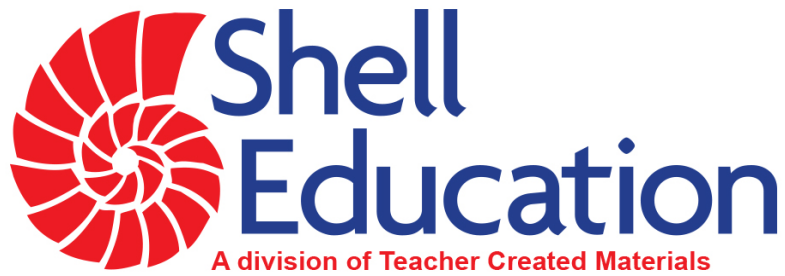Sample Pages from

Shell
Education
A division of Teacher Created Materials

Thanks for checking us out. Please call us at 800-858-7339 with questions or feedback or to order this product. You can also order this product online at **www.tcmpub.com/shell-education**.

For correlations to state standards, please visit
www.tcmpub.com/teachers/correlations

To **Create** a *World* in which
Children Love to *Learn!*

There's RESEARCH for That

Your K-5 Literacy Instruction Questions Answered

HEIDI ANNE MESMER • KATIE HILDEN

Shell Education

Table of Contents

PART 1: FOUNDATIONAL SKILLS THAT SUPPORT WORD RECOGNITION

PART 2: LANGUAGE AND OTHER SKILLS THAT SUPPORT COMPREHENSION

Question Organization

Question: The classroom-based question being examined.

Question 3

What are print concepts, and should they be given instructional attention? Don't students just naturally learn print concepts as we teach them to read?

Discussion from the Classroom

"Children learn the concept of word in print when you teach them how to decode a word. The whole focus on print concepts is a waste of time," one teacher said on social media. And that post got a lot of likes! It did seem like common sense. Why mess around with all the minutiae of print concepts if you can cut right to the chase and focus on all come together during decoding? Why spend time reminding children that print is what we read and not the pictures? Why model print tracking during a whole-group shared reading? Why ask children to practice tracking the print if it will all "come together" from decoding cat?

As it turns out, the research tells us that children do not naturally understand how to work in print, and modeling and practice can make a substantial difference in developing these insights.

Background and Assumptions

In the 1990s, through her careful clinical work, Marie Clay made the field aware of what became known as "concepts about print" (1991). She revealed that children do not naturally know all the mechanics about how print works (e.g., print vs. pictures, left-to-right, top-to-bottom, where one word ends and the other begins). She developed an assessment to test children's understanding of these concepts.

29

Discussion from the Classroom: Common concerns that teachers voice about the question. Why answering the question is important for classroom practice.

Background and Assumptions: Established facts, theories, or ideas. Definitions.

Within the collection of concepts about print, the specific insight about how words work is pivotal. This is called "concept of word in print." Researchers theorize that before they fully acquire and learn how to use letter sounds, children do not really know how to find the boundaries of words (Morris et al. 2003). They tend to treat a sentence as one continuous object, rather than composed of multiple word objects. It appears that children do not use the letter sounds or pay attention to the spaces between words.

Research Studies That Inform the Question

Ehri, L. C., and J. Sweet. 1991. "Fingerpoint Reading of Memorized Text: What Enables Beginners to Process the Print?" *Reading Research Quarterly* 26 (4): 442–462.

Evans, M. A., and J. Saint-Aubin. 2005. "What Children Are Looking at During Shared Storybook Reading: Evidence from Eye Movement Monitoring." *Psychological Science* 16 (11): 913–920.

Farry-Thorn, M., and R. Treiman. 2022. "Prereaders' Knowledge About the Nature of Book Reading." *Reading and Writing* 35: 1933–1952.

Justice, L. M., A. S. McGinty, S. B. Piasta, J. N. Kaderavek, and X. Fan. 2010. "Print-Focused Read-Alouds in Preschool Classrooms: Intervention Effectiveness and Moderators of Child Outcomes." *Language, Speech, and Hearing Services in Schools* 41 (4): 504–520.

Justice, L. M., L. E. Skibbe, A. Canning, and C. Lankford. 2005. "Pre-schoolers, Print and Storybooks: An Observational Study Using Eye Movement Analysis." *Journal of Research in Reading* 28 (3): 229–243.

Mesmer, H. A., and T. O. Williams. 2015. "Examining the Role of Syllable Awareness in a Model of Concept of Word: Findings from Preschoolers." *Reading Research Quarterly* 50 (4): 483–497.

Morris, D., J. W. Bloodgood, R. G. Lomax, and J. Perney. 2003. "Developmental Steps in Learning to Read: A Longitudinal Study in Kindergarten and First Grade." *Reading Research Quarterly* 38 (3): 302–328.

Nevo, E., and V. Vaknin-Nusbaum. 2018. "Enhancing Language and Print-Concept Skills by Using Interactive Storybook Reading in Kindergarten." *Journal of Early Childhood Literacy* 18 (4): 545–569.

30   ‹‹‹   THERE'S RESEARCH FOR THAT

Research Studies That Inform the Question: List of citations for studies that best answer the question. Often these include meta-analyses. These studies are the bases for answering the question.

Research Findings: Translation of findings from cited studies. Main themes listed as subheadings.

Research Findings ‹ ‹ ‹ ‹ ‹

Understanding What a Word Is in Print Does Not "Come Naturally"

What are young children looking at when they are watching an adult read to them? Can children know letters and letter sounds but not understand what a word is in print? As it turns out, empirical research informs these two questions, and it tells us that insights about how words work are not natural (Farry-Thorn and Treiman 2022; Justice et al. 2005). Two eye movement studies show that pre-readers (ages three to five-and-a-half) do not naturally pay attention to words. In one study, children only looked at print, even when it was set apart by itself on a page, less than 10 percent of the time (Evans and Saint-Aubin 2005). Another study found that when children were watching and listening to a traditional picture book with very prominent pictures, they looked at the print only 2.7 percent of the time. Even when they were watching and listening to a specially constructed picture book with larger and more prominent print, they only fixated on print a maximum of 7 percent of the time. In fact, even children who had letter knowledge did not pay more attention to print (Justice et al. 2005).

Another study tested the behaviors of preschoolers (Farry-Thorn and Treiman 2022). The study measured the preschoolers' knowledge of letters and words beforehand and then tested the following questions: "Do pre-readers who can identify letters and words in a book understand that the print is the part of the book that is read?" The study presented children with different sets of facing text pages (i.e., one page on the left and one on the right). In each set, the page on the left had only pictures and page on the right had either a single letter or only words. Researchers asked the children to point to the page with the pictures, point to the page with the letter, and point to the page with the words. They found that 97 percent of preschoolers correctly pointed to the page with letters (but not words), and 94 percent correctly pointed to the page with words. But when asked, "Can you point to the page that I can read?" only 58 percent of the children pointed to the page with print. This showed that children could know the labels *letter* and *word*, and even know some actual letters, but still not conceptually understand how that relates to reading.

Children Develop Concept of Word in Predictable Patterns

How can we tell that children know where one printed word begins and another ends, and why is that even important? Researcher Morris and colleagues (2003) found that if you ask children to memorize a line of print and then watch them try to coordinate the words that they say as they point, you can understand their understanding of words. As children are learning letters and letter sounds, they also need to learn how to *use* that information in the acts of reading and writing. When young children look at a line

QUESTION 3   ››› 31

So What? Actions for the Classroom: Actionable steps or instructional choices based on the findings.

Another quasi-experiment examined a similar intervention with Hebrew-speaking children who were randomly assigned to one of two groups: an interactive shared reading group and a control group (Nevo and Vaknin-Nusbaum 2018). The interactive storybook reading taught print concepts along with language skills (morphology, vocabulary, and phonological awareness). The interactive reading impacted children's learning of print concepts, morphology, vocabulary, and phonological awareness. The study also found that children's pretest motivation influenced their learning of print concepts, pointing to the importance of engagement as children learn print concepts.

So What? Actions for the Classroom

Do Not Assume Students Conceptually Understand the Difference Between Letters, Words, and Sentences

The research demonstrates that many children do not naturally understand that letters make up words or even that words are the part that we "read." They see pictures as most useful and often just don't attend to print because it is not interpretable to them. How do you know if you are assuming that children understand these concepts, and how can you avoid making that assumption? First, although you must teach letter shapes and sounds using isolated letters, do not do this to the exclusion of modeling real reading. If children are always working with isolated letters and never see them being used in an extended text, they are unlikely to get "the big picture" (see procedures below). As obvious as it sounds, they will not connect letters with reading ("Oh, these letters are what we read") or understand that letters group together to form words. It's like teaching someone about all the different types of bolts that there are (e.g., bugle head, dome head, raised head) without telling them that they are building a ship!

Second, as you are teaching letters, give children time to acquire these insights about print. It does not happen overnight, and so you must keep the shared reading going as you are teaching letters. Third, as described below, rely on modeling and shared participation for building insights about how words work as much as you depend on direct explanation. Usually, direct explanation will not go as far in developing understandings as ongoing modeling and shared participation. The teaching of letters must be constantly integrated with learning how those letters work and why in the world you might learn them!

Teach Print Concepts During Shared Whole-Group Reading

There is a well-known piece of advice that fiction writers are given about developing a story: "Show, don't tell." This advice also applies to print concepts and concept of word.

As children advance, they should be able to control their own pointing, especially with polysyllabic words. Do model this, however, by showing them that your finger stays on a polysyllabic word and does not move to the next word (e.g., "Look at when I say the word *moving*. It's long. I start at the *Mm* then stay on the word for both parts, *mov-ing*.").

Lastly, we suggest letting children do this themselves with small books that replicate the lines that the teacher modeled throughout the week. After doing whole-group instruction and asking individual children to demonstrate, give children their own individual books with the same story/rhyme/sentences and ask them to do it. We have used this in research with preschoolers (Messmer and Lake 2010). Some educators and researchers discourage using individual books, because children are not actually decoding the words (Lindsey 2022). If that is your perspective, ask children to participate in a whole-group setting. The research does not point to individual books being either harmful or pivotal.

What are print concepts? Should they be given instructional attention?

Print concepts do not come naturally. Children may point to letters and words but still not understand the function of words.

- 87% answered this correctly: "Can you point to the page with letters on it?"
- 84% answered this correctly: "Can you point to the page with words on it?"
- **Only 58%** answered this correctly: "Can you point to the page that I can read?"

HOW TO MODEL:

Where should I start reading? On this side, or this one?

How many words are there?

There it goes! See the cat! Leaping, jumping That's a fact.

Stepping high! Crouching low! Moving fast! Moving slow!

See the word leaping has two parts: leap/ing. But is it one word.

Can you find a long word? A short word?

Say the words while I point.

(Justice et al. 2009; Nevo and Vaknin-Nusbaum 2018; Farry-Thorn and Treiman 2022)

Translational Graphics: Graphic that lists the main classroom applications of the findings along with the citations.

Other Useful Resources: Additional articles, how-to pieces, or theories about the topic, often not research.

Other Useful Resources

Clay, M. M. 1989. "Concepts About Print in English and Other Languages." *The Reading Teacher* 42 (4): 268–276.

Justice, L. M., R. P. Bowles, and L. E. Skibbe. 2006. "Measuring Preschool Attainment of Print Concept Knowledge: A Study of Typical and At-Risk 3- to 5-Year-Old Children Using Item Response Theory." *Language, Speech, and Hearing Services in Schools* 37 (3): 224–235.

Justice, L. M., and H. K. Ezell. 2001. "Word and Print Awareness in 4-Year-old Children." *Child Language Teaching and Therapy* 17 (3): 207–225.

Justice, L. M., and H. K. Ezell. 2002. "Use of Storybook Reading to Increase Print Awareness in At Risk Children." *American Journal of Speech-Language Pathology* 11 (1): 17–29.

Justice, L. M., J. N. Kaderavek, X. Fan, A. Sofka, and A. Hunt. 2009. "Accelerating Preschoolers' Early Literacy Development Through Classroom-Based Teacher-Child Storybook Reading and Explicit Print Referencing." *Language, Speech, and Hearing Services in Schools* 40 (1): 67–85.

Messmer, H. A. E., and K. Lake. 2010. "The Role of Syllable Awareness and Syllable-Controlled Text in the Development of Finger-Point Reading." *Reading Psychology* 31 (2): 176–201.

Messmer, H. A., and T. O. Williams. 2015. "Examining the Role of Syllable Awareness in a Model of Concept of Word: Findings from Preschoolers." *Reading Research Quarterly* 50 (4): 483–497.

I know that "letter of the week" is not the way to go, but how many letters should I teach per week?

Discussion from the Classroom

Most teachers know that the tradition of teaching one letter per week is not effective (Sunde, Furnes, and Lundetræ 2020). Here are some of the reasons that teaching this way is not the best idea for students:

1. It is too slow. There are twenty-six letters and thirty-six weeks in the typical school year. If you teach only one letter per week, students do not know all the letter sounds until about April.

2. Not all letters require a full week. Some letters children already know. In fact, most children will know the letters at the beginning of the alphabet as well as some of the letters in their name (Drouin, Horner, and Sondergeld 2012; Phillips et al. 2012). Why teach letters children know? And why spend a week on Aa if everyone already knows it?

3. Not everyone needs the same amount of letter instruction. In one study, kindergartners knew between one and fifty-two letters (Phillips et al. 2012), meaning that children did not all need the same letter instruction, a point made by other researchers (Stahl 1998; Treiman 2000).

4. Not all letters present the same level of difficulty for learners (Drouin, Horner, and Sondergeld 2012). Some are harder and need more time, and others are easier and need less time.

Of course, teachers, being the pragmatic professionals that they are, always ask, "Okay, so if one letter per week is too few, then what number is right? How many

letters *should* I teach per week? What does the research say?" Three studies specifically addressed different rates of letter introduction to learners (Jones and Reutzel 2012; Sunde, Furnes, and Lundetræ 2020; Vadasy and Sanders 2021).

Background and Assumptions

Many teachers are familiar with the term *letter,* but fully understanding how an alphabetic system works requires understanding the more technical terms *phoneme* and *grapheme*. Below are brief definitions of these terms:

➔ **Phoneme.** A *phoneme* is a speech sound, the smallest unit of sound in a language that differentiates meaning. For example, the words *cat* and *cot* differ by one speech sound, *a/o,* and that difference distinguishes the words' meanings (e.g., *animal* vs. *small bed*).

➔ **Letter.** A *letter* is a unit in an alphabetic writing system that usually represents just one phoneme or speech sound. Letters combine to form words. There are two types of letters, consonants and vowels, representing phonemes formed in a variety of ways.

➔ **Grapheme.** Within the context of literacy research and instruction, a *grapheme* is the written expression of a phoneme made up of one or more letters. In English there are 26 letters but about 44 phonemes; to represent all the phonemes, some graphemes combine letters. (e.g., *beat*, *toil*, *bark*).

Research Studies That Inform the Question

Jones, C. D., and D. R. Reutzel. 2012. "Enhanced Alphabet Knowledge Instruction: Exploring a Change of Frequency, Focus, and Distributed Cycles of Review." *Reading Psychology* 33 (5): 448–464.

Sunde, K., B. Furnes, and K. Lundetræ. 2020. "Does Introducing the Letters Faster Boost the Development of Children's Letter Knowledge, Word Reading and Spelling in the First Year of School?" *Scientific Studies of Reading* 24 (2): 141–158.

Vadasy, P. F., and E. A. Sanders. 2021. "Introducing Grapheme-Phoneme Correspondences (GPCs): Exploring Rate and Complexity in Phonics Instruction for Kindergartners with Limited Literacy Skills." *Reading and Writing* 34: 109–138.

Research Findings ⬅ ⬅ ⬅ ⬅ ⬅

An Average of Three Graphemes per Week Resulted in Better Learning, Especially for Lower Skilled and Multilingual Learners

In our opinion, an experimental study by Vadasy and Sanders (2021) provides the most helpful guidance on how many letters to introduce per week. Researchers identified kindergarten and first grade students, including multilingual learners, who did not have high levels of letter knowledge and randomly assigned them to one of the following groups:

1. Slow: five weeks of instruction in ten letters, two per week
2. Fast: five weeks of instruction in fifteen letters, three per week

Interestingly, these researchers did not simply teach single-letter graphemes but also taught some multi-letter units. All students were taught the graphemes *a*, *m*, *ea*, *s*, *t*, *oo*, *d*, *o*, *sh*, and *r*, and students in the Fast group were also taught *n*, *ai*, *g*, and *ck*. After five weeks, researchers tested students on (a) letter names (taught); (b) letter sounds (taught); (c) letter spellings (taught); (d) word reading (consonant-vowel-consonant [cvc]); and (e) spelling (cvc). Students in the Fast group had learned more graphemes. This study suggests that at-risk kindergarten and first grade students, as well as students who are multilingual learners, learn more graphemes when taught three per week.

Teachers Who Introduce All Letters Earlier in the Year Positively Impact Learning, Especially for Lower Skilled and Multilingual Learners

A study in Norway examined natural differences that teachers reported in rates of letter introduction across the school year (Sunde, Furnes, and Lundetræ 2020). This was not an experimental study, and there was no random assignment to different rates of instruction. Researchers examined the impact that different rates of letter instruction had on over 900 children's (a) letter knowledge; (b) word-reading accuracy; (c) sight-word efficiency; and (d) spelling after a year.

Students took tests on the four measures at the beginning and end of the year, and researchers used a teacher survey to identify their rate of letter instruction. The main question on the survey was, "By the end of which month did you complete the first introduction of the letters?"

Children who learned letters at faster paces performed best on all measures (letter knowledge, word reading, sight word, and spelling). This was especially true for the lowest performing children and for multilingual learners. About 50 percent of teachers introduced all letters by December. If students learn letters earlier, they may have more time for repetition and practice, more time to learn how to *apply* letter-knowledge to

decoding and spelling, and more time with the harder letters. Essentially, there is a timesaving efficiency that benefits students.

We want to provide a few caveats and clarifications about this study. In the study, the mean age of children at school entry was about 6.5 years, making them at least one year older than most kindergartners in the United States. In addition, the Norwegian language is more regular than English, meaning there are fewer "exception" words (e.g., *said*, *of*, *enough*).

Repeated Letter Cycles with One Letter per Day and Formative Assessment Resulted in Fewer At-Risk Students

In a two-year longitudinal study, researchers tested the impact of what they called Enhanced Alphabet Knowledge (EAK) instruction in comparison to traditional instruction (Jones and Reutzel 2012). This was not an experimental study; students were not randomly assigned instructional treatments. Instead, each teacher used either EAK or traditional instruction. EAK instruction included the following: (a) letter-a-day pacing with increasing flexibility; (b) distributed review cycles; and (c) lessons that efficiently teach students alphabet knowledge. Distributed review is review that takes place over a longer period and, in this study, formed 10 to 20 percent of the instructional time. The study took place in four urban schools, with nine teachers and over two hundred students using EAK and four teachers and ninety-two students using a traditional approach in Year 1.

Based on the Letter Naming Fluency measure of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), the study showed that by the end of the first year, EAK instruction reduced the number of at-risk students and increased the number of students meeting the benchmark. EAK instruction was 1.5 times more effective at reducing risk and 2.9 times more effective at helping students meet the benchmark. The EAK instruction was multidimensional, and all three elements of it—review, formative assessment, one letter per day—contributed to its effectiveness.

So What?   Actions for the Classroom

Teach Three to Five Letters per Week, with All Letters Introduced by December

Together, the three studies offered several big takeaways. First, learners, including multilingual and at-risk learners, learned more when their teachers presented three to five letters per week. In another study, teachers who introduced all the letters by December saw more growth. This is interesting because teachers' instincts often say to slow down with learners who are struggling, but in the case of letters, slower was not

better. Of course, the details of the letter instruction are important. Fast, sloppy teaching will not be effective, and just going fast is not the only ingredient. So, in following a pace of three to five letters per week, make sure to follow the additional research-based suggestions.

Teach Letters in Assessment-Informed Cycles with Predictable Routines

A study of letter cycles showed that after presenting all the letters, teachers assessed students to see which letters needed more time and for which students. Then they taught those specific letters to students who needed to learn them. Their pacing and selection of content was driven by responsive instruction. Simply reteaching content without assessment is inefficient and wastes instructional time. The teaching routine was clear and simply asked students to identify the letter name and sound, recognize the letter in text, and write the letter.

Use Distributed Review

The research on practice tells us that distributed review over days is better than longer practice sessions that take place less frequently. The most successful letter instruction used 10 to 20 percent of the instructional time to practice letters recently learned while also reviewing some that were learned less recently. It can take four to six weeks for some content to really stick. In addition, with a short, daily practice session reviewing previous letters, a teacher can quickly reteach or emphasize content that may have "slipped" over a break or a long weekend. So, teach a bit faster, but also review systematically each day using about 10 to 20 percent of the instructional time. Keep the practice uncomplicated and offer each child many opportunities to identify letter sounds.

For a graphic that shows the answer to this chapter's question, turn the page!

How many letters should I teach per week?

abcde fghijklmn opqrstuv wxyz

Three to five letters per week

In an experimental study, at-risk and multilingual learners learned more with a three-letters-per-week routine.

In a study with multiple components, a pace of one letter per day resulted in more students meeting benchmarks in letter naming.

Review letters based on assessment

Teachers used assessments after teaching all letters to see which students needed more time for which letters.

DECEMBER

Introduce all by December

In a longitudinal study, children whose teachers introduced all letters by December learned more—this was especially true for at-risk and multilingual learners.

Distributed Review 10% to 20% of instructional time

At-risk and multilingual learners benefit from a faster pace.

(Jones and Reutzel 2012; Sunde, Furnes, and Lundetræ 2020; Vadasy and Sanders 2021)