsic and extrinsic motivation, reading amount, and comprehension: A conceptual replication. *Reading and Writing, An Interdisciplinary Journal, 32*(5), 1197–1218.
- Vadasy, P. F., & Sanders, E. A. (2008). Repeated reading intervention: Outcomes and interactions with readers' skills and classroom instruction. *Journal of Educational Psychology, 100*(2), 272–290.
- Vaughn, S., Chard, D. J., Bryant, D. P., Coleman, M., & Kouzekanani, K. (2000). Fluency and comprehension interventions for third-grade students. *Remedial and Special Education, 21*(6), 325–335.
- Wang, J. H. Y., & Guthrie, J. T. (2004). Modeling the effects of intrinsic motivation, extrinsic motivation, amount of reading, and past reading achievement on text comprehension between U.S. and Chinese students. *Reading Research Quarterly, 39*(2), 162–186.
- Wigfield, A., Gladstone, J., & Turci, L. (2016). Beyond cognition: Reading motivation and reading comprehension. *Child Development Perspectives, 10*(3), 190–195.
- Wigfield, A., Guthrie, J. T., Tonks, S., & Perencevich, K. C. (2004). Children's motivation for reading: domain specificity and instructional influences. *Journal of Educational Research, 97*(6), 299–309.
- Young, C., Pearce, D., Gomez, J., Christensen, R., Pletcher, B., & Fleming, K. (2017). Read Two Impress and the Neurological Impress Method: Effects on elementary students' reading fluency, comprehension, and attitude. *The Journal of Educational Research, 111*(6), 657–665.

Appendix B. Search Strings

Search strings for library literature:

- **Population:** children OR “young readers” OR “emerging readers” OR “early childhood” OR kindergarten OR preschool OR pre-school OR pre-K OR elementary OR “primary school” OR “primary level” OR “primary grade” OR “grade 1” OR “1st grade” OR “first grade” OR “grade 2” OR “2nd grade” OR “second grade” OR “grade 3” OR “3rd grade” OR “third grade” OR “grade 4” OR “4th grade” OR “fourth grade” OR “grade 5” OR “5th grade” OR “fifth grade”
- **Intervention/Issue:** literacy OR reading OR books OR practices OR activities OR program* OR intervention OR initiative
- **Outcomes:** love OR enthusiasm OR passion OR motivation OR “reading for pleasure” OR proclivity OR engage* OR enjoy* OR motivate OR foster OR promote OR attitudes OR behavior OR behaviour
- **Context/Setting 1:** library OR libraries OR librarian OR librarians
- **Context/Setting 2:** “United States” OR “United States of America” OR U.S.A. OR USA OR U.S. OR US OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR “New Hampshire” OR “New Jersey” OR “New Mexico” OR “New York” OR “North Carolina” OR “North Dakota” OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR “Rhode Island” OR “South Carolina” OR “South Dakota” OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR “West Virginia” OR Wisconsin OR Wyoming
- **NOT:** “school library” OR “school libraries” OR “classroom library” OR “classroom libraries” OR “teacher librarian” OR “school librarian” OR “classroom librarian” OR Australia* OR “United Kingdom” OR UK OR Britain OR “New Zealand” OR Spain OR Canada OR China OR “COCHRANE Library” OR “Cochrane Library” OR “Wiley Online Library” OR medical OR health OR healthcare OR pediatric

Search strings for nonlibrary (general) literature:

- **Population:** children OR “young readers” OR “emerging readers” OR “early childhood” OR kindergarten OR preschool OR pre-school OR pre-K OR elementary OR “primary school” OR “primary level” OR “primary grade” OR “grade 1” OR “1st grade” OR “first grade” OR “grade 2” OR “2nd grade” OR “second grade” OR “grade 3” OR “3rd grade” OR “third grade”

OR “grade 4” OR “4th grade” OR “fourth grade” OR “grade 5” OR “5th grade” OR “fifth grade”

- **Intervention/Issue:** literacy OR reading OR books OR school OR classroom OR teach* OR practices OR activities OR program* OR intervention OR initiative
- **Outcome 1:** “reading skills” OR “reading outcomes” OR “reading test scores” OR “reading comprehension” OR “literacy skills” OR “literacy outcomes” OR “literacy test scores” OR “literacy learning”
- **Outcome 2:** love OR enthusiasm OR passion OR motivation OR “reading for pleasure” OR proclivity OR engage* OR enjoy* OR motivate OR foster OR promote OR attitudes OR behavior OR behaviour
- **Context/Setting:** “United States” OR “United States of America” OR U.S.A. OR USA OR U.S. OR US OR Alabama OR Alaska OR Arizona OR Arkansas OR California OR Colorado OR Connecticut OR Delaware OR Florida OR Georgia OR Hawaii OR Idaho OR Illinois OR Indiana OR Iowa OR Kansas OR Kentucky OR Louisiana OR Maine OR Maryland OR Massachusetts OR Michigan OR Minnesota OR Mississippi OR Missouri OR Montana OR Nebraska OR Nevada OR “New Hampshire” OR “New Jersey” OR “New Mexico” OR “New York” OR “North Carolina” OR “North Dakota” OR Ohio OR Oklahoma OR Oregon OR Pennsylvania OR “Rhode Island” OR “South Carolina” OR “South Dakota” OR Tennessee OR Texas OR Utah OR Vermont OR Virginia OR Washington OR “West Virginia” OR Wisconsin OR Wyoming

About the American Institutes for Research®

Established in 1946, the American Institutes for Research® (AIR®) is a nonpartisan, not-for-profit organization that conducts behavioral and social science research and delivers technical assistance both domestically and internationally in the areas of education, health, and the workforce. AIR's work is driven by its mission to generate and use rigorous evidence that contributes to a better, more equitable world. With headquarters in Arlington, Virginia, AIR has offices across the U.S. and abroad. For more information, visit [AIR.ORG](https://www.air.org).



AIR® Headquarters

1400 Crystal Drive, 10th Floor
Arlington, VA 22202-3289
+1.202.403.5000 | [AIR.ORG](https://www.air.org)

Notice of Trademark: "American Institutes for Research" and "AIR" are registered trademarks. All other brand, product, or company names are trademarks or registered trademarks of their respective owners.

Copyright © 2023 American Institutes for Research®. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, website display, or other electronic or mechanical methods, without the prior written permission of the American Institutes for Research. For permission requests, please use the Contact Us form on [AIR.ORG](https://www.air.org).