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Reading Fluency in the Middle and Secondary Grades

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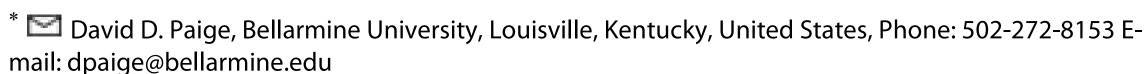
Abstract

In this article we discuss the specifics of reading fluency and provide suggestions for identifying when reading is fluent and when it is not. We then discuss the important role that reading fluency plays in the attainment of literacy achievement and briefly review research results that highlight the relationship between fluency and comprehension. This is followed by a discussion of reading fluency and comprehension data gathered by one of the authors in India that highlight the possibilities for the acquisition of fluent reading in those learning English as a second language. Following a review of strategies to assist middle and secondary teachers with the development of fluent reading in their students, we conclude with a discussion of word study strategies that promote syllabic and morphemic analysis. Such strategies aid readers in the development of word automaticity and encourage the development of fluent reading.

Keywords: Reading fluency, Adolescent literacy, Secondary literacy, Prosody, Accumaticity, English language learners, International literacy

Introduction

Let's imagine the following scenario where Antonio is a seventh-grade student in Mr. Jackson's (both pseudonyms) social studies class. Antonio has always been an average student at best. Mr. Jackson assigns an in-class reading that he anticipates will take students about 10 minutes to complete. At the end of the 10 minutes some students are finished. However Antonio, as well as a number of others, have only finished a little more than half the reading. While Mr. Jackson is aware that Antonio and others have not completed the reading, time is tight and he must move on. His hope is they will be able to catch-up later. Unfortunately for Antonio, while "later" arrives the "catch-up" does not. He has no choice but to move forward without the requisite background knowledge due to his inability to finish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the in-class reading. This makes the ensuing lessons more than challenging for Antonio. It also means that the lesson plans designed by Mr. Jackson, which he will work so hard to implement in the coming few days, will be less effective for Antonio and the others who were unable to complete the initial reading.

Far too often middle and secondary students fall short of their academic potential because their poor reading skills do not allow them sufficient access to course content. But disfluent reading doesn't have to be an inevitable outcome for students. As middle and secondary teachers, we have the ability to help students develop fluent reading skills as a means for facilitating comprehension and understanding of disciplinary material. After a brief review of fluency we will discuss several instructional strategies that middle and secondary teachers can use to improve fluency in their students, strategies that can help students like Antonio be successful.

What Makes Fluent Reading?

Reading fluency is defined by the three characteristics or "indicators" (Samuels, 2007, p. 564) of word identification accuracy, pacing, and prosody which interact to encourage comprehension (Paige, Rasinski, Magpuri-Lavell & Smith, 2014; Schwanenflugel et al., 2006). How can we tell if a student is a fluent reader? If we listen carefully to a student read, one can quickly discern their level of fluency. The first indicator is the ability to read words in the text with accuracy without stumbling over their pronunciation. A high level of word identification accuracy suggests the reader possesses the phonics knowledge to correctly match letter blends to the sounds of language to pronounce words. It also means they have engaged in sufficient word study to gain knowledge of a large number of words (Bear, Invernizzi, Templeton, & Johnston, (2012).

Reading text at an adequate pace, what we also call automaticity, is the second fluency indictor. When a reader is automatic with a word, they are able to retrieve it from long-term memory without invoking their decoding knowledge (Logan, 1988). Possessing a large inventory of words which the reader knows instantly by sight is critical to reading text at an appropriate pace. Generally, a good pace for oral reading is one that approximates conversation, about 150-200 words per minute for skilled readers (Rayner & Clifton, 2009). We might refer to this as Goldilocks pacing - it's neither too slow nor too fast, but just right. This interaction of word identification accuracy and automaticity results in what we call *"accumaticity*." While it is common to see this construct referred to in measurement terms as words-correct-per-minute or WCPM, the use of the term accumaticity provides a more descriptive label. Readers who have good accumaticity read with a good flow because they avoid frequent pauses to analyze and decode words. However, there is still one more important indicator critical to fluent reading.

While accumaticity refers to the interaction of two indicators of fluent reading, it is not yet fluency because it ignores prosody. Prosody, or reading with expression, is critical because it forms the cognitive framework important to building comprehension (Frayser, Carlton, & Clifton, 2006). Think of someone you've heard reading in a monotone voice and how difficult it becomes to pay attention. Or imagine a time when you've heard a conversation in a language other than your native tongue. Even mild attention to the conversation makes apparent the pauses, inflections, and chunking of words which create the rhythm of the language. What you're hearing is prosody. So it is prosody which we apply to reading to make the text approximate speech because it aids in our understanding of what we read (Raynor, Pollatsek, Ashby, & Clifton, Jr., 2012). For example, recent research has found that secondary students who use appropriate prosody when reading are more likely to

comprehend what they read (Paige et al., 2014). As such, each of the three fluency indicators contributes to understanding.

The tandem theory of reading hypothesizes how each of the three indicators work together in an interactive basis to aid comprehension of what is being read (Paige et al., 2014). Whether reading orally or silently for comprehension, the reader who is monitoring what they read attempts to identify the words as correctly as possible while using appropriate prosody. The reader then adjusts their pacing or automaticity to facilitate understanding, speeding up when comprehension is easily attained, or slowing down for more complex text. As the majority of reading is done silently, it's important to remember that aside from voice articulation, the same indicators that encourage fluency when reading aloud are also used when reading silently (Raynor et al., 2012).

What is Not Reading Fluency?

In order to understand fluent reading it is helpful to discuss what is *not* reading fluency, or what is often called "disfluent" reading. To begin with, fluency is not reading excessively fast. Very quickly "scanning" the text, hoping to get the general gist or idea is not fluent reading. Fluent reading is not reading that is excessively slow, even if the text is read with high accuracy. Reading at a conversational pace while mispronouncing the words is not fluent reading and monotone or flat, expressionless reading is not fluent either.

You may be getting the correct idea that disfluent readers struggle with one or more of the three fluency indicators. For example, readers who struggle to decode words with accuracy often read with long pauses as they attempt to pronounce the words. Disfluent reading is often punctuated by multiple stops, starts, and rereading of correctly read words or phrases. This results in reading that is laborious, slow, and exhausting for the student. Difficulty grouping words into natural phrases is another frequent challenge for disfluent readers. In other cases disfluent readers decode words quite well, but race through the text ignoring prosodic markers such as commas, periods, and question marks as if in a race to the finish. Other disfluent readers, whether they read slowly, quickly, or at a conversational pace, lack appropriate expression when they read. Difficulty with one of the three reading indicators results in less efficient and more challenged reading, while trouble with two or more most often results in serious comprehension challenges. Because cognitive processing is focused on the decoding process, little attention is available for the reader to focus on making meaning from the text. The reading of complex text only exaggerates the problem. In contrast, *fluent readers* combine the three fluency indicators – identifying words and phrases quickly and accurately, reading at a conversational pace, and using appropriate expression, into smooth and pleasant sounding reading that facilitates understanding and comprehension.

The Role of Fluency in Middle and Secondary Reading

Reading is a language-based skill where in the early elementary grades students are taught phonics, the principles explaining how the sounds of the language are connected to written letters which are then assembled into words to represent speech (Anthony, Williams, Aghara,, Dunkelberger, Novak, et al., 2009; Shankweiler, Crane, Brady, & Macarruso, 1992). An important note here is the single determinant that distinguishes good from poor readers has little to do with intelligence, but rather, involves the student's facility with phonological awareness (Shankweiler, Crain, Katz, Fowler, Liberman, Brady, et al., 1995). Many children struggle with reading because they lack the necessary phonological awareness and skills which are acquired with exposure to instruction (Adams, 1990; Stanovich, 2000). Let's also recognize that phonological disabilities are confined to a small percentage of the population estimated at about 5%, meaning that almost all children are capable of fluent reading

(Interagency Committee on Learning Disabilities, 1987; Shaywitz, Fletcher, & Shaywitz, 1994). The failure to acquire a complete understanding of the alphabetic principle interferes with decoding, resulting in inaccurate and languid word recognition skills and ultimately, poor reading fluency (Torgesen, Wagner, Rashotte, Rose, Lindamood, Conway et al., 1999). We mention this because the "efficiency" (Perfetti, 1985, p. 102) with which the reader engages the multiple sub-skills constituting phonics is manifested in the extent to which the student is a fluent reader. Consequently, deficiencies in phonological knowledge can hinder fluent reading and many middle and secondary teachers will have students where this remains an underlying problem.

The importance of learning to read is to access the knowledge found in texts. Many studies have found significant relationships linking reading fluency to comprehension (Fuchs, Fuchs, Hosp, & Jenkins, 2001; Jenkins, Fuchs, Espin, van den Broek, & Deno, 2003; Kuhn & Stahl, 2003; Paige, 2011a; Stecker, Roser, & Martinez, 1998; Young, Bowers, & MacKinnon, 1996). Two large-scale studies investigating the connection between oral reading fluency and reading achievement as measured by the National Assessment of Educational Progress (NAEP) concluded that poor reading fluency is a hindrance to comprehension and affects up to 40% of fourth-grade students (Pinnell, Pikulski, Wixon, Campbell, Gough, et al., 1995; Daane, Campbell, Grigg, Goodman, & Oranje, 2005.) Research evidence has shown that challenges with fluent reading extend into the middle and secondary grades. For example, Schatschneider, Buck, Torgesen, Wagner, Hassler, et al. (2004) found that in third-, seventh-, and tenth-grade students reading fluency was a significant factor in explaining differences in achievement scores on the Florida end-of-year achievement test. Paige (2011a) found that in a study of 227 sixth- and seventh-grade students, oral reading fluency explained between 50% and 62% of the difference in reading comprehension. Results from a study of urban ninth-grade students found that oral reading fluency achievement was equivalent to the 25th percentile for eighth-graders and explained 28% of the difference on the state achievement test (Rasinski & Padak, 2005; Rasinski, Padak, McKeon, Wilfong, Friedhauer, et al., 2005). In another study that assessed 108 ninth-grade students attending an urban high school, Paige and Magpuri-Lavell (2011) found that students were two years behind on grade-level norms of reading accumaticity (reading with accuracy at an appropriate pace). Additionally, students exhibited only partially developed prosody (expression) when reading. In a recent study, 250 first-, second-, and third-grade students attending ten elementary schools in a high-SES school district were assessed on measures of accumaticity and prosody. Using the Multi-Dimensional Fluency Scale (Zutell & Rasinski, 1991), students were found to exhibit fully developed prosody by the end of third grade (Paige, Magpuri-Lavell, Dinkins, & Rasinki, in preparation).Together, prosody and accumaticity accounted for 57% to 63% of the variance on a standardized test of reading comprehension. These studies conducted in various states across the U.S., suggest that clearly, many students are not acquiring the reading fluency skills important to the facilitation of reading comprehension.

Fluency in English Language Learners

What is the potentiality for students who are learning English as a second language to become fluent English readers? What role does reading fluency play in their reading comprehension? Paige, Spagnoli, and Wood (2013) assessed 193, third-, fifth-, seventh-, and ninth-grade students attending a Catholic, English medium school in the state of Kerala in southern India. The students attending the study school came from a variety of non-English speaking homes were Malayalam is the indigenous language. While many students come from lower socio-economic households, about half would best be described in India as

middle class. Education is taken quite seriously by the parents and they tend to hold their children accountable for their learning.

Students were assessed on standardized measures of phonological awareness, sightword reading, vocabulary, and comprehension, as well as on a grade-level narrative passage to assess reading accumaticity (correct-words-per-minute). Results comparing student performance to U.S. norms found that decoding ability across all four grade levels averaged at the 80th percentile. Sightword reading while lower, still averaged at the 58th percentile while accumaticity (correct-words-per-minute) was at the 70th percentile on U.S. reading norms (Hasbrouck & Tindal, 2006). However, assessments of vocabulary and comprehension hovered around the 20th percentile, suggesting the challenges of understanding a new language. Regression analysis revealed that across all four grades, accumaticity and vocabulary accounted for 57% of the variance in reading comprehension, very similar to that found in many U.S. populations.

The findings strongly suggest that English language learners can attain reading fluency with English texts to a high level. At the same time, the vocabulary and comprehension results speak loudly to the difficulties encountered by English language learners who have little exposure to English outside of the school setting (Aarts & Verhoeven; Low & Siegel, 2005).

Strategies to Encourage Fluent Reading

A fundamental principle in becoming a competent reader is the notion that, like so many other human endeavors, students must practice reading (Adams, 1990; Rasinski, Reutzel, Chard, & Linan-Thompson, 2011). There are several strategies that fit well in the middle and secondary curriculum to encourage and develop fluent reading in students. It's important to note that the development of effective fluency must extend beyond the domain of the English Language Arts teacher, particularly for those students who are learning English. With this in mind, our discussion will focus on strategies that can be used by teachers across all content areas. The tie that binds disciplinary teachers is that while most middle and secondary teachers are not "reading teachers," we all expect our students to be able to read and comprehend the curriculum. As such, reading provides a critical pathway to learning across all classrooms and as such, should be supported by all teachers. We once knew a social studies teacher who remarked that his content had its own particular discourse that through years of schooling he had learned to read and interpret. He saw it as his job as a teacher to use his content expertise about literacy to provide students with the instruction that would allow them to read the texts he used in his class. It is with this notion of providing students access to the content we teach that we introduce the following strategies to encourage fluent reading.

Whole-Class Choral Reading

In whole-class choral reading (WCCR) all students read aloud from the same text, at the same time, in unison with the teacher. This makes choral reading a highly efficient instructional strategy because all students practice reading at the same time. Research has shown that both poor and good readers benefit from WCCR because they are engaged in deliberative practice with what is most often grade-level text, or text that may be above the reading level of some students (Paige, 2008, 2011b). Once students are trained in the procedure, WCCR provides teachers with a research-based strategy that is simple to implement across multiple subject areas.

First, WCCR is an assisted-reading instructional strategy. Hearing the teacher read the text aloud provides students with a model of how to pronounce the words, what is an

appropriate reading pace, and what kind of expression to apply when reading. The texts which students practice with in WCCR are taken from the curriculum. One idea is to use texts that will be taught within the next week or two. There are advantages to using a text that is slightly ahead of the curriculum. First, students become familiar with the important words and how to read them correctly. Students also gain background knowledge on the topic which means the teacher can spend less time on introductory material and more time going deeper into the subject matter. Finally, students improve their reading skills within the anonymity of whole-class reading where no student is asked to read aloud in front of the class.

Paige (2011b) describes implementation procedures for WCCR that begins with choosing a text from the curriculum. Texts should take about 2 minutes or so to read so at a typical conversational rate of 150 words-per-minute, this translates into a length of about 300 words. Distribute the text to students or otherwise make it available so everyone can read it simultaneously, whether through a paper copy, on an overhead projector, or through some digital means. Very briefly preview the text in a sentence or two and review no more than several vocabulary words that you believe will be challenging for students. Next, read the text aloud to the students while they follow along silently with their copy. This provides them a model of what the reading should sound like. Now it's time for students to read so inform them that help them begin and read together, you'll countdown from "3-2-1," after which, they'll start reading. Expect several false starts as students learn to start together. Remember, the teachers leads the students in reading but while doing so, it's important to walk about the room listening to how students are pronouncing words and reading the phrases. Also, keep the students reading "with one voice," like a choir. This means that during the first few readings you may have stop the class reading and have them begin again to get them reading in unison. Students must read softly enough to hear the teacher. Once the reading is finished, provide students with positive, corrective feedback. Always praise and encourage the class as a group and never single out a particular student for either good or poor reading. Whole-class choral reading must remain "safe" for all readers.

Implementing WCCR can be done on either a repeated-reader basis where the text is practiced several times over 3-4 days, or, in a wide-reading format where a different, but very similar text is read each day. When implementing WCCR in either format, the teacher should provide a reading of the text on the first day while students follow along. In the repeated-reading format the text is then read twice (on the first day) so that students can quickly gain some competence with the reading. Practice with the same text is then distributed over the next several days where students read the passage once per day. In a wide-reading format, students would choral read the text a couple of times each day with a new passage being used each day. Oftentimes the passages are taken from the same or similar book with topics changing every week or two. To add variety to WCCR, rotate the repeated- and wide-reading implementation. Also, use what is called antiphonal reading by splitting the class in half and then having each side read a sentence followed by the other side reading the next sentence. This is continued until the passage is completed.

Paired or Buddy Reading

Paired- or buddy-reading is a peer-assisted learning (PALS) strategy where students are put into groups or dyads of two. PALS has been extensively researched over many years, yielding much evidence demonstrating its effectiveness (Topping, 2005, 2006).While PALS is frequently used in the elementary grades, it is useful in middle school also. In paired reading, students take turns reading the text to each other. The first question becomes how to pair students? It is helpful if less fluent readers are paired with a more fluent reader, however, the

difference should not be dramatic as we don't want the better reader becoming frustrated with the less fluent one. Like whole-class choral reading, choose texts which serve the curricular needs of the class. Texts should also be at the independent reading level of the better reader, but not so difficult that the partner is frustrated.

The first issue to address in paired reading is how to group students. One way is to make a list of students and their reading ability. Divide the list of students into good and not-so-good groups. Then pair the best reader from the good list with the best reader from the not-so-good list. Another way is to pair readers based upon similar reading ability. When pairing students it is also important to consider the particular interpersonal factors between students that can either encourage or impede successful implementation. It is also important to be sensitive to students who particularly struggle or may have reading disabilities.

In order to make paired reading successful, it's also important that a routine be decided in advance by the teacher. For example, what signal or direction will students use to signal that it's now time to switch turns reading? Will they swap at the end of paragraphs or some other way? When and how will the better reader step in to assist their reading partner when it becomes clear the student does not know how to pronounce a word? What is an appropriate method for the reading pair to check for their understanding? Should they stop at the end of each page and build a common understanding of what happened, or perhaps they can take turns summarizing the reading? How this is done will depend on the extent to which the text is challenging to the reader. Finally, how long should a paired reading session last? To assist students with these issues, it's important they be decided in advance by the teacher.

Once the procedure for paired reading has been thought out, they should be modeled by the teacher in front of the class. One way to do this is to select a student to work with you. Practice in advance with the student so they understand the procedures and are comfortable participating in front of the class. Before modeling, introduce the strategy to the class and the specific procedures to use during implementation. After the introduction, model the strategy in front of the class as was rehearsed with your student partner. Pay particular attention to demonstrate the specific procedures that were decided upon for correcting reading mistakes, turn-taking, and creating understanding of the text.

Word Study Strategies to Build Fluency. Possession of a large inventory of words which the reader knows instantly by sight is critical to being a fluent reader (Torgesen, Wagner, Rashotte, Burgess, & Hecht, 1997). Middle and high school students struggling with word pronunciation can benefit from word level interventions (Lovett & Steinbach, 1997; Scammacca et al, 2007) which can improve word identification accuracy, and thus accumaticity. Fluent readers often read the whole-word and check for recognizable morphemes in the word (Raynor et al., 2012). If necessary, they will divide words into syllables. If these two strategies do not work, they will then attempt to sound out individual letters using their knowledge of letter-sound correspondence. Armed with this knowledge, we can assist struggling middle and high school readers through two word study strategies - *syllabic analysis* and *morphemic analysis*.

Syllabic Analysis. Syllabic analysis is a strategy that allows students to decode an unknown word by identifying the syllables – the units of spoken language consisting of an isolated vowel sound or a vowel sound with one or more consonants. Breaking words into smaller units, known also as *chunking,* helps a reader determine a word's pronunciation by matching it to a word in their listening vocabulary. By *chunking* words into smaller parts, readers are often able to identify the part and then blend it into a familiar word. This strategy for pronouncing unfamiliar multisyllabic words is more efficient than decoding a word sound by sound. Multiple exposures to the word helps move it into the reader's long term memory for

automatic retrieval, thus adding to their sight word inventory. This process makes reading words more efficient and facilitates the comprehension process by allowing the reader to focus their attention on making meaning of the text.

Syllabic analysis is most effective when students are directly and explicitly taught the six major syllable types and the patterns for syllable division which are listed in Tables 1 and 2. These common rules for syllable division make multisyllabic words both easier to read and spell. Practice of this strategy should entail words read as single words, in phrases, and in sentences. Direct instruction of syllabication should be connected to content specific texts. Once students apply this knowledge they often demonstrate improvements in their word identification accuracy and automaticity, the two indicators which combine to form *accumaticity* – a crucial factor in becoming a fluent reader.

Morphemic Analysis. A morpheme is the smallest linguistic unit which has meaning in a language. For example, the suffix *ness* is a morpheme which indicates a state of being. When *ness* is added to the root word empty to become emptiness, the meaning of the word is changed. Many of the words encountered in middle and high school texts are multisyllabic and often contain Latin and Greek word parts. In addition to learning syllable patterns through syllabic analysis, readers can benefit from learning *morphemic analysis*. Teaching middle and high school students morphemic analysis helps to encourage automatic word recognition which improves their reading fluency.

When using morphemic analysis, the reader considers word parts such as prefixes, suffixes, and root words, to help determine a word's meaning. Students are taught affixes (i.e., both prefixes and suffixes), root words, and compound words which are examples of morphemes. These morphemes are most helpful because they are used in many words – hundreds of thousands of words. Knowing common morphemes not only enhances decoding and spelling skills but also vocabulary skills. For example, knowing that the root *struct* means "to build" provides a clue to the meaning of words with this same part – *construct, destruct, structure,* and *obstruct*. Table 3 offers a proposed Scope and Sequence for the teaching of morphemes. This word analysis strategy supports reading fluency by helping students identify and pronounce chunks in words that have meaning and how to pronounce and understand content specific words (i.e., coming from science, social studies, and math) that are of Latin and Greek origin.

We suggest that instruction on morphemes begin with what students already know about morpheme patterns. One simple way is to begin with a Latin root such as *"port"* and ask students to generate as many words as they can with the root. Morphemes can be taught directly and explicitly in all content areas. Remember that readers need numerous opportunities to read words in general, so it is important to follow-up direct instruction of morphemes with content specific text. Morphemic analysis helps support *accumaticity* which will encourage fluent reading with understanding of grade-level content texts.

Conclusion

As students progress through the middle and secondary grades they encounter a wide variety of text genres and topics across content areas. While many students transition from the elementary grades as fluent readers, many others do not. For even fluent readers, some of the texts they will encounter require the learning of new syntax, vocabulary, morphemes, and ideas written with multiple meanings. For those students entering middle school who are less than fluent readers, the challenge to read such texts is immense. As teachers, we can help all students gain access to the texts we teach and expect them to be able to absorb, by implementing the fluency strategies that we have described above into our teaching. The current trend across classrooms in the U.S., as well as other many countries, is to lead

students in higher order and strategic thinking about the content we teach. Unfortunately, it is very difficult for a reader to critically consider a text which they struggle to read. Because too much of the student's attention is devoted to just reading the words, little is left over to consider what the text means. Thus, fluent reading is critical because it allows the reader to pivot their attention from decoding processes to understanding. Incorporating the strategies suggested above in the middle and secondary grades will help students better learn the content which we work so hard to teach.

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APPENDIX

Table 1. *Six Major Types of Syllables*

Syllable Type	Example	Definition
Closed	***com***-mon ***dap***-ple ***hos***-tel	When the vowel of a syllable is short, the syllable will be closed off by one or more consonants.
Open	***to*-tal** ***ri*-val** ***mo*-tor**	If a syllable is open, it will end with a long vowel sound spelled with one vowel letter; there will be no consonant to close it and protect the vowel.
Consonant –le	**ca-ble** **bu-gle** **ti-tle**	Also known as the *stable final syllable*, this is unaccented final syllable containing a consonant plus *l* and silent *e*.
Vowel-Consonant-e (VCe)	**com-*pete*** **des-*pite*** **con-*flate***	Also known as "magic ***e***" syllable patterns, VC**e** syllables contain long vowels spelled with a single letter, followed by a single consonant, and a silent ***e***.
Vowel Team	con-***geal*** ***train***-er ***spoil***-age	A vowel team may be two, three, or four letters; thus, the term vowel digraph is not used. A vowel team can represent a long, short, or diphthong vowel sound.
Vowel –r	***per***-fect ***spur***-ious con-***sort***	This type of syllable is a vowel followed by ***r (er, ir, ur, ar, or).***

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Table 2. *Patterns for Syllable Division*

Major Patterns	Syllable Division	Examples
VCCV	VC/CV	man/ner dis/play
VCV	V/CV	vo/cal lo/cate
VCCCV	VC/CCV o VCC/CV	ex/treme part/ner
VV	V/V	du/et cha/os

Table 3. Propose Scope and Sequence for the Teaching of Morphemes

Language Layer	Element of Language	Examples
Anglo-Saxon	Compounds	*doghouse, ballgame, blackbird*
	Inflected and derivational endings with no spelling change	*feeding, teacher, puppy, sadly, hits, wanted*
	Inflected and common derivational morphemes with spelling changes:	
	• Final consonant doubling	*shipping, robber*
	• Drop final *e*	*hoping, likable, mover*
	• Change *y* to *i*	*cried, happier, sillier*
	• Double final consonant of accented syllable	*occurrence, beginner*
	Prefixes and suffixes	*under-, over-; -hood*
Latin (Romance)	Roots	*port, rupt, script, tract, cept, spect, ject, struct, dict, mit, flex, cred, duc, pend*
	Prefixes	*un-, re-, non-, dis-, in-, pre-, ex-, mis-, en-, con-, per-, inter*
	Suffixes	*-ly, -ful, -ness, -less, -ment, -ible/able, -ent/ant, -ous, -ic, -al*
	Assimilated prefixes that change form to match the root	*in- (immigrate, illegal, irregular)* *ad- (address, approach, aggressive)* *ob- (obstruct, opportunity)* *sub- (subtract, suppose, surround)* *com- (commit, collide, corrode)* *dis- (dissuade, difference)* *ex- (extinguish, emit, eccentric, efficient)*
Greek	Combining Forms	*micro, scope, photo, graph, tele, phon, geo, -meter, -ology, -it is*

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