Fountas & Pinnell Classroom™
Research Base

Introduction

Literacy is a human right. Highly proficient users of literacy are empowered to learn more through reading, writing, speaking, and listening so they can fully participate in their world. Systems that support effective teaching provide teachers with coherent structures, resources, and professional learning for carefully monitoring literacy and sustaining each student’s unique progress toward this goal.

Our current, disturbing reality is that only about a third of students test as proficient readers by fourth grade1, a figure that has not dramatically changed in decades, leaving educators, parents, and policymakers asking important questions about what to do. The problem is not intractable, but if the solutions were simple, they would be widely practiced by now. Preparing students to live in a dynamic world with high literacy demands—critical thinking, problem solving, analysis, and discovery—is multidimensional and complex.

Too often, discussions about teaching children to read and write are oversimplified and reflect limited understanding of decades of research about how children become literate. What works in labs and formal research studies doesn’t always predict what will work in the day-to-day life of classrooms, of students with unique strengths, needs, and lived experiences. For these and other reasons, humility and tentativeness are required when interpreting and applying scientific research to classroom practices.

Effective literacy instruction demands that research-based evidence is understood in concert with practice-based evidence and close attention to what an individual child can and cannot yet do. It also arises within the context of a careful examination of values and beliefs about literacy and what it takes to prepare children to be literate citizens of the world.

Like all comprehensive systems, Fountas & Pinnell Classroom™ PreK-6 (FPC) was constructed over many years and has been implemented in school districts for several years, beginning in 2017. The system includes five contexts for teaching reading—all different in implementation and purpose but designed with coherence—and five contexts for teaching writing. A separate, but connected and sequential context for teaching phonics, spelling and word study through daily lessons is an essential component.

Like other effective comprehensive systems, FPC rests on a thorough and thoughtful examination of existing research. Data gathered from implementation of FPC demonstrates positive evidence of gains. Two examples can be seen from Hillsboro, OH and Midway, TX.

What follows is an extensive review of the foundational research underpinning the development of FPC, along with recent research that supports and aligns with a comprehensive literacy system.

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1 U.S. Dept. of Education
Summary of the twelve essential principles drawn from an examination of the research

In this paper, we review the research base for FPC PreK–6. We explore twelve compelling principles that rest on decades of research on literacy instruction and the ways literacy and language develop in children over time.

1. It is critical for the process of becoming literate to stay connected to relevant, meaningful, and authentic outcomes from the start.

2. Variation among readers, writers and speakers requires responsive teaching.

3. Responsive teaching depends upon ongoing systematic observation, assessment and analysis.

4. Equitable classrooms are places where teachers know the uniqueness of each individual child.

5. An intentional and comprehensive design for literacy teaching and learning includes a wide range of meaningful reading, writing, listening, and speaking contexts.

6. Oral language and vocabulary contribute to and benefit from rich, daily, authentic language-based literacy experiences.

7. Students need strong foundational skills (for accurate reading of words and for comprehending meaning) and daily opportunities to apply those skills in reading and writing.

8. An effective literacy design includes a coherent set of evidence-based instructional practices for whole-group, small-group, and individual instruction.

9. Children need access to a range of high-quality texts and tasks that promote the joy of literacy learning, expand vocabulary, build content knowledge, and nurture the ability to think, talk and write about them.

10. Reading and writing are reciprocal processes, so what is learned in one area strengthens and expands understanding in the other.

11. Coherent systems for literacy teaching and learning benefit all stakeholders.

12. Ongoing, long-term professional learning builds and sustains the literacy success of all children.
It is critical for the process of becoming literate to stay connected to its relevant, meaningful and authentic outcomes from the start.

Children are naturally curious. Their curiosity draws them into literacy experiences as they seek understanding about the world around them. Being literate is far more than reading and writing words accurately, although accuracy is critical. Making meaning, expanding language, building knowledge, and engaging with the world as global citizens are the purposes and rewards of literacy, even from children’s earliest experiences.

If literacy is ultimately a means to fully realized human potential, then it is critical for the process of becoming literate to stay connected to relevant, meaningful, and authentic outcomes from the start – connecting with the larger world, building knowledge, exploring inner lives, and creating meaning and joy. While the teaching of words in isolation may be systematic and provides easy-to-measure progress in word calling, this approach alone does not help children become literate.

Reading is a complex process that is strongly connected to speaking and writing. It requires the cognitive integration of a variety of sources of information: visual information (letters or symbols), auditory/phonological information (sounds and sound parts), knowledge of the structure of language, and content knowledge of the world acquired through experience. Reading or writing an unknown word demands a problem-solving process that is active, flexible, and draws from previous literacy experiences.

“Instruction that includes hands-on activities, opportunities to engage in reading for authentic purposes, and texts with a clear structure and vivid, concrete examples is associated with motivated engagement and, subsequently, better recall and learning.”

— Duke & Pearson, 2002
Research indicates that decontextualized learning, isolated drills, and rote learning have little long-term impact\(^8\). Authentic, inquiry-based learning on the other hand, has been shown to decrease performance gaps\(^9\). Interactive teaching is associated with deeper understanding in both reading and mathematics\(^10\). Pursuing lines of inquiry that engage children places them at the center of teaching and learning and expands knowledge, vocabulary, and agency in learners\(^11\).

Supporting children in developing these complex processes requires teacher expertise. Teachers need a clear vision of proficiency and how it develops over time, so they have a common destination in mind as they support children on their literacy journey. Teachers who understand effective literacy behaviors can respond to the strengths and needs of learners with precision and intention. They facilitate conversations among a community of learners that leverage these strengths and lift the levels of understanding for all\(^12\). Teachers create space for high-quality book collections for children to explore ideas, enjoy language, deepen knowledge, and develop their own tastes and preferences.

**Variation among readers and writers and speakers requires responsive teaching.**

Responsive teaching is characterized by intentional, data-informed, decision making that considers the ever-changing strengths, needs, and interests of each student. Expert teachers are equipped to teach responsively, including English learners and students who find literacy learning difficult. Although students increase their array of competencies over time, they take “different paths to common outcomes”\(^13\). A core document, *The Fountas & Pinnell Literacy Continuum* is the instructional and observational anchor for every lesson, text, and assessment in FPC. [https://www.fountasandpinnell.com/continuum](https://www.fountasandpinnell.com/continuum).

> If we notice children taking different paths,“ we can interact with their different journeys just as we would alter our talking to adapt to our listeners, and in about three years expect them to arrive at common outcomes.

— Clay, 2014
It helps educators develop a vision for how literacy proficiency develops over time. The Literacy Continuum describes behaviors to notice, teach for, and support so teachers understand what students know and what they need to learn to become proficient readers, writers and language users.

Responsive teaching depends upon ongoing systematic observation, assessment and analysis.

Responsive teaching includes ongoing and systematic observation and the analysis of students’ strengths and needs. Teachers who know the strengths of their students as readers, writers, speakers, and thinkers can provide systematic instruction at their learning edge, so children are able to navigate increasingly complex texts with independence. Instead of assuming deficits, teachers who know how to identify and build on students’ strengths create learning conditions in which students make accelerated progress, feel competent and are highly engaged in literacy experiences. The more students engage in authentic reading, writing, and speaking activities, the more their literacy competencies expand.

Assessment resources that seamlessly and systematically connect analysis to instruction are embedded in every instructional context of FPC, providing a continuous flow of reliable information about students’ literacy progress to inform decision-making. The decisions teachers make based on this data form the heartbeat of responsive teaching.

“If literacy assessment is to serve literacy learners and society, then it has to be grounded in processes that reflect current understandings of learning, literacy, and society. It also has to remain open to evolution in both literacy and assessment, which at the very least means encouraging some diversity in assessment practice.”

— Johnston, 2005
These resources include:

RUNNING RECORDS
Running record forms for coding reading behaviors are provided for every book in the FPC Guided Reading collection. Teachers analyze the data from these records to glean information about the reader’s problem solving, accuracy, comprehension, and fluency which is used to plan for instructional emphasis across instructional contexts. They reveal the kinds of information readers are using and more importantly, what they are neglecting. The data can inform the dynamic grouping and regrouping of readers for small group instruction to best support their needs.

PHONICS, SPELLING, AND WORD STUDY ASSESSMENTS
An array of diagnostic assessments for collecting specific data on each child’s phonemic awareness, phonics, word analysis, and vocabulary competencies are included in the Phonics, Spelling, and Word Study System. The data from systematic observation and assessments provide instructional guidance for the responsive teacher.

WRITING ABOUT READING
Throughout FPC, children have opportunities to write about what they read every day in a Reader’s Notebook. The goals of writing about reading range from writing to demonstrate understanding, to clarifying and composing thinking, to exploring new ideas, to making connections. Examining students’ writing is another way to observe progress and to document students’ thinking about texts over time as well as their control of letter-sound relationships, word structure and spelling patterns. They also provide insight about children’s interests and preferences.

TALK AS BEHAVIORAL EVIDENCE
Each FPC lesson provides teachers with suggestions for using talk as behavioral evidence of effective literacy processing. This guidance strengthens teachers’ understandings of what to listen for as students engage in conversations with each other about books so they can facilitate the expansion of students’ thinking within, beyond and about texts.

D’Agostino et al, 2021
Barone et al, 2019
Equitable classrooms are places where teachers know the uniqueness of each individual child.

The work of teaching and learning happens within relationships. Equitable classrooms require culturally sensitive teachers who honor and support students’ unique identities, lived experiences, languages, and the knowledge they bring into the classroom. FPC provides teachers with resources for creating a community of learners that ground conversations in authentic, rich, diverse books. Students and teachers become known to each other and develop empathy through meaningful reading, writing, and speaking experiences. Positive relationships within the classroom are linked to higher levels of student achievement. They also improve students’ disposition toward literacy learning and increase their engagement and motivation.

English learners especially, depend upon equitable teaching. They require an additional, targeted level of support every day to build on the richness of their first language. Each lesson in the FPC system includes suggestions for scaffolding instruction to support English learners in expanding their language structures and in building the academic and content vocabulary needed to participate successfully in learning. Specific guidance ranges from suggesting sentence frames, to identifying phrases or vocabulary that may need clarification, to noting linguistic differences that might cause confusion in phonics.

“Teacher–child relationship quality predicted behavioral and academic indicators of school success during the formative elementary school-aged period, and seems comparably important for younger and older students.”

— Baker, 2006
FPC lessons provide blueprints and suggestions, not scripts, for teaching that leads literacy learning forward. Teachers are given scaffolded guidance for teaching a group of individual students with a variety of strengths and needs, not a rigid, linear path for teaching a program.

Suggested language and suggested sequences are offered within each instructional context, but teachers are encouraged to use the resources to meet the diverse needs of their students. Homogeneous curricula can lead to inequitable outcomes because they do not accommodate for differences, often leaving behind historically marginalized groups, so teachers must have the permission and knowledge to respond to the students in front of them.

An intentional and comprehensive design for literacy teaching and learning includes a wide range of meaningful reading, writing, listening and speaking contexts.

Literacy is attainable for all students but requires a comprehensive, coherent system in which different—but closely related—instructional contexts work together. A little of this and a little of that will not work and may confuse some children. Nor is a narrow path of instruction advisable as it limits students’ abilities to use literacy with full power.

A comprehensive design for high-level literacy competencies includes daily direct, systematic phonics instruction within a comprehensive literacy design that includes reading high-quality books aloud to children, engaging them in shared reading, reading and writing minilessons, small-group guided reading instruction, small-group book clubs, independent choice reading, and a wide range of meaningful writing and speaking contexts. FPC includes all of these contexts.

The challenge here is to prepare and—for those who are already in the field—develop far more teachers who are skilled at improving not only word-reading skill, but also vocabulary, conceptual and content knowledge, and comprehension in their students.

— Duke & Block, 2012
Oral language and vocabulary contribute to and benefit from rich, daily, authentic language-based literacy experiences.

Research shows that effective literacy instruction includes robust teaching of vocabulary and spelling across the grades. Spelling is complex and develops over time. Over time, children develop knowledge of words and categories of words they can write quickly and accurately29. Words can and should be studied in specific lessons through explicit instruction and immersion in words to build multiple ways to learn30. Repeated exposure to words is also effective. That means instruction must go beyond single lessons and involve multiple exposures in real reading and writing contexts31.

When children engage in talk and writing about books, they communicate and refine their ideas, reveal their understandings and perspectives, and make meaning from texts and experiences32. They need numerous opportunities to hear written language read aloud, to read and talk about books with others, to choose and read books independently, and to write daily for a variety of purposes and audiences in many different genres. Research proves that collaborative, language-based literacy practices, such as teacher-led and small-group discussions enhance reading abilities and provide feedback for teachers about strengths and needs of individual students33. The voluminous multi-text experiences provided in FPC allow children to take on literary language that is more complex in structure and vocabulary than their everyday language. It also provides opportunities to hone listening comprehension throughout the day. All of this is supported by explicit instruction in the form of FPC lessons and Fountas & Pinnell Phonics, Spelling and Word Study system PreK-6.

“Time for students to talk about their reading and writing is perhaps one of the most underused, yet easy-to-implement, elements of instruction. It doesn’t require any special materials, special training, or even large amounts of time. Yet it provides measurable benefits in comprehension, motivation, and even language competence.”

— Allington & Gabriel, 2012
Students need strong daily foundational skills (for accurate reading of words and for comprehending meaning) and daily opportunities to apply those skills in reading and writing.

All children need daily, explicit systematic, direct phonics instruction and multiple opportunities to apply those skills to reading and writing. They need the experience of working with letters and sounds—by isolating them, studying them, making connections between them, seeking patterns and making discoveries. Daily phonics lessons have been found to make bigger contributions to growth in reading than alternative programs providing unsystematic or no phonics instruction. However, the National Reading Panel did not find that a single kind of phonics instruction was more effective than another; the evidence showed simply that the inclusion of daily phonics is beneficial. Key characteristics of effective instruction include structured, sequential, and multisensory approaches.

Foundational skills begin with oral language when young children focus on the meaning (not the sounds) of words; at the same time, they delight in rhythm, repetition, rhymes, and songs. As they begin to notice written language and try to read and write it, they become more aware of the sound units of speech. Converging evidence across countries indicates that some form of phonemic awareness is necessary to successfully learn to read alphabetic languages. Both phonological (sounds) and graphemic (letters) are essential.

Approaches in which a systematic code instruction is included with meaningful connected reading resulted in superior reading achievement overall.

— Adams, 1990
The Phonics, Spelling, and Word Study system (PreK-6) includes 100+ explicit, generative minilessons per grade, focused on the nine areas of learning for word solving: early literacy concepts, phonological awareness, letter knowledge, letter-sound relationships, spelling patterns, high-frequency words, word meaning and vocabulary, word structure, and applying word-solving actions in reading and writing. Lessons in the intermediate grades include a strong focus on word structure. Each lesson provides guidance for applying phonics and word solving principles to continuous texts. The lessons are systematic in that they progress from simple to more complex and they support teachers in observing and planning for the unique strengths and needs of their students.

They are supported with hands-on multisensory practice using magnetic letters, picture cards, and word cards. A comprehensive view of the Phonics, Spelling, and Word Study system can be found in this research base.
An effective literacy design includes a coherent set of evidence-based instructional practices for whole-group, small-group, and individual instruction.

Whole-group, small-group, and individual contexts are effective structures for learning and teaching. It is important that students are given the opportunity to benefit from both homogeneous and heterogeneous groups throughout the week. This combination helps to build community, increase engagement, and support self-efficacy.

Students spend much of the day in FPC working in both homogenous and heterogeneous small groups. Small-group reading instruction provides teachers with the ability to tailor instruction to the strengths and needs of students. While small, homogeneous groups of students in guided reading and writing lessons is very powerful, the heterogeneous groups also have important benefits for students. They diffuse tracking systems which can lead to permanent inequity, low self-esteem and achievement for some students.

The instructional contexts in FPC work together to foster independence through a gradual release of responsibility. Teachers demonstrate, prompt, and reinforce effective literacy behaviors and provide students with opportunities for authentic application of learning with varying levels of support across contexts. The different contexts serve as a scaffold to support each child as they build an efficient, effective literacy processing systems. The various contexts provide responsive structures for teaching that make the most of individual student strengths and lead them forward in their learning.

“The argument is made that by coordinating research evidence from effective classroom reading instruction with effective small-group and one-on-one reading instruction we can meet the literacy needs of all children.”
— Foorman & Torgesen, 2001
Children need access to a range of high-quality texts that promote the joy of literacy learning, expand vocabulary and content knowledge, and nurture the ability to think, talk and write about them.

Whole-group reading instruction with complex texts includes interactive read-aloud, shared reading, and reading minilessons that leads to independent reading. Decades of research indicate that reading aloud to students builds the foundation needed for reading success. Interactive Read-Alouds build fluency, vocabulary, content knowledge, and strengthen comprehension, and are beneficial across grade levels. *FPC Interactive Read Aloud K-6 and Shared Reading PreK-4* books and lessons provide students with the opportunity to see how print works, engage with text and images, learn vocabulary, and think and talk like readers and writers. *The Reading Minilessons Books PreK-6* provide explicit, purposeful applications of literacy concepts and engage students in inquiry.

Small-group reading instruction enables teachers to tailor instruction to the strengths and needs of students who are at different phases in their reading development. As they work their way through an instructional level text in *FPC Guided Reading K-6*, students encounter opportunities for problem solving while working to maintain their accuracy, comprehension, and fluency. Within a small guided reading group, each child is different and has slightly different instructional needs which requires teachers to notice variation and use their observations to respond effectively by the moment. In *FPC Book Clubs*, small heterogeneous groups of readers choose trade books for in-depth discussion during which the teacher adjusts the level of facilitation and participation as needed.
**Our results indicated that enhancing read-alouds with comprehension strategies and text-based discussions made a positive difference in student performance.**

— Santoro et al, 2008

*FPC Independent Reading* gives students practice decoding and comprehending, expands students’ vocabulary, and improves stamina and fluency. The goal is for students to self-select texts and apply what they have learned in other contexts, especially from explicit reading minilessons, to their reading. Teachers confer with readers individually to provide brief customized support for processing texts more efficiently and effectively. The amount of time spent reading correlates positively with comprehension and is the strongest predictor of reading achievement.
Reading and writing are reciprocal processes, so what is learned in one area strengthens and expands understanding in the other.

Reading and writing are parts of a larger literacy processing system. They are related at just about every level of language learning: letters, sounds, and words; syntactic patterns; mapping out meaning. What is learned in one area can be used to strengthen and expand understanding in the other. Readers and writers must use and integrate print information while processing continuous text49.

Reading and writing are communication processes that involve shared knowledge and cognitive processes that impact each other. Writing slows processing down and makes it more visible. In early writing experiences, children naturally and purposefully attend to the details of print, which in turn supports their early reading behaviors. Readers notice author’s craft and writers consider their purpose and audience. Writing about reading builds powerful bridges as it increases understanding of a text and builds knowledge50.

FPC is designed to support the reading-writing connection. Each lesson provides teachers with guidance for supporting students in using what they know about reading to support writing and what they know about writing to support reading. Principles explored in phonics, spelling, and word study lessons offer authentic applications for readers and writers throughout the day.

Whole-group writing minilessons from Fountas & Pinnell’s Writing Minilesson Books PreK-6 strengthen students’ understanding of the writing process and writers’ craft through brief focused teaching about one important principle of effective writing.

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Explicit teaching to help students understand the reciprocal nature of reading and writing is a powerful tool for accelerating learning.

— Anderson & Briggs, 2011

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Coherent systems for teaching and learning benefit all stakeholders.

Promoting the right to literacy for all students requires thinking about the way a school functions as an interdependent system that supports continuous study and improvement. At the heart of systems that support effective teaching are coherence, strong professional learning, a unifying vision and a set of core values that are essential to achieving literacy for all students and structures and processes for continuous improvement.

Successful school systems eliminate incoherence, mismatched goals, and competing cultures⁵¹. They create a culture of reflective practice that fuels growth and collaboration, fosters capacity building, encourages collective responsibility, promotes collegial generosity, and nurtures a focused, cohesive direction that benefits everyone. A piecemeal approach to literacy education cannot meet the needs of all students⁵².

Because every goal, lesson, and text in *FPC* has been informed by *The Literacy Continuum*, colleagues can discuss common expectations for student achievement, and all students benefit from coherent, efficient, and responsive instruction⁵³. Literacy goals are consistent at each grade level and are aligned schoolwide. Students experience a text base with breadth and depth that has been holistically curated with shared goals in mind. Teachers are given support for facilitating intentional conversations about books in ways that create a common language and schoolwide routines for sharing thinking.

When everyone in the school uses the same literacy tools and language as they move from observation to instruction, common conversations and understandings occur. Assessment systems include interval and continuous assessment tools that are aligned with the shared goals for literacy instruction and are directly linked to instruction. Students’ literacy progress becomes the shared responsibility of every teacher, coach, and administrator in the school community⁵⁴.

*FPC* was developed as a coherent system. Each instructional context is reciprocally connected to the rest. All lessons include goals, predictable lesson structures, powerful teaching language, assessment information, and links across books and contexts that provide a learning experience that fits together meaningfully and seamlessly.

"The Coherence Framework has four components: focusing direction, cultivating collaborative cultures, deepening learning, and securing accountability."

— Fullan & Quinn, 2015

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⁵¹ Fullan & Quinn, 2015
⁵² Newmann et al, 2001
⁵³ Darling-Hammond et al, 2008
⁵⁴ Donohoo et al, 2018
⁵⁵ Rogers, 2002
Ongoing, long-term professional learning builds and sustains the literacy success of all children.

The strongest influence on student learning is having expert educators working together to maximize the efficacy of teaching\(^{55}\). A culture of reflective practice fuels mutual energy, fosters teacher agency, encourages acts of leadership by individuals, and promotes the kind of generous teamwork that benefits everyone\(^{56}\). As teacher expertise increases and success within the school and school system occurs, students make accelerated progress\(^{57}\).

Efficacy studies of reading programs suggest that teachers who are provided with extensive professional learning tools and development of evidence-based instructional practices have substantially greater outcomes than those focused on curriculum or technology alone\(^{58}\). Converging evidence also indicates that teachers benefit from extensive, ongoing professional learning\(^{59}\).

\(\textit{FPC}\) is designed to create a sense of community among teachers who are concerned, not only about what students learn, but also how and why they learn. The system offers a model of collaboration and continual learning. Professional learning is embedded throughout, with guidance for: observation, assessment, decision-making, working with English learners, using effective language for teaching and prompting, and creating a calendar for collaboration with colleagues. Beyond the embedded professional learning supports, other opportunities are available from Heinemann to further develop the teaching craft and foster a climate of collegiality and community. These include school-based seminars with Fountas & Pinnell-endorsed consultants, multi-day institutes designed and delivered by Fountas and Pinnell, recorded webinars with chat, video demonstrations, and additional resources to support learning. For more information about \(\textit{FPC Professional Learning}\), visit \url{https://www.fountasandpinnell.com/professionaldevelopment/}.

\begin{quote}
So, my claim is that the greatest influence on student progression in learning is having highly expert, inspired and passionate teachers and school leaders working together to maximise the effect of their teaching on all students in their care.

— Hattie, 2015
\end{quote}
Conclusion

Children bring unique strengths, needs and experiences to their classrooms. A one-size-fits-all approach is too narrow to accommodate diversity and has been proven not to work. High quality literacy teaching and learning can best be achieved with coherent, culturally sustaining instructional resources in the hands of educators who are able to respond to the precise literacy competencies of their students at any point in their development. When schools place high value on continuous professional learning, teacher knowledge and expertise in decision-making become the critical factors in improving student outcomes.

All children have the right to meaningful and engaging literacy learning that ignites their intellectual curiosity and expands their knowledge of the world. Based on decades of research, practical experience and a set of core values, FPC offers a team of educators a blueprint for assuring every student finds the joy and success in literacy learning and becomes a highly literate, productive citizen of the world.
End Notes

1 U.S. Dept. of Education

2 Cervetti et al, 2020; Frankel et al, 2016; Au & Raphael, 2021; Auckerman & Schuldt, 2021

3 Johnston & Scanlon, 2020; Price-Mohr & Price, 2020

4 Duke & Pearson, 2002; Barber & Klauda, 2020

5 Wyse & Bradbury, 2021

6 Clay, 2014; Duke & Cartwright, 2021; Scarborough, 2001

7 Afflerbach et al, 2008; Kaye, 2006

8 Davis et al, 2007; Clay, 2014; Foorman & Connor, 2011

9 Newmann et al, 1996; Duke et al, 2011

10 Smith, 2001

11 Buchannan et al, 2016; Friesen et al, 2013; Chu, 2011; Chu, 2021

12 Brownlee, et al, 2012; Galloway et al, 2020

13 Clay, 2014

14 Bell & Dolainski, 2012; Black & William, 1998; Johnston, 2005

15 Christenson et al, 2012; Johnston, 2005


17 D’Agostino et al, 2021; Barone et al, 2020

18 Saphier, 2017


20 Baker, 2006; Lee, 2012; Muller, 2001

21 Auckerman & Schuldt, 2021
22 NCEL, 2022

23 Aukerman & Schuldt, 2021; Slavin & Cheung, 2005

24 Cheung & Slavin, 2005

25 Aukerman & Schuldt, 2021

26 Newmann et al, 2001; Fullan & Quinn, 2015; Langer, 2002; Knapp & Turnbull, 1990

27 Duke & Block, 2012

28 Biancarossa et al, 2010

29 Armbruster et al, 2006

30 Blachjowicz & Fisher, 2000

31 NICHD, 2000


33 NCTE, 2012; NCTE, 2012

34 Adams, 1990; Chall, 1967

35 NICHD, 2000

36 Tumner & Nesdale, 1985

37 Goswami & Bryant, 1986; Bradley & Bryant, 1983

38 Duke et al, 2011; Allington & Gabriel, 2012; Foorman & Torgesen, 2001

39 Slavin, 1990; Glass, 2002; Reutzel, 2007; Katz & Chard, 2000

40 Aukerman & Schuldt, 2021; Murphy et al, 2017

41 Kalb & van Ours, 2014; Bus et al, 1995; Anderson et al, 1985


43 Dreher, 2003
44 Hatcher et al, 2006; Foorman & Torgesen, 2001; Bonfiglio et al, 2006
45 Soter et al, 2008; Daniels, 2002
46 Topping & Samuels, 2007; Harvey & Ward, 2017; Hiebert & Reutzel, 2010
47 Serravallo & Goldberg, 2007
48 Taylor et al, 1990; Miller & Moss, 2013; Anderson et al, 1988; Foorman et al, 2006
49 Waiser & Whiteley, 2001; Anderson & Briggs, 2011; Deford, 1994
50 Tierney & Shanahan, 1991
51 Fullan & Quinn, 2015
52 Newmann et al, 2001; Darling-Hammond et al, 2008
53 Donohoo et al, 2018; Rogers, 2002
54 Donohoo et al, 2018
55 Hattie, 2015; Donohoo et al, 2018
56 Fullan & Quinn, 2015
57 Bryk et al, 2015
58 Slavin et al, 2008
59 NCTE 2012; Lovejoy et al, 2013
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