CHAPTER 1

Foundations of Word Study Instruction

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GUIDING QUESTIONS

- What is the goal of word study?
- How is orthographic knowledge related to word study instruction?
- What principles of word study instruction keep teachers on track?
- How do the stages of reading, writing, and spelling develop in synchrony?
- What are the types of developmental groups teachers may see across the school grades?
- What one or two elements of word study instruction do teachers choose in professional learning, including differentiation, materials, student talk, and reflection?

Word study is an approach to teaching phonics, vocabulary, and spelling that is based on what students know about words in reading and writing, their orthographic development. This chapter shows how to make word study real for teachers and their students, and this chapter lays the foundation by describing the developmental aspects of phonics, spelling and vocabulary instruction, and professional learning.

This word study approach to teach phonics, spelling, and vocabulary emerged in the 1970s from the scholarship and teaching of Edmund

Henderson, his colleagues, and students at the Universities of Virginia and Delaware (Henderson & Beers, 1980). In assessment and instruction classes, he showed how reading and writing are interrelated and how to teach word study. This work has been a foundation to understand how students learn to spell, and many texts and dissertations have been dedicated to Henderson. In the lesson plan at the McGuffey Reading Center, word study was an essential activity, and it was there at the University of Virginia that Marcia Invernizzi taught the first word study course. Since then, *word study* has been adopted by many to describe phonics instruction. In several chapters in this book and others, word study instruction is based on the layers of orthographic knowledge and stages of spelling Henderson described (Templeton & Bear, 1992/2012, 2018). This perspective guides how educators can shape and supplement their available materials and activities. You will see throughout this chapter that this approach to word study is active, explicit, student-based, and differentiated.

The *Why* of Word Study

The ultimate goal of word study is for students to be proficient readers and writers. Word study teaches students about words for the fast and accurate recognition of words in reading and production of words in writing. This fluency and automaticity in reading and writing makes time for students to focus their attention on making meaning. Word study explicitly teaches students the vital skills necessary to excel at word recognition, spelling, and vocabulary using hands-on activities (Bear et al., 2020).

In proper perspective, word study is but one part of an experiential, language-based, story-rich, and relevant social ecology for literacy learning. In our conversations with teachers, much of what we discuss as literacy leaders are five general categories of literacy activities, of which word study is but one: *Read To*, *Read With*, *Write With*, *Word Study*, and *Talk With* (RRWWT). *Read With* and *Word Study* activities are often differentiated developmentally and are usually conducted in small groups. The *Read To*, *Write With*, and *Talk With* activities do not need to be differentiated by orthographic development.

Word study instruction is active and must be accompanied by plenty of experience reading and writing to the point that orthographic knowledge is internalized and tacit (Polanyi & Sen, 2009), perceived directly (Gibson, 1982), and deployed quickly, almost unconsciously, and the study of orthography becomes more conscious in metalinguistic and conceptual analyses of morphology, vocabulary, and comprehension. Developmental orthography is a concept that shows how learning to read and write are part of the same process.

Two Components of Orthographic Knowledge

To understand phonics, spelling, and vocabulary instruction, it is essential to understand the concept of orthographic knowledge. There are two components of orthographic knowledge: (1) memory of how to read and spell specific words and (2) understanding the patterns that underlie how words are spelled. These two components are complementary and are required for fluent reading, and both are necessary in the learning process. Consider how beginning readers memorize a few words and letter–sound correspondences and build on those words and correspondences to make generalizations about the alphabetic principle. And once having learned the alphabetic principle, they discover patterns and processes that shape the orthography of one- and two-syllable words. Orthographic knowledge makes reading words rather effortless and, to borrow from Jack London (1917), leaves plenty of "brain energy to think" for students to think about what they are reading and writing. Memory of words and knowledge of orthographic patterns build on each other in both reading and writing. Reading and writing are part of the same processes, as evidenced in psychological, psycholinguistic, physiological, neurolinguistic, and sociolinguistic research (Ehri, 2014; Hruby & Goswami, 2011; Joshi & Aaron, 2006; Moffett et al., 2021; Perfetti, 2007). Orthographic knowledge and word reading fluency are facilitated by explicit, structured, and sequenced developmental word study.

Reciprocal Processes in Learning

Reading, writing, and spelling knowledge are interactive and inform each other, and thus there is a reciprocity in among the three. Word study instruction throughout this book incorporates this reciprocity in instruction and contributes to growing capable and proficient readers and writers (Templeton & Bear, 2018). Not only are reading and writing interactive processes (Ehri, 2014), but teaching and learning are also reciprocal. For centuries, educators have recognized the reciprocity between reading and writing and have used spelling instruction to teach phonics and vocabulary (Russell, 1844). Orthographic studies and reviews of research have shown that, when we teach spelling, for example, we are also teaching reading (Graham & Santangelo, 2014). In summary, word study instruction for phonics, spelling, and vocabulary teaches word knowledge for reading.

As a receptive process, reading development may look like it is ahead of the more demanding task of writing, but in looking at students' orthographic knowledge, the synchrony among reading, writing, and spelling is evident. Synchrony is an important concept in assessment and monitoring progress because the synchrony model shows how the three are interrelated

across the three layers and five stages of development. Knowing students' spelling stage reveals the orthographic development they use to read words of varying levels of complexity. Conversely, knowing reading stages suggests the way students spell and a stage of spelling. Reading, writing, and spelling unfold in a timed fashion (*together* + *in time*, *syn* + *chron*), and this synchrony concept is part of formative assessment in literacy.

Principles of Word Study Instruction

The success of students' learning hinges on implementing the practices embodied in the principles of word study instruction presented here. Word study instruction is an *approach* to teaching and not confined to a set of materials; and therefore, materials in your school can be adapted for instruction. The 11 principles in Figure 1.1 apply across stages of development and grades. What word study looks like, the routines, and physical structures change across the years, but the same principles apply. These principles are reminders of how we want to teach and have remained stable across the years. They are discussed in detail (Bear et al., 2020), and a few key concepts are highlighted in this discussion with the principles in parentheses.

The first principle is essential to assessment, knowing where students are developmentally, and grouping for instruction. We look for what type of errors students make as evidence of the new ideas they are learning (Principle 1, or P1 for short). Their spelling and reading errors show us the edges of students' learning, their instructional levels. What they can spell

Principles of Word Study Instruction

1. Look for what students use but confuse.
2. A step backward is a step forward.
3. Use words that students can read.
4. Compare words that "do" with words that "don't."
5. Begin with obvious contrasts.
6. Sort by sound and pattern.
7. Don't hide exceptions.
8. Avoid rules.
9. Work for fluency.
10. Encourage and participate in student talk.
11. Return to meaningful texts.

FIGURE 1.1. Eleven principles of word study instruction. Adapted from Bear et al. (2020).

correctly, for example, is useful to know but insufficient. The quality of the errors shows us what they are thinking and what orthographic theories they are playing with; for example, students learning about the long vowel silent *e* marker often overgeneralize and add an *e* to words (e.g., PLAYE for *play* and FANE for *fan*). In daily word study, students can read nearly all the words they study (P3) and they learn to think about how words compare to each other (P4). Once automaticity or fluency sorting, writing, and reading particular types of words is achieved, students experiment with other orthographic generalizations (P9). Student talk in Principle 10 emphasizes the need for students to discuss what they are learning and for the teacher to facilitate the discussion to encourage participation and reflection. We want to encourage student talk, for we have confidence that we cannot teach by telling students things (James, 1899/1958). Asking open-ended questions is a way to encourage student talk (discussed in Chapter 3 and presented in the Appendix, this volume). Students are *proximal partners* with similar understandings of the orthography, and they are often able to explain and show each other approximations in spelling and vocabulary use that are educative if they have sufficient opportunity to interact (cf. Vygotsky, 1978). These principles suggest specific types of activities. As examples, Principle 2 suggests that teachers introduce word study with relatively easy materials that students already understand, and Principle 5 speaks to the need to show students word study routines for sorting, to work with partners, and to complete independent activities.

Before students dive into how words look alike, have them first look at the way the words may be alike in how they sound (P6). Students return to meaningful texts in their word hunts when they look for words that have the same features for sound, pattern, and meaning (P11). To encourage understanding, we do not ask students to memorize rules (P8); rather, we compare words—those that "do" and those that "don't" (P4)—and to encourage discovery, exceptions often lead to generalizations (P7). Once we know about students' orthographic and literacy development, instruction is organized with these principles in the forefront of our thinking.

Layers of Orthographic Knowledge and Stages of Reading and Spelling

Orthographies are described by their three layers: sound–symbol, pattern, and meaning (Berninger et al., 2009). Students' development of these three layers in an orthography is portrayed in this book following Henderson's five stages of reading and spelling (Henderson, 1990; Templeton & Bear, 2018). The five stages presented here provide a guide to understanding students' orthographic knowledge and teaching phonics, spelling, and vocabulary.

Three Layers: Sound to Symbol/Graph–Pattern–Meaning

The three layers of sound to symbol/graph, pattern, and meaning represent a developmental progression. In English and other alphabetic orthographies, the layer that features sound–symbol correspondences is the alphabetic layer. During the mastery of the second layer, students internalize syllable patterns. Finally, to learn about the meaning layer, students use their knowledge of morphology in speech and writing and their linguistic and background knowledge to learn vocabulary, comprehend, and think (Venezky, 1999).

These questions illustrate what a teacher might say to have students explore these three layers:

Sound to graph: "What sounds do you hear in . . . ?"

Pattern: "What vowel pattern do you notice in this word?"

Meaning: "I see that this word has the morpheme *semi*. What would that tell us about the meaning of the word?"

Layers in Different Orthographies

These layers can be examined across the structure of the 400 or so written languages, but the balance in the layers varies by both universals and particulars (Perfetti & Helder, 2022; Verhoeven & Perfetti, 2022). Much of orthographic research and teaching are Euro- and alphabet-centric (Share, 2021) and narrow how we understand bilingualism and students' translanguaging when they write and speak. Literacy development research across languages reveals universals and the particulars of both the characteristics of the written languages that students are learning and the impact of their personal experiences and other languages. This information about orthographies highlights how students will compare and contrast their orthographies and helps teachers plan explicit instruction to address these differences (Helman et al., 2012).

The three layers come in proportions depending on the structures of the orthography. Here are a few examples of the differences among orthographies. Spanish and Italian are examples of transparent orthographies, and word recognition and spelling are more accurate during the elementary grades because of the closer correspondences between sounds and letters. The predictability of writing in both Italian and Spanish may explain why dyslexia may not be identified in the primary grades (Paulesu et al., 2000). In a developmental sense, the sound/alphabet layer consistency in Spanish and Italian take students further in reading before they have to examine various patterns of two-syllable words, as in the example in Spanish of understanding accents in polysyllabic words (Helman et al., 2012).

In English, the alphabet layer takes students through reading easy single-syllable, consonant–vowel–consonant (CVC) words, and patterns then come into focus developmentally when they read and write words with long vowels. In Chinese, the predominance in orthographic knowledge of the sound layer is short lived developmentally, and the pattern and meaning layers come into orthographic learning sooner than in English (Shen & Bear, 2000; Spinks et al., 2000).

Different writing systems represent sounds with different letters and systems; they have different patterns and meaning systems evident in the morphology, the structure of words, most notably affixes (*pretend* and *beautiful*), roots (*pretend*), and bases (*forecast*). In writing Mandarin, students learn what parts of a character are linked to sound and what parts are patterns for meaning. Teachers study the contrasts between the written and oral languages that students know to understand how they use one writing system to learn another. For example, Spanish speakers may spell the short *o* in English with an *a* because the short *o* is the sound that *a* makes in Spanish (HAT for *hot*).

Students' Theories of Their Orthography

Readers and writers actively call on the three layers as they read and write (Ehri, 1997; Perfetti, 1997). Students' reading and writing accuracy, and the quality of their errors, what they "use and confuse," show what principles they have mastered and what they are experimenting with (Invernizzi et al., 1994), and the quality of the errors indicate what layers they have mastered.

While learning to read and write, students develop theories about the orthography, and as they progress, they see that their theories about the spelling of words are "dissonant with reality." This led Henderson to write that "spelling, the alphabetic principle, and the orthographic features by pattern and meaning that flow from it, are the central core of literacy. Reading nourishes this gradually elaborating construct; writing automatizes it" (Henderson, 1992/2012, p. 23). The five stages of literacy discussed in the next section map students' theories of the three layers and how orthographic knowledge manifests in their reading, writing, and spelling.

Five Stages of Reading, Writing, and Spelling

In word study, the five stages described by Henderson (1990) are keystone concepts that guide instruction. The developmental stages of spelling reflect students' orthographic knowledge and are in synchrony with stages of reading and writing. Description of the five stages can be found in many books and papers (Bear et al., 2020; Ganske, 2013; Gehsmann & Templeton, 2022; Invernizzi & Hayes, 2004; Templeton & Bear, 2018) and

are discussed briefly in this section. The names of the reading and spelling stages are conventional (Chall, 1983). Spelling development has become an important part of the synchrony picture, as it is a dependable indicator of how students perceive written words, their orthographic knowledge. The names of the spelling stages are key concepts for that stage, though there are other orthographic features that are important to each stage. For example, in the within word pattern stage, students study the vowel patterns *within* words, thus the name of the stage. They also learn about final consonant blends like preconsonantal nasals in words like *stump* and *bland*. The synchrony in development and integration of orthographic knowledge is apparent in students' reading, writing, and spelling. The concepts of layers and stages describe a *hierarchical, developmental progression* that has great explanatory adequacy for teaching (Templeton, 2020). The stage progression is not "lock-step, distinct, and exclusionary." The boundaries between stages are fuzzy and they overlap; and as discussed below, the boundaries bend to the structure of students' orthographies. The stages identify and emphasize the "predominant, but not the only, source of information from which learners may draw" (Templeton, 2020, p. 321).

In our teaching and research, students' spelling is analyzed carefully for features from beginning consonants to roots. In developing word study groups or chatting with colleagues about activities, we include a discussion of gradations within the five stages—high, middle, and low. With students' papers in hand, we discuss word study and grouping with colleagues, coaches, and tutor mentors. The gradations clarify differences within and across stages and may recommend that we form groups across stages, as when late letter name–alphabetic spellers and early within word pattern spellers have similar instructional needs to study consonant digraphs and blends (Bear & Templeton, 2000). The following descriptions of the stages present key characteristics of development and instruction.

Emergent Reading, Writing, and Spelling

There are six components of emergent stage development and instruction that together can be thought of as a diet that is interwoven throughout this stage (Invernizzi, 2003): oral language, phonological awareness, alphabet knowledge, letter–sound knowledge, concepts about print, and concept of word in text (COW-T; Bear et al., 2018, 2020). Each component has a sizable research base with many subcomponents. Subcomponents of oral language, for example, include the study of students' articulation, phonology, syntax, semantics, pragmatics, other languages, and more (Bhide et al., 2013; Mesmer & Williams, 2015).

Parts of lessons are taught to the whole class so that everyone is introduced to the same story and materials, but students use the materials

differently. You may introduce a rhyme or ditty to the whole class, and then with different emphases in developmental groups. For example, some may learn an easy song and stick to marching and drumming to the song, whereas slightly more advanced learners may spend more time locating the beginning sounds of words, like the /d/ in *duck*.

Before spending considerable time on consonant sounds with early emergent learners, students examine rhythmic structures of text at a phrasal level (Nelson, 2016; Vidal et al., 2020). For example, students sing, clap, and pantomime songs like "If You're Happy and You Know It" at phrasal levels.

When students point accurately to a memorized text, they have acquired a rudimentary COW-T (Flanigan, 2007). COW is a keystone that supports beginning reading and holds the way open for learning the alphabetic principle and sight word acquisition. Over the course of emergent literacy, writing progresses from drawing to scribbles to writing one or two letters in a word, often beginning with consonants and the most prominent sounds (e.g., B or BT for *bat*). Students learn a few sight words and it is as beginning readers that they steadily acquire sight words while reading.

Beginning Reading and Writing, and Letter Name–Alphabetic Spelling

In the early part of this stage, students have a rudimentary COW-T. Beginning readers read easy books with one to five lines on a page, usually supported with pictures. They read in a word-by-word, disfluent fashion without much expression in prosody at a rate of 40–80 words per minute. They may fingerpoint and learn just a few sight words after several readings of a text. Writing is similarly labored. In English, students use articulatory gestures to assist their spelling, they study short vowel families and the CVC pattern, and by the end of this stage, word study includes even short vowel words with beginning and ending consonant digraphs and blends. Beginning readers are usually found in either kindergarten through the middle of second grade. Reading materials are up to a 400 Lexile level.

Transitional Reading, and Writing, and Within Word Pattern Spelling

Students in the transitional stage of reading cease to read aloud to themselves and stop finger pointing. They read common two-syllable words, chapter books become accessible, and reading prosody and rate develop throughout the stage. In spelling, students study the orthographic patterns of long vowel spelling in English beginning with the CVC*e* pattern, then learn long-vowel patterns like the CVVC and CVV patterns, and then move on to lower-frequency patterns and vowel diphthongs (*town*, *sure*,

toy) and digraphs (*soon*). Over the course of this stage, they learn to spell most single-syllable words correctly, and writing fluency picks up (see Bear, 1991; Skar et al., 2021). The grade range for these stages is 1–4 and an approximate Lexile range from 400 to 700.

Intermediate Reading, Writing, and Syllables and Affixes Spelling

These last two stages comprise upper-level development. Intermediate readers and writers acquire fluency in oral and silent reading with rates from 110 to 150 words per minute orally, and up to 200 words per minute in recreational silent reading. Intermediate readers learn to be flexible readers, adjusting their styles and rate depending on their goals, knowledge base, and disciplinary knowledge. They develop their knowledge of genres and authors, and they learn study skills that they adapt with the discipline (Shanahan & Shanahan, 2008). In word study, vocabulary and spelling are integrated when students examine polysyllabic words for orthographic patterns, stress, and morphological features like affixation in prefixes and suffixes. The grade range is quite wide, from third to eighth grades, with a Lexile range of 500–1,000 in reading materials.

Advanced Reading and Writing, and Derivational Relations Spelling

This is an advanced level of reading and writing, and in vocabulary study during this stage, the meaning layer predominates as a way to describe new concepts. Reading rates may be as high as 300 words per minute and slow quite a bit with notetaking and underlining. Reading and writing styles continue to be refined and expanded with experience reading and writing in genres and disciplines, and for different purposes. Vocabulary instruction involves the study of derivations, including Greek and Latin roots, word histories in etymologies, and deep study of vocabulary and meaning connections across roots (Carlisle, 2010). Other forms of linguistic and world knowledge contribute to comprehension and understanding. Students in fifth grade may be advanced-level readers, and comfortable reading levels are in a range of 740–1,000 Lexiles.

Word Study Organization across Grades

The 11 principles apply to all levels and stages of instruction, but there are unique considerations for organization at different grade levels. Consider two questions: What does word study look like at different grade levels? What are the word study needs of our students at different stages and grades? Developmental profiles in the following classrooms create an

overview of word study across grades. These classroom profiles may be similar to what you see in your schools. Orthographic development guides expectations for how students will spell and read, and what stages of reading, writing, and spelling are likely for these grade levels.

PreK–K: Continuum of Reading and Spelling Development and Instruction

Reading and Writing Stages

Emergent → Beginning → Transitional

Spelling Stages

Emergent → Letter Name → Within Word Pattern

Early – Middle – Late Early – Middle – Late Early

(Darker shading represents larger numbers of students.)

Most students in PreK are emergent readers and writers throughout the year, and at least one-third of kindergarteners are in the emergent stage during the first 2 months of the year. As indicated in the shading of the gradations within the stages, the range in PreK is from early emergent to early beginning reading and letter name–alphabetic spelling. In kindergarten, the continuum stretches from emergent to beginning reading and letter name–alphabetic spelling. By the end of kindergarten, many students are in the middle of these reading and spelling stages. The six-part diet of instruction noted for emergent readers is crucial to explore throughout this period.

Many of the activities function well as stations with several children together. Instead of individual centers and independent seatwork, students rotate in groups among stations and areas in the room: alphabet sorting, painting, concept sorts, blocks, pretend stores, painting, and reading in the class library, for example.

Grades 1–3: Continuum of Reading and Spelling Development and Instruction

Reading and Writing Stages

Emergent → Beginning → Transitional → Intermediate

Spelling Stages

Emergent → Letter Name → Within Word Pattern → Syllables & Affixes

Middle – Late Early – Middle – Late Early – Middle – Late Early – Middle

(Darker shading represents larger numbers of students.)

There is a wide range of development in grades 1–3 that covers the first four stages. As the shading of gradations indicates, most students in first and second grade classrooms are in the beginning and transitional reading stages. The class and grade profiles in this section are snapshots of students' development. In these grades, we often recommend three groups that rotate among three types of activities: *circle time*—students meet with the teacher; *seat*—students complete an activity independently or with a partner or two; and *center*—students are assigned. Language arts activities are varied, and there are usually one or two students at a center during a rotation.

A developmental continuum for a first-grade class is presented in Table 1.1. Over a year, there was a progression among three levels of reading and spelling: later emergent–early letter name; middle–late letter name; and early–middle within word pattern. Instructionally, this continuum suggests that materials and activities with emergent and early letter name spellers involve Read With activities like tracking, repeated reading, and support reading. Students draw on their language and early print experiences as they develop directionality and accurate fingerpoint reading. Word bank and sight word collection goes slowly at first, and word study includes alphabet knowledge, phonological awareness, and letter–sound knowledge activities. A review of initial consonants with picture sorts sets the foundation for early beginning readers to solidify their phonological awareness and supports their early decoding of rhythmic poems and short texts. Most students in first grade quickly move out of the emergent stage and on to beginning reading (Morris et al., 2003).

In first grade, there is usually one group of students, who are beginning readers studying beginning and final consonants, digraphs and blends, short vowel families, and then short vowels across families (see Table 1.1). Fluency improves as beginning readers progress to nearly 80 words per minute in their oral reading. In small groups, teachers present focused picture contrasts of digraphs and blends and short vowels. Small-group word study offers an increased opportunity for students to talk about words, try on new vocabulary, and manipulate word features through sorting. Students progress as beginning readers at various rates, and teachers appreciate teaching in small groups where they can hone in to offer supportive text and grow students' orthographic knowledge incrementally. For instance, one group of beginning readers may need to study short *e, i, o, u* in pictures while another group may be ready to examine complex short vowel words such as *raft*, *shelf*, *wilt*.

By late first grade, orthographic knowledge is often sufficient to read short chapter books, a hallmark of transitional reading. First graders engage in meaningful center or seat activities where they strengthen their orthographic knowledge as they listen to high-quality literature, read

TABLE 1.1. Continuum of Development in a First-Grade Classroom in September, January, and May

		Beginning			Transitional	
Reading stage	Emergent	Early	Middle	Late	Early	Middle
Concept of Word in Text	*Developing*	*Rudimentary*	*Firm*	—	—	—
Reading Levels in Lexiles, Letters, and Numbers	40L–160L B/2	40L–160L 160L–310L C&D/3	160L–310L 300L–450L D-F/4-8	300L–450L F&G/10&12	430L–530L H&I/14&15	—

		Letter Name–Alphabetic			Within Word Pattern	
Spelling Stage	Emergent	Early	Middle	Late	Early	Middle
September	3	7	6	—	—	—
January	—	3	6	6	-	1
May	—	—	2	1	7	6

books of their choice, write, and play word study games to review the features they are learning.

In second grade, we often see a range of development over the beginning and letter name stages and gradual movement through transitional reading and within word pattern spelling. There may be one-third of the students in second grade who are beginning readers at least until January. They are learning about short vowel word families, and in grade-level reading, students are delayed in their acquisition of sight words, including high-frequency words. Several students who began the year in the transitional stage become intermediate readers.

Second-grade teachers may start the year with a review of harder short vowel words to set the stage to contrast short and long vowel sounds and patterns. As usual, instruction begins in a comfort range that provides time to teach word study routines like the weekly schedule in Table 1.2. This example of a classroom routine in a primary classroom includes times students will be with the teacher, what is labeled as circle time.

The profile presented here of a third-grade class begins with one small group of beginning readers and letter name spellers and two large groups of transitional readers and within word pattern spellers. One group of six to eight students will be in the fourth stage, intermediate reading and syllables and affixes spelling. There is a temptation to have more than three groups. Students who are beginning readers at the midyear point are in intensive tutoring programs, and students who are early to middle transitional readers at this time need a focused Tier 2 program in the classroom.

Grades 4–5: Continuum of Reading and Spelling Development and Instruction

Reading and Writing Stages

Beginning → Transitional → Intermediate

Spelling Stages

Letter Name → Within Word Pattern → Syllables and Affixes

Middle – Late Early – Middle – Late Early – Middle – Late

(Darker shading represents larger numbers of students.)

Developmental groups can also be quite varied in this grade. There are usually three word study groups and whole-class meeting times for vocabulary instruction (Bear et al., 2020). The continuum in this fifth-grade classroom in April had a wide range, including students who examined short vowels and consonant blends and digraphs, one group in the within word pattern stage to study basic long vowel patterns and then two syllables and affixes

TABLE 1.2. Primary Grade Word Study Weekly Schedule

	Day 1	Day 2	Day 3	Day 4	Day 5
Small circle group	Review previous sort 5 minutes Introduce new sort Present generalization 15 minutes	Review and talk about sort Sort with a partner	Refine understandings Discuss generalization Share word study notebooks	Discuss sort Chart words from Word Hunt	Assessment with teacher
Seat	Sort independently	Sort and record sort in word study notebook	Word Hunt	Speed sort with a partner	Written reflection in word study notebook
Center	Old sort games	Pocket-chart center	Speed sort with a partner	Game with two partners	Blind sort with table partners or small group

groups, one to examine how two-syllable words combine, and another group in the middle of the syllables and affixes stage to examine open and closed syllables and word accent.

There are many fifth-grade classrooms in which most of the students are pretty much in the same place developmentally (e.g., early to middle syllables and affixes). In these classrooms, the word lists and sorts may be introduced to a large group, and then the large group is divided into two for smaller meetings.

Students pursue much of their work independently, and teachers may meet with their developmental word study groups three times a week (see Flanigan et al., 2011). Vocabulary instruction in these grades is less tied to development and more to content and academic studies. However, as noted earlier, vocabulary instruction for concepts may not involve studying the spelling in depth. There is a balance between the academic vocabulary study for concepts and the word study guided by students' stages; both types of word study must be presented, one more focused on the pattern layer and the other on the meaning layer.

Grades 6–12: Continuum of Reading and Spelling Development and Instruction

Reading and Writing Stages

Transitional → Intermediate → Advanced

Spelling Stages

Within Word Pattern → Syllables and Affixes → Derivational Relations

Middle – Late Early – Middle – Late Early – Middle – Late

(Darker shading represents larger numbers of students.)

Instruction is differentiated in secondary classrooms through class schedules and individual student contracts that explicate the student activities (Templeton et al., 2015). Differentiated instruction in small groups may be limited to two or three meetings a week when the word study is introduced. Some individual and small-group exercises written into contracts focus on developmental needs.

Using a flipped classroom approach, the teacher makes a brief recording to demonstrate the lesson and state the generalization that can be viewed online by students before meeting in person. (Additional materials on our website—*www.wordstudyprofessionallearning.com*—include videos for teachers and students.) Secondary students often try out an open sort before meeting with the teacher to discuss the online demonstration and the generalizations underlying the word groups. The online sorts and games continue to evolve, and students use digital games, inserting

word study areas and challenges; students have created separate areas in Minecraft, for example. Students often use digital interactive whiteboards like Jamboard for vocabulary study like the secondary teachers present in Chapters 10 and 11 (this volume).

Ms. Rubero is an English teacher (Bear et al., 2020), and in addition to whole-class vocabulary and reading sessions, she met with developmental groups two or three times a week. Table 1.3 presents a work schedule for one of the three developmental groups for the first three weeks of a quarter. This group was in the middle to late syllables and affixes stage. In this eighth-grade classroom, these groups met to discuss their weekly contracts, the vocabulary activities, and how they would work together—for example, a deep dive into a few vocabulary words (Flanigan et al., 2011).

In addition to the differentiated groups, there were heterogeneous groups of table partners of four to six students with whom they developed deep vocabulary studies from their common class texts that they shared with others (e.g., charts, excerpts from online etymologies, and vocabulary webs). Keystone activities for vocabulary notebooks titled "Looking into Language" included students entering the sorts and writing a rationale or generalization for the sorts, adding words from word hunts that fit the patterns they are studying, making a record of word hunts from their reading, collecting vocabulary from class themes and units of study, developing semantic webs, and making grammar notes and examples. There were a series of other activities that were part of their contracts and schedules. Notebooks included an area called a *Personal Dictionary* in which students entered interesting words they would study further in dictionaries and etymologies, and which they might use in their writing.

Disciplinary vocabulary instruction can be coordinated between English language arts (ELA) and other subject areas (Shanahan & Shanahan, 2008). Outside of ELA classes, we want to facilitate the teaching of key vocabulary in the content areas. Conferring with colleagues across disciplines gives teachers and literacy leaders a feeling for the types of word study to pursue and what affixes, bases, and Greek and Latin roots that students will read in their texts. In this cross-disciplinary professional learning, teachers ask, "What is the key vocabulary in these other areas, and how might we coordinate our efforts?" A meeting to prepare for each

TABLE 1.3. Word Study Schedule for 3 Weeks for an Eighth-Grade Group

Group 2	Monday	Tuesday	Wednesday	Thursday	Friday
Middle to late syllables and affixes	Contract with teacher Closed sort with teacher	Meet with teacher Work on open sort	Teacher-led sort with whole class Word Hunt	Game: Homophone Win, Lose, or Draw	Assessment Written reflection

quarter makes it possible to communicate assignments and share a list of key vocabulary often found at the front or end of the assigned chapters. There are also many lists and resources found online to tap into disciplinary language, including specialized dictionaries in each content area (like *CHEMnetBase.com* and *thoughtco.com* for chemistry definitions). Students benefit from examining related words and shared roots and affixes to understand disciplinary vocabulary (e.g., words related to *hyper-* and *hypo-* found at *etymonline.com* and *onelook.com*). In ELA classes, teachers have students choose a few words from their content areas for deep word study. They enter what they learn in their vocabulary notebooks and then use these notes to teach their classmates (Flanigan et al., 2011).

This section has shown how word study is implemented across a variety of settings. There are elements of professional learning that must be pursued for all these teaching environments.

Essential Elements of Word Study for Professional Learning

In professional learning, we consider 10 elements of word study instruction: (1) grouping for differentiation, (2) preparation and organization of materials, (3) teacher talk, (4) facilitating student-to-student talk, (5) extension and transfer, (6) instructional routines, (7) student reflection, (8) notebook use, (9) engagement, and (10) teacher knowledge and management.

Literacy leaders and professors examine these elements to introduce word study in districts, individual schools or grade levels, and in classes in higher education (Gehsmann et al., 2012). These 10 elements are presented in an order that is useful for educators new to this approach: Start with number one, differentiation, and proceed down the list until the teachers find the elements they want to study. In professional learning with experienced educators, teachers may want to choose one or two elements to pursue in a professional learning community (PLC) or in a class. Teachers work together in groups by grade and developmental levels, and within the groups, teachers share templates for creating games and sorts with each other. In this way, teachers focus on the students they teach.

As Gehsmann discusses (Chapter 3, this volume), the 10 elements were validated in developing the Word Study Classroom Observation Guide, which is included in the Appendix (see pp. 279–302). A short form of the observation guide, which we use in teacher meetings and when we observe lessons in model classrooms either in person or through videos, is available in Chapter 3 (see Form 3.1). Several other chapters focus on these elements of instruction in professional learning in huddles, graduate courses, and PLCs (see Chapters 4, 5, 9, and 13, this volume).

The short form of the guide (Form 3.1) contains one-sentence descriptions of the 10 elements. These elements of effective instruction can be

divided into two categories: elements related to organization and materials, and elements related to facilitating student talk and thinking (Bear, 2019). Choosing one element from each category is a way to immerse teachers in the theory and practice of word study.

Close Instruction: Literacy Practica, Literacy Centers, and Tutoring

Where do preservice and graduate teachers learn about word study? Word study can be taught occasionally in courses just on word study. Word study is often taught as part of practica with preservice teachers and graduate courses in literacy centers or in schoolwide interventions and tutoring programs. In these settings, educators think hard about students' learning (Bear, 1999; Morris, 2021), and it is a privilege to collaborate with teachers, literacy leaders, and administrators to conduct professional learning in these settings with struggling readers (Bear Ittner, 2021).

Teaching Preservice Teachers

In preservice teachers' initial practica, they observe the classroom, shadow and assist their cooperating teachers, and are taught to conduct a series of lessons. Our beginning practica with preservice teachers follow RRWWT, and the first assignment may be a *Read To*, then a *Read With* activity, followed by a *Word Study* activity. During their visits two or three times a week, students may sort with and play word study games with other students, score spelling assessments, and meet with small groups in *Read With* activities chosen by the teacher.

Figure 1.2 presents an outline of students' tutoring in a preservice practicum in a first-grade classroom in which there are three distinct developmental groups. The plan suggests activities in *Read With*, *Word Study*, and *Writing*. Two of the groups are with early and middle letter name spellers, and the activities match their orthographic knowledge.

Practica with Advanced Preservice and Graduate Students

Tutoring with struggling readers is conducted one-to-one to one-to-three and may include online instruction; see Chapter 7 (this volume). There are a number of similar tutoring structures (see Invernizzi et al., 2021; Morris, 2017, 2022). In advanced preservice and inservice graduate-level practica in university literacy centers and schools, teachers develop 75-minute tutoring plans. They meet with students for 20 sessions twice a week for 10 weeks during a 15-week semester. There is always a mentor who reviews lesson plans, observes, and meets with tutoring teams. The lesson plan for

Developmental Planning Notes for Practicum in Grade 1

Teacher: Bear Dates:

Developmental Levels	Early Beginning Reading and Writing Early Letter Name Spelling	Middle to Late Beginning Reading and Writing Letter Name Spelling	Early Transitional Reading and Writing Within Word Pattern Spelling
Read With	1. Reread experience chart 2. Students come up to read their sentences 3. Students read in personal readers and draw picture of the ducks	1. Reread three personal reader entries 2. Choral read contributions to group experience chart in personal reader 3. Choral read *Birds in the Nest*	1. Support read *Birds in Flight* as a DR-TA. What do you think this book will be about? Where do birds fly? 2. Assign pp. 12–18 in *Birds in Flight* to read in group meeting 3. Check in with a few students during independent reading
Word Study	1. Review word bank words 2. Hunt in word bank for words that end with a *t* 3. Use pocket chart to show an *-an* and *-ad*	Examine short *i* and short *o* words: 1. Start with T-made short *i* and short *o* picture sort 2. Demonstrate word sort using pictures as the column guides 3. Word hunt for short *i* and short *o* in personal reader entries	Examine long *e* with sort; *ten* and *feel* as guide words. 1. Demonstrate sort 2. Check for known words 3. Practice with the group and partners 4. Sort and record sort on paper at seat
Writing Independent writing: 1. Introduce book, *Birds Fly* 2. Support writing: for example, Birds _____ (*fly, eat*)		Independent writing: 1. Develop group book on birds and where they live. 2. Students choose a bird to write about and explore the bird books to make notes, or 3. Write about what you learned and what you think about birds and their ability to fly.	

FIGURE 1.2. Developmental lesson plan for preservice practicum.

advanced practica and graduate tutoring courses with struggling readers follows the RRWWT structure noted earlier with an example of a lesson plan in Figure 1.3. *Read With* and *Word Study* activities are usually the most essential parts of this close instruction. Students who struggle with reading and spelling need this intense concentration on these activities over an extended period. The *Talk With*, *Read To*, and *Write With* activities are often conducted in small groups without differentiation for orthographic knowledge.

As seen in the interactive lesson plans for this chapter on our website (*www.wordstudyprofessionallearning.com*), there are three parts of the lesson plan: (1) a rationale for each activity, (2) detailed steps for each activity, and (3) a section on assessment of students' activity and the tutor's reflection of the lesson. Guide questions are presented for each section of the lesson plan. Similar lesson plans for tutoring programs are also included on our website. This section has shown how word study is a part of lessons in school practica, interventions, tutoring, and university literacy centers.

Conclusion

Word study is an approach to instruction that is based on students' orthographic knowledge. The sound–symbol/graph, pattern, and meaning layers are described in five stages. In professional learning, the 11 principles of word study are reviewed to see if word study is on track. Across a wide range of grades—PreK, K, 1–3, 4–5, and 6–12—it was shown how the continuum of development contributes to organization and differentiation of instruction. Finally, 10 elements of effective instruction are presented to assist teachers in choosing topics for professional learning. For each heading in this chapter, our website (*www.wordstudyprofessionallearning.com*) has support materials and activities for your professional teaching.

REFERENCES

Bear, D. (1991). Copying fluency and orthographic development. *Visible Language, 25*(1), 40–53.

Bear, D. R. (1999). Close looks in a literacy center. In D. H. Evensen & P. B. Mosenthal (Eds.), *Advances in reading/language arts 6: Reconsidering the role of the reading clinic in a new age of literacy* (pp. 213–248). JAI Press.

Bear, D. R. (2019). Best practices for developmental word study in phonics, vocabulary, and spelling. In L. M. Morrow & L. B. Gambrell (Eds.), *Best practices in literacy instruction* (6th ed., pp. 175–198). Guilford Press.

Bear, D. R., Invernizzi, M., Templeton, S., & Johnston, F. (2020). *Words Their Way: Word study for phonics, vocabulary, and spelling instruction* (7th ed.). Pearson.

LESSON PLAN

TUTOR Susan Howard **ROOM** 22 **STUDENT(S)** Bob Giles **READING and SPELLING STAGES** Middle Beginning and Letter-Name Alphabetic

Guide Questions for Rationale: Why are you doing this activity? What about this student's development makes this activity worthwhile? Consider questions like: Why did you choose that reading? Why is this a good writing activity for this student? What do you expect will happen? *Notes for presenting the activities:* Number activities showing the order of presentation. Note how long is scheduled for each activity. List the steps to each activity. You may want to include guide questions, stopping points, and transitions to the next activity.

READ TO	READ WITH	WRITE WITH	WORD STUDY
Rationale	**Rationale**	**Rationale**	**Rationale**
5. Model fluency; model think aloud; involve Bob with questions to help him predict, think about vocabulary, and develop comprehension. Through the DL-TA, he will check his predictions, and reflect on the story. Chose to read this book to Bob because it is above his developmental reading level and birds are a topic he chose to study.	**1, 3, 6, and 9.** Practice reading with fluency; repeated reading for fluency; broaden sight vocabulary with word bank.	**7 and 8.** This composing will be dictated to me. Writing allows Bob to translate his ideas and language into print. This cube will be great for rereading/familiar reading.	**2.** Bob will practice word identification by reading through his word bank. **4.** For review, Bob will study blends in sort with pictures for sound and words for blends. This sets the stage for examining short vowel patterns. **10.** This game focuses on sounds. He had trouble sorting by sound and pronouncing words.
Activity/Time	**Activity/Time**	**Activity/Time**	**Activity/Time**
1. Bob will reread his dictations of choice aloud from his personal reader. (5 minutes)	**7.** Bob will dictate a poem about birds to me, and then he will add it to one square on his poetry cube.	**7.** Bob will dictate what he has learned about birds to each square of the cube. (10 minutes)	**2.** Bob will underline any words from his previous dictations that he feels he really knows and add them

3. Bob will read *Snowy Gets a Wash* by Beverley Randell in a DR-TA format. 1. What do you think this story will be about? Cover 2. What else do thou think Nick does with Snowy? p. 7 3. How do you think Nick feels? p. 9 **6.** Read aloud from *Bird Talk* by Ann Jones. 1. What do you think this book will be about? Cover, title 2. What do you think the birds are talking about? p. 13 3. What do you think birds talk about when they chirp? p. 23 (10 minutes) **9.** Bob will roll his cube a few times and read what it lands on. (5 minutes)	(5 minutes) **8.** Bob will finish writing on each side of his cube.	**8.** Bob will assemble the cube. (5 minutes)	to his word bank. Bob will also read through his word bank words. (5 minutes) **4.** Bob will sort the blends and digraphs cl/cr/fl/fr by first reading through the cards, then placing them under their headings. Next, he will explain his column placement, and finally, he will reread the sort. (5 minutes) **10.** Bob will play the game "Dominoes" by matching the beginning sounds (e.g., *tub* matches *ball*). (10 minutes)

FIGURE 1.3. Lesson plan in advanced practica.

Bear, D. R., & Ittner, A. (2021). Professional learning in word study: Four collaborations. *The California Reader, 40*, 333–334.

Bear, D. R., Johnston, F., Invernizzi, M., & Templeton, S. (2018). *Words Their Way: Letter and picture sorts for emergent spellers* (3rd ed.). Allyn & Bacon.

Bear, D. R., & Templeton, S. (2000). Matching development and instruction. In N. Padak & T. Rasinski (Eds.), *Distinguished educators on reading: Contributions that have shaped effective literacy instruction* (pp. 363–376). International Reading Association.

Berninger, V. W., Abbott, R. D., Nagy, W., & Carlisle, J. (2009). Growth in phonological, orthographic, and morphological awareness in grades 1 to 6. *Journal of Psycholinguistic Research, 39*(2), 141–163.

Bhide, A., Power, A., & Goswami, U. (2013). A rhythmic musical intervention for poor readers: A comparison of efficacy with a letter-based intervention. *Mind, Brain, and Education, 7*(2), 113–123.

Carlisle, J. F. (2010). Effects of instruction in morphological awareness on literacy achievement: An integrative review. *Reading Research Quarterly, 45*(4), 464–487.

Chall, J. S. (1983). *Stages of reading development*. McGraw-Hill.

Ehri, L. C. (1997). Learning to read and learning to spell are one and the same, almost. In C. A. Perfetti, L. Rieben, & M. Fayol (Eds.), *Learning to spell: Research, theory, and practice across languages* (pp. 237–269). Erlbaum.

Ehri, L. C. (2014). Orthographic mapping in the acquisition of sight word reading, spelling memory, and vocabulary learning. *Scientific Studies of Reading, 18*(1), 5–21.

Flanigan, K. (2007). A concept of word in text: A pivotal event in early reading acquisition. *Journal of Literacy Research, 39*(1), 37–70.

Flanigan, K., Hayes, L., Templeton, S., Bear, D. R., Invernizzi, M., & Johnston, F. (2011). *Words Their Way with struggling readers: Word study for reading, spelling, and vocabulary instruction, grades 4–12*. Pearson/Allyn & Bacon.

Ganske, K. (2013). *Word journeys: Assessment-guided phonics, spelling, and vocabulary instruction* (2nd ed.). Guilford Press.

Gehsmann, K., Millwood, K., & Bear, D. (2012). *Validation study of teacher word study observation guide, presented with Gehsmann and Millwood*. Paper presented at the 62nd annual conference of the Literacy Research Association, San Diego, CA. (See the report provided in the materials for Chapter 3 on our website.)

Gehsmann, K. M., & Templeton, S. (2022). *Teaching reading and writing: The developmental approach* (2nd ed.). Pearson.

Gibson, J. (1982). New reasons for realism. In E. Reed & R. Jones (Eds.), *Reasons for realism: Selected essays of James J. Gibson* (pp. 375–384). Erlbaum.

Graham, S., & Santangelo, T. (2014). Does spelling instruction make students better spellers, readers, and writers?: A meta-analytic review. *Reading and Writing, 27*, 1703–1743.

Helman, L. A., Bear, D. R., Templeton, S., Invernizzi, M., & Johnston, F. (2012). *Words Their Way with English learners* (2nd ed.). Pearson/Allyn & Bacon.

Henderson, E. H. (1990). *Teaching spelling* (2nd ed.). Houghton Mifflin.

Henderson, E. H. (2012). The interface of lexical competence and knowledge of

written words. In S. Templeton & D. Bear (Eds.), *Development of orthographic knowledge and the foundations of literacy: A memorial Festschrift for Edmund H. Henderson* (pp. 1–30). Routledge/Taylor & Francis. (Original work published 1992)

Henderson, E. H., & Beers, J. W. (1980). *Developmental and cognitive aspects of learning to spell: A reflection of word knowledge*. International Literacy Association.

Hruby, G. G., & Goswami, U. (2011). Neuroscience in reading: A review for reading education researchers. *Reading Research Quarterly, 46*(2), 156–172.

Invernizzi, M. (2003). Concepts, sound, and the ABCs: A diet for a very young reader. In D. M. Barone & L. M. Morrow (Eds.), *Literacy and young children: Research-based practices* (pp. 140–156). Guilford Press.

Invernizzi, M., Abouzeid, M., & Gill, J. T. (1994). Using students' invented spellings as a guide for spelling instruction that emphasizes word study. *Elementary School Journal, 95*(2), 155–167.

Invernizzi, M., & Hayes, L. (2004). Developmental-spelling research: A systematic imperative. *Reading Research Quarterly, 39*, 216–228.

Invernizzi, M., Lewis-Wagner, D., Johnston, F. R., & Juel, C. (2021). *Book buddies*. Guilford Press.

James, W. (1958). *Talks to teachers on psychology and to students on some of life's ideals*. Norton. (Original work published 1899)

Joshi, R. M., & Aaron, P. G. (Eds.). (2006). *Handbook of orthography and literacy*. Erlbaum.

Kemp, N., & Treiman, R. (2022). Learning to spell words. In M. J. Snowling, C. Hulme, & K. Nation (Eds.), *The science of reading: A handbook* (2nd ed., pp. 165–185). Wiley.

London, J. (1917, February). Eight factors of literary success. *The Silhouette*.

Mesmer, H. A. E, & Williams, T. O. (2015). Examining the role of syllable awareness in a model of concept of word: Findings from preschoolers reading. *Reading Research Quarterly, 50*(4), 483–497.

Moffett, L., Weissman, A., Weiland, C., McCormick, M., Hsueh, J., Snow, C., & Sachs, J. (2021). Unpacking pre-K classroom organization: Types, variation, and links to school readiness gains. *Journal of Applied Developmental Psychology, 77*, 101346.

Morris, D. (2017). *The Howard Street tutoring manual: Teaching at-risk readers in the primary grades*. Guilford Press.

Morris, D. (2021). *A Studebaker's memoir: Preventing reading failure in grades 1–3*. Fieldstream.

Morris, D. (2022). The case for tutoring struggling readers in the primary grades. *Reading & Writing Quarterly, 39*, 104–119.

Morris, D., Bloodgood, J. W., Lomax, R. G., & Perney, J. (2003). Developmental steps in learning to read: A longitudinal study in kindergarten and first grade. *Reading Research Quarterly, 38*, 302–328.

Nelson, S. D. (2016). *The effects of an integrated rhythmic and literacy intervention on the development of phonological awareness and rhythm skills of preschoolers*. Unpublished doctoral dissertation, Iowa State University.

Paulesu, E., McCrory, E., Menoncello, L., Brunswick, N., Cappa, S., Cotelli, M.,

. . . Frith, U. (2000). A cultural effect on brain function. *Nature Neuroscience, 30*(1), 91–95.

Perfetti, C. A. (1997). The psycholinguistics of spelling and reading. In C. A. Perfetti, L. Rieben, & M. Fayol (Eds.), *Learning to spell: Research, theory and practice across languages* (pp. 21–38). Erlbaum.

Perfetti, C. A. (2007). Reading ability: Lexical quality to comprehension. *Scientific Studies of Reading, 11*(4), 357–383.

Perfetti, C., & Helder, A. (2022). Progress in reading science: Word identification, comprehension, and universal perspectives. In M. J. Snowling, C. Hulme, & K. Nation (Eds.), *The science of reading: A handbook* (2nd ed., pp. 5–35). Wiley.

Polanyi, M., & Sen, A. (2009). *The tacit dimension*. University of Chicago.

Russell, W. (1844). *Spelling-book, or second course of lessons in spelling and reading*. Tappan & Dennet.

Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review, 78*(1), 40–59.

Share, D. L. (2021). Is the science of reading just the science of reading English? *Reading Research Quarterly, 56*, S391–S402.

Shen, H., & Bear, D. R. (2000). The development of orthographic skills in Chinese children. *Reading and Writing: An Interdisciplinary Journal, 13*, 197–236.

Skar, G. B., Lei, P. W., Graham, S., Aasen, A. J., Johansen, M. B., & Kvistad, A. H. (2021). Handwriting fluency and the quality of primary grade students' writing. *Reading and Writing, 35*(2), 509–538.

Spinks, J. A., Liu, Y., Perfetti, C. A., & Tan, L. H. (2000). Reading Chinese characters for meaning: The role of phonological information. *Cognition, 76*, B1–B11.

Templeton, S. (2020). Stages, phases, repertoires, and waves: Learning to spell and read words. *The Reading Teacher, 74*(3), 315–323.

Templeton, S., & Bear, D. (Eds.). (2012). *Development of orthographic knowledge and the foundations of literacy: A memorial Festschrift for Edmund H. Henderson*. Routledge/Taylor & Francis. (Original work published 1992)

Templeton, S., Bear, D. R., Invernizzi, M. R., Johnston, F., Flanigan, K., Townsend, D. R., . . . Hayes, L. (2015). *Vocabulary their way: Word study with middle and secondary student* (2nd ed.). Pearson.

Templeton, W., & Bear, D. R. (2018). In D. Lapp & D. Fisher (Eds.), *Handbook of research in the teaching of English* (4th ed., pp. 207–232). Routledge.

Venezky, R. L. (1999). *The American way of spelling: The structure and origins of American English orthography*. Guilford Press.

Verhoeven, L., & Perfetti, C. (2022). Universals in learning to read across languages and writing systems. *Scientific Studies of Reading, 26*(2), 150–164.

Vidal, M. M., Lousada, M., & Vigário, M. (2020). Music effects on phonological awareness development in 3-year-old children. *Applied Psycholinguistics, 41*(2), 299–318.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University.