Methods for Advancing Literacy in Children Grades preK-3

Reading literacy is a critical foundational skill for success in all aspects of life, yet the 2019 National Assessment of Education Progress (NEAP) found that only 37% of fourth graders in Vermont were proficient in reading.¹ The Vermont General Assembly passed Act 148 in 2016 to allocate funding and direct the Agency of Education to work with a consulting firm to evaluate current education practices for students who struggle and create future recommendations.² In 2017 the District Managing Group (DMG), the selected firm, published their report with five key recommendations.³ Act No. 173, passed in 2018, shifted funding from a reimbursement model to a census-based model to better suit the recommendations of the DMG.⁴ Finally in response to the 2019 NAEP report and prolonged disruption to learning as a result of Covid-19, the Vermont State Representative Sarah Austin proposed House Bill 101 that seeks to provide the necessary grants to implement the DMG’s recommendations and increase literacy in preK-3 students.⁵ This report will evaluate specifically reading, one component of overall literacy, to outline the different instructional methods and their subsequent outcomes.

Definitions

Reading wars

The reading wars have been described as a battle between experts about the best way to teach literacy to young readers. The reading wars have occurred for at least 40 years, and some researchers consider them to go back 250 years. The two different arguments are for either a phonics or whole language approach to teaching children to read.6

Phonics

Phonics is a collection of approaches to teaching literacy that focuses on identifying letters, their relationships to one another and the subsequent sounds they make. This method allows readers to approach unfamiliar words with an understanding of the rules of the phonemes that constitute it and therefore enables them to sound it out.7

Whole Language

Whole language learning is centered around the philosophy that, much like the way speech develops in a child, reading too will arise naturally through exposure. Teaching methods focus on frequent reading, encouraging students to learn at their own pace, and the promotion of word recognition and context clues. Whole language learning is more a belief system than a methodological approach to teaching reading, consequently instruction using this approach can vary vastly.8

The Science of Reading/Reading Science

The science of reading or Reading science “is a vast, interdisciplinary body of scientifically-based research about reading and issues related to reading and writing.”9 This research is derived from multiple fields including cognitive psychology, communication sciences, developmental psychology, education, implementation science, linguistics, neuroscience and school psychology.10

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Prominent Methods

Structured Literacy

Structured Literacy (SL) is a method of reading instruction that includes

(a) explicit, systematic, and sequential teaching of literacy at multiple levels—phonemes, letter–sound relationships, syllable patterns, morphemes, vocabulary, sentence structure, paragraph structure, and text structure; (b) cumulative practice and ongoing review; (c) a high level of student–teacher interaction; (d) the use of carefully chosen examples and nonexamples; (e) decodable text; and (f) prompt, corrective feedback.11

These components of SL can be approached in numerous ways however Louise Spear-Swerling, child reading education expert, highlights the fundamental aspects of SL instruction in her research. She suggests, teachers using this teaching approach must emphasize specific skills and concepts, teaching them clearly rather than expecting incidental learning to take place.12 To clarify this further, teachers are expected to make sure skills are taught in a logical order for example, working on the decoding of one syllable words then moving on to two syllable words.13 Structured literacy is commonly used for students with dyslexia although the highly explicit nature of this system has been shown to help low-income students as well as at risk learners.14

When implementing structured literacy, the order in which course content is taught relies on the scope and sequence of what the students have already learned.15 For example, certain programs will start with sounds exclusively without teaching letters in order to avoid confusion in phoneme manipulation with the presence of letters.16 Once students master phonemic awareness, graphemes should then be introduced, for example, the addition of short vowels or vowel-consonant structures.17 These sequences are specifically designed in order to give students the easiest path to mastery while also incorporating access to a vast array of words which supports the development of fluency.18 Also, SL practices enable teachers to instruct students in a systematic way that ensures all students receive instruction that meets their needs and if the students are struggling, the specific skill or lesson they are not understanding is

16 Nina A. Lorimor-Easley, “An Explanation of Structured Literacy, and a Comparison to Balanced Literacy.”
17 Nina A. Lorimor-Easley, “An Explanation of Structured Literacy, and a Comparison to Balanced Literacy.”
18 Nina A. Lorimor-Easley, “An Explanation of Structured Literacy, and a Comparison to Balanced Literacy.”
more easily identified. With this information teachers can then return to the lesson where the student struggled and provide them with the support they need. The systemic nature of this style of teaching also gives teachers the ability to be diagnostic with their students, thus if a student begins to struggle it is easier to trace back to the specific step that a student may need to revisit.

The emphasis that Structured Literacy places on foundational skills such as decoding has been shown to be a vital step in improving literacy within children, especially those in kindergarten through 1st grade. A 2010 study conducted in thirty-one elementary schools sought to compare the differences between typical school practices and Responsive Reading Instruction (a type of structured literacy program). The purpose of this study was to look at differences in phonemic awareness, word identification, phonemic decoding, spelling, reading comprehension, and oral reading fluency. The study found that on average those who received Responsive Reading Instruction (RRI) placed in the 25th percentile in oral reading fluency, in contrast, those who received Typical School Practices (TSP) placed in the 18th percentile. Further, forty percent of the students within the RRI group tested out of special education after the study was conducted.

In addition to educational outcomes, neuroscience studies indicate that grapheme-phoneme (GP) oriented learning activates parts of the brain that then assist in later word recognition. In a study published in the *Brain and Language Journal*, scientists trained randomly assigned, literate adults to read scripts of glyph with either a whole word (WW) memorization process or a grapheme-phoneme (GP) focus. The glyphs represented English words and were composed of symbols much like letters. Participants that learned to associate the segments of the glyphs with sounds were better at deducing new, untrained words than those who were taught whole word instruction. Additionally, GP learners were shown to activate more neural activity on the left side of the brain whereas WW leaners activate more right hemispherical neural activity. The authors of the study comment that left hemisphere brain engagement during reading is a telltale sign of a skilled reader.

While it is evident that phonics is a successful and necessary component of reading, experts warn against a phonics-only based approach. The National Panel for Reading concluded in its report that “systematic phonics instruction should be integrated with other reading instruction

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19 Nina A. Lorimor-Easley, “An Explanation of Structured Literacy, and a Comparison to Balanced Literacy.”
20 Denton et al., “Effectiveness of a Supplemental Early Reading Intervention Scaled up in Multiple Schools,” 395.
21 Denton et al., “Effectiveness of a Supplemental Early Reading Intervention Scaled up in Multiple Schools,” 410.
22 Denton et al., “Effectiveness of a Supplemental Early Reading Intervention Scaled up in Multiple Schools,” 410.
23 Denton et al., “Effectiveness of a Supplemental Early Reading Intervention Scaled up in Multiple Schools,” 411.
25 Yuliya N. Yoncheva, Jessica Wise, and Bruce McCandliss, “Hemispheric specialization for visual words.”
26 Yuliya N. Yoncheva, Jessica Wise, and Bruce McCandliss, “Hemispheric specialization for visual words.”
27 National Reading Panel, “Teaching Children to Read: An Evidenced-Based Assessment of the Scientific Research Literature on Reading.”
to create a balanced reading program. Phonics instruction is never a total reading program.”

The Panel goes on to write

Phonics should not become the dominant component in a reading program, neither in the amount of time devoted to it nor in the significance attached. It is important to evaluate children’s reading competence in many ways, not only by their phonics skills but also by their interest in books and their ability to understand information that is read to them.”

Balanced Literacy

Balanced literacy is an approach to teaching reading that straddles between skills-based instruction, such as phonics, and the whole language method. Phonics only learning does not teach children to apply words in context while whole language fails to instruct on ways to decode unfamiliar words. By utilizing both approaches, the deficits of one are compensated by the other. The term “Balanced Learning” was popularized following the publication of Reading Instruction that Works: A Case for Balanced Teaching by education phycologist Michael Pressley in 1998. In its adoption, however, balanced literacy has lacked true methodological consensus and thus has become a catchall for most sorts of blended learning approaches.

Because balanced literacy is more akin to a philosophy than methodology, classrooms that teach in this style often reflect the interpretation of the teacher. Therefore, scientific research of reading outcomes with the balanced literacy approach are quite challenging to execute. Many scholars, including Mark Seidenberg a prolific psycholinguistics specialist, believe balanced literacy is whole language learning rebranded. Seidenberg says in his book Reading at the Speed of Light, “Balanced literacy was a way to defuse the wars over reading...It succeeded in keeping the science at bay, and it allowed things to continue as before.” However, others, such as Dr. Juliet Halladay, associate professor in the Department of Education at The University of Vermont, would contest this condemnation, suggesting it is not the notion of balanced literacy that is flawed but the execution of it in the classroom.

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28 National Reading Panel, “Teaching Children to Read: An Evidenced-Based Assessment of the Scientific Research Literature on Reading,” p. 97.
29 National Reading Panel, “Teaching Children to Read: An Evidenced-Based Assessment of the Scientific Research Literature on Reading,” p. 97.
31 Juliet Halladay (University of Vermont professor of literacy), in discussion with the authors, March 2021.
34 Mark Seidenberg, Language at the Speed of Light, (New York; Basic Books, 2017).
35 Juliet Halladay, in discussion with the authors, March 2021.
Other Instructional Methods and Practices

Reading in Motion

Rose and Magnotta experimented with another method of teaching literacy skills called the “reading in motion” method.36 This method uses the five areas of critical reading instruction recommended by the NIH but teaches them through music and drama in small groups. The method also focuses on providing frequent feedback from the instructor to ensure that students are learning.

Rose and Magnotta conducted 9 studies of this method over a 13-year period. Their study compares results from a group of students who use arts-based learning to those who use traditional, non-arts-based reading curricula. The results of this study are promising. “When students were taught to read using arts-based methods to teach phonemic awareness, systematic phonics, and oral reading fluency in small groups with frequent feedback, they significantly outperformed their peers.” Increased engagement was a prominent result from this study, and because of the dramatic aspect of this method, students may be better able to “creat[e] images of the information being read.”37

Interactive Read-Alouds

Interactive read alouds positively affect young children’s vocabulary development, literary syntax, narrative recall and more.38 Additionally, evidence has been found that read alouds may be of particular value to English learners. Interactive read-alouds help with oral reading fluency, something ELs may struggle with more. Interactive read-alouds provide context with instruction, which has been shown to be more effective than teaching literacy through decontextualized activities.39

Giroir et al. recommend “explicit vocabulary instruction along with meaningful text-based interactions, specifically those that allow for multiple exposures to words in numerous contexts” to accelerate vocabulary learning for ELs.40 In addition, interactions with other learners and native English speakers are important because it can “increas[e] their fluency and

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accuracy in their second language” and enhance development when they collaborate on projects.  

Reading to Learn vs. Learning to Read

In the 1990s, the idea of “learning to read” and “reading to learn” became more popular in literacy studies. The basis of this theory is that in grades K-3, children are learning to read, and in 4-12 they are reading to learn. However, after grade 3 in this approach, reading is taken out of context and skills and information are not learned in conjunction, which can make it harder to keep up with reading in later grades and students may be less engaged in the material. Data has since emerged showing that “learning to read” and “reading to learn” should happen “simultaneously and continuously, from preschool through middle school.” Focusing only on reading to learn after grade 3 results in narrow skill development and children who struggle to read who may not have developed strong reading skills by the end of grade 3. K-3 should focus on learning basic skills, such as “concepts of print, phonemic awareness, phonics and the alphabetic code, and word analysis strategies,” while comprehension skills like “fluency and automatic word recognition, vocabulary development, comprehension acquisition, and strategy development” are learned and perfected over a lifetime.

In preschools, many teachers often use units and different subjects to help students learn. Dr. Juliet Halladay, a literacy and language development professor at the University of Vermont, recommends teachers implement thematic curricula to simulate learning skills and information at the same time. Tong et al. explore this idea of thematic learning in a 2014 study incorporating literacy lessons with science instruction for grades K-3 ELs. Tong et al. found that K-3 students who received science-embedded English language instruction not only continued to develop faster than those students who did not receive the intervention in their English oral reading fluency (i.e., expressive and receptive vocabulary knowledge, verbal reasoning, and word meanings) and comprehension skills, but also approached or outscored their monolingual native English peers as reflected by the grade-based standard scores.

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41 Shannon Giroir et al., “Interactive Read-Alouds for English Learners in the Elementary Grades,” 641.
43 Juliet Halladay, in discussion with the authors, March 2021.
44 “Dismantling the Myth of Learning to Read and Reading to Learn,” Bonnie D. Houck and Kari Ross, ASCD.
45 “Dismantling the Myth of Learning to Read and Reading to Learn,” Bonnie D. Houck and Kari Ross, ASCD.
46 “Dismantling the Myth of Learning to Read and Reading to Learn,” Bonnie D. Houck and Kari Ross, ASCD.
47 Juliet Halladay, in discussion with the authors, March 2021.
Difference in Socioeconomic Status and Literacy

Nelson et al. find that the vocabularies of students of higher and lower-income backgrounds differ for several reasons. A few explanations the researchers outline include lower-income children not having exposure to book reading and language experimentation, and a lack of engagement in independent reading when school begins. These realities stem from a complex array of social and economic factors. Learning new words requires both “rich instruction and multiple exposures” to ensure the words are learned well. For students that struggle with learning vocabulary and the longer this gap occurs, the more likely it is that it will become a knowledge gap and students will struggle to comprehend material in future grades.49

Another difference is the students who enter kindergarten from lower socioeconomic backgrounds can sometimes have weaker oral language skills than students of higher socioeconomic backgrounds. This depends not only on parental encouragement of reading in pre-K grades, but also preschools that have strong programs to encourage and instruct 3- and 4-year-olds in beginner reading skills.50

Despite this evidence, Dr. Blanche Podhajski, former president of the Vermont Stern Center for Language and Learning of 37 years and expert in literacy methods, believes that students can learn literacy equally well if the teachers are prepared well enough.51 Learning methods, including specific word instruction, word-learning strategies, word consciousness, and explicit instruction from the teachers can counteract any variables of a student’s background that may impact their ability to learn.52

Expert Opinion on Structured Literacy

The University of Vermont’s Dr. Halladay believes that structured literacy is a “simple solution for a complex issue,” and that “in order to be a successful reader you need to have knowledge and skills,” which combine both information and reading skills to achieve the best literacy levels. Reading has multiple pathways that students must access to comprehend the material; decoding the words and understanding the letter-sound knowledge path is the phonics part, which structured literacy is based on, but the other important part is linguistic knowledge, including cultural and background knowledge, which balanced literacy focuses on (whole word approach). The last pathway that Halladay described was the “strategic processing pathway,” in

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51 Blanche Podhajski (former president of the Stern Center for Language and Learning), in conversation with the authors, March 2021.

which students can both summarize and visualize the text to make predictions, which is a comprehensive approach to understanding the text.53

Dr. Katie Revelle of the University of Vermont advocates for a “comprehensive approach to literacy instruction that includes research-based instructional practices and uses systematic assessments to evaluate and respond to students’ diverse learning needs.”54

The What Works Clearinghouse (WWC) is an arm of the Institute of Education Sciences through the U.S. Department of Education that was started in 2002. The goal of the WWC is to assess best methods for literacy in American children, using scientific methods to determine what works and what does not. Their database comprises of many different research methods and papers individuals have conducted and written, showing methods that live up to the WWC standards for literacy and reading education.

Within the report focusing on “foundational skills to support reading for understanding,” the WWC has four recommendations for teaching literacy skills in grades K-3.

1. Teach students academic language skills, including the use of inferential and narrative language, and vocabulary knowledge.
2. Develop awareness of the segments of sounds in speech and how they link to letters.
3. Teach students to decode words, analyze word parts, and write and recognize words.
4. Ensure that each student reads connected text every day to support reading accuracy, fluency, and comprehension.55

The National Reading Panel

In 1997 Congress created a National Reading Panel to analyze a review of the literature about approaches to teach children to read. In 1997 the National Reading Panel published their extensive 450-page report evaluating six key components of learning to read: alphabetics (phonics), fluency, comprehension, teacher education and reading instruction, and computer technology and reading instruction. While the report covers numerous nuanced teaching styles and their outcomes, there are a few essential overarching conclusions from each of these categories:

• Phonics awareness and instruction are irrefutably beneficial to children learning to read and systematic phonics instruction yields superior outcomes compared to subjective teacher phonics instruction.
• Fluency (speed and accuracy of oral reading) is improved with guided oral reading.

53 Juliet Halladay, in discussion with the authors, March 2021.
54 Katie Revelle (University of Vermont professor of literacy), in discussion with the authors, March 2021.
55 Barbara R. Foorman et al., Foundational Skills to Support Reading for Understanding in Kindergarten through 3rd Grade (Washington, D.C., 2016).
• Reading comprehension teaching strategies are numerous but effective therefore it is essential teachers are equipped with comprehensive strategies to instruct their students.
• There is a lack of understanding in the literature about how to compare teachers’ training and education to their effectiveness as an instructor which must resolved.
• There is also a lack of literature on the use of technology in the classroom, but the few studies examined show promise.  

Practices Employed in Other States

Michigan

The state of Michigan has recently begun implementing new instructional practices in the classroom for literacy. In a document produced for the state, the Early Literacy Task Force of the Michigan Association of Intermediate School Administrators (MAISA) General Education Leadership Network (GELN), emphasized 10 practices that can be used within any literacy framework or approach. They recommend integrating the practices into different subjects such as Science or Social Studies to help contextualize the material while also improving literacy skills, thus combining the ideas of “reading to learn” and “learning to read.” The 10 practices the Early Literacy Task Force recommended are as follows:

1. Deliberate, research-informed efforts to foster literacy motivation and engagement within and across lessons.
2. Read-alouds of age-appropriate books and other materials, print or digital.
3. Small group and individual instruction, using a variety of grouping strategies, most often with flexible groups formed and instruction targeted to children’s observed and assessed needs in specific aspects of literacy development.
4. Activities that build phonological awareness.
5. Explicit instruction in letter-sound relationships.
7. Intentional and ambitious efforts to build vocabulary and content knowledge.
8. Abundant reading material and reading opportunities in the classroom.
9. Ongoing observation and assessment of children’s language and literacy development that informs their education.
10. Collaboration with families in promoting literacy.

Massachusetts

Kindergarten Foundational skills in Massachusetts emphasize phonological awareness, and print concepts such as reading left to right and top to bottom.59 These concepts are a vital step in furthering children's literacy skills. The skills are also taught in a highly explicit and systematic way which is aligned with the Structured Literacy model. Furthermore, Massachusetts's program emphasizes the teaching of High-Frequency words such as “do, does, were, are, was and of.”60 These words are taught in such a manner that is associated with their spelling, sounds and meaning rather than a single unit.61 Finally, there is an emphasis on culturally responsive practice. One part of this is a respectful and trusting relationship between the student and the teacher. This helps facilitate corrective feedback in an affirming way, it also accounts for a mix in knowledge with English learners.62 For example, a Spanish speaking student may confuse the “j” sound as the /y/ sound in their home language in this instance teachers are to remind them of the difference and make sure not to criticize the mistake.63

Conclusion

Increasing evidence demonstrates a strong middle ground is the best approach to teaching literacy. While some scholars and educators are adopting the middle ground approach, there remains a divide between other scholars and educators who prefer SL or balanced literacy. The key difference between these SL and balanced literacy methods is the amount of phonics instruction. Regardless of whether a compromise between the two would be most effective, which is considered true in some newer research, actual literacy practices employed around the country are still divided between these two camps.64

The research is clear that phonics instruction is critical to reading literacy success; however, there are many other components of literacy instruction that are fundamental to facilitating the development of an engaged and well-rounded reader such as context, comprehension and expression. Emerging research has shifted the narrative away from “reading wars” debates and towards more wholistic, evidence-based tactics. Ultimately, it matters less what the reading approach is called and more so that it, and the teachers instructing it, are comprehensive in addressing the breadth of skills needed to equip children to learn.

This report was completed on April 21, 2021, by Rowan Hawthorne, Aidan Neilly, Hannah Dauray under the supervision of VLRS Director, Professor Anthony “Jack” Gierzynski in response to a request from Vermont State Representative Sarah Austin.

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